

## Part C T826 Transmitter & T827 Exciter

This part of the manual is divided into six sections, as listed below. There is a detailed table of contents at the start of each section.

Section	Title
1	General Information
2	Circuit Operation
3	Initial Tuning & Adjustment
4	Functional Testing (not available for Initial Adjustment manual)
5	Fault Finding (not available for Initial Adjustment manual)
6	PCB Information



# 1 T826/827 General Information

This section provides a brief description of the T826 transmitter and T827 exciter, along with detailed specifications and a list of types available.

The following topics are covered in this section.

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## 1.1 Introduction

The T826 is a synthesised, microprocessor controlled FM base station transmitter designed for single or multichannel operation in the 66 to 88MHz frequency range<sup>1</sup> with a standard power output of 25W. The RF section of the transmitter comprises a frequency synthesiser which provides 125mW of frequency modulated RF drive to a two stage, wide band output driver followed by a 25W power amplifier. A thermal shut-down feature is provided in the T826 in case operating temperatures exceed acceptable levels.

The T827 is a synthesised, microprocessor controlled FM base station exciter designed for single or multichannel operation in the 66 to 88MHz frequency range<sup>1</sup>. With a standard power output of only 1W, the exciter is designed for use with the T828 50W power amplifier. The RF section of the exciter comprises a frequency synthesiser which provides 125mW of frequency modulated RF drive to a two stage, wide band output amplifier.

A wide selection of audio characteristics may be obtained from the audio processor. Optional circuit blocks are an audio compressor and a pre-emphasis stage. They can be bypassed or linked to one or both audio inputs, and then back into the remaining audio circuitry in almost any combination. All audio processor options are link selectable.

The synthesiser frequency is programmed via the serial communications port. Eight channel select lines are accessible via an optional D-range connector (D-range 2 - T800-03-0000) at the rear of the set.

All components except those of the VCO are mounted on a single PCB. This is secured to a die-cast chassis which is divided into compartments to individually shield each section of circuitry. Access to both sides of the main circuit board is obtained by removing each of the chassis lids. There is provision within the chassis to mount small option PCBs.

The front panel controls include line sensitivity, microphone socket and carrier switch. This switch turns on the carrier (unmodulated) as an aid to servicing.

The T826 and T827 are both 60mm wide and each occupies a single space in a Tait rack frame, which has the ability to accommodate up to seven standard modules.

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1. Although capable of operating over the 66-88MHz frequency range, the T826 and T827 have an 8MHz switching range (see [Section 1.2.3](#) and [Section 3.1](#)).

## 1.2 Specifications

### 1.2.1 Introduction

The performance figures given are minimum figures, unless otherwise indicated, for equipment tuned with the maximum switching range and operating at standard room temperature (+22°C to +28°C) and standard test voltage (13.8V DC).

Where applicable, the test methods used to obtain the following performance figures are those described in the EIA and ETS specifications. However, there are several parameters for which performance according to the CEPT specification is given. Refer to [Section 1.2.6](#) for details of test standards.

Details of test methods and the conditions which apply for Type Approval testing in all countries can be obtained from Tait Electronics Ltd.

The terms "wide bandwidth" and "narrow bandwidth" used in this and following sections are defined in the following table.

	Channel Spacing	Modulation 100% Deviation	Receiver IF Bandwidth
Wide Bandwidth	25kHz	±5.0kHz	15.0kHz
Narrow Bandwidth	12.5kHz	±2.5kHz	7.5kHz

### 1.2.2 General

Number Of Channels .. 128 (standard)<sup>1</sup>

Supply Voltage:

Operating Voltage	.. 10.8 to 16V DC
Standard Test Voltage	.. 13.8V DC
Polarity	.. negative earth only
Polarity Protection	.. crowbar diode
Line Keying Supply (if required)	.. -50V DC

Supply Current:

Transmit - T826	.. 4.5A (typical)
- T827	.. 650mA
Standby	.. 160mA (typical)

Operating Temperature Range .. -30°C to +60°C

1. Additional channels may be factory programmed. Contact your nearest Tait Dealer or Customer Service Organisation.

## Dimensions:

Height	.. 183mm
Width	.. 60mm
Length	.. 322mm
Weight	.. 2.1kg
Time-Out Timer (optional)	.. 0 to 5 minutes <sup>1</sup> adjustable in 10 second steps
Tail Timer	.. 0 to 5 seconds adjustable in 100ms <sup>2</sup> steps
Transmit Key Time	.. <30ms
Transmit Lockout Timer	.. 0 to 1 minute adjustable in 10 second steps

### 1.2.3 RF Section

Frequency Range	.. 66-88MHz (refer to <a href="#">Section 1.4</a> and <a href="#">Section 1.5</a> )
Modulation Type	.. FM
Frequency Increment	.. 5 or 6.25kHz
Switching Range	.. 8MHz (i.e. $\pm 4$ MHz from the centre frequency)
Load Impedance	.. 50 ohms
Frequency Stability (see also <a href="#">Section 1.4</a> and <a href="#">Section 1.5</a> )	.. $\pm 2.5$ ppm, -30°C to +60°C
Adjacent Channel Power (full deviation):	
Wide Bandwidth (WB) ( $\pm 25$ kHz/15kHz B/W)	.. -70dBc
Narrow Bandwidth (NB) ( $\pm 12.5$ kHz/7.5kHz B/W)	.. -60dBc
Transmitter Switching	.. complies with ETS 300 113
Transmitter Side Band Noise: (no modulation, 15kHz bandwidth)	
At $\pm 25$ kHz	.. -95dBc
At $\pm 1$ MHz	.. -105dBc

- 
1. Adjustable from 0 to 10 minutes in PGM800Win version 2.12 and later.
  2. Adjustable in 20ms steps in PGM800Win version 2.12 and later.

Intermodulation	.. -40dBc with interfering signal of -30dBc .. -70dBc with 25dB isolation & interfering signal of -30dBc (PA with output isolator)
T826 Mismatch Capability:	
Ruggedness	.. refer to your nearest Tait Dealer or Customer Service Organisation
Stability	.. 3:1 VSWR (all phase angles)
Radiated Spurious Emissions:	
Transmit	.. -36dBm to 1GHz .. -30dBm 1GHz to 4GHz
Standby	.. -57dBm to 1GHz .. -47dBm 1GHz to 4GHz
Conducted Spurious Emissions: (T826 Only)	
Transmit	.. -36dBm to 1GHz .. -30dBm 1GHz to 4GHz
Standby	.. -57dBm to 1GHz .. -47dBm 1GHz to 4GHz
Power Output:	
T826 - Rated Power	.. 25W
- Range Of Adjustment	.. 5-25W
T827	.. 1W ±300mW
Duty Cycle (T826 Only)	.. 100% @ 25W at +25°C .. 30% @ 25W at +60°C .. 100% @ 10W at +60°C

## 1.2.4 Audio Processor

### 1.2.4.1 Inputs

Inputs Available	.. line, microphone and CTCSS
Line Input:	
Impedance	.. 600 ohms (balanced)
Sensitivity (60% modulation @ 1kHz)- With Compressor	.. -50dBm
Without Compressor	.. -30dBm
Microphone Input:	
Impedance	.. 600 ohms
Sensitivity (60% modulation @ 1kHz)- With Compressor	.. -70dBm
Without Compressor	.. -50dBm



**1.2.4.2 Modulation Characteristics**

Frequency Response (below limiting) .. flat or pre-emphasised (optional)

Line And Microphone Inputs:

Pre-emphasised Response-Bandwidth

.. 300Hz to 3kHz (WB)  
.. 300Hz to 2.55kHz (NB)

Below Limiting

.. within +1, -3dB of a 6dB/octave pre-emphasis characteristic

Flat Response

.. within +1, -2dB of output at 1kHz

Above Limiting Response

.. within +1, -2dB of a flat response (ref. 1kHz)

Distortion

.. 2% max.

Hum And Noise:

Wide Bandwidth

.. -55dB (300Hz to 3kHz [EIA]) typical

Narrow Bandwidth

.. -50dB (CEPT)

Compressor (optional):

Attack Time

.. 10ms

Decay Time

.. 800ms

Range

.. 50dB

**1.2.4.3 CTCSS**

Standard Tones

.. all 37 EIA group A, B and C tones plus 13 commonly used tones

Frequency Error (from EIA tones)

.. 0.08% max.

Generated Tone Distortion

.. 1.2% max.

Generated Tone Flatness

.. flat across 67 to 250.3Hz to within 1dB

Modulation Level

.. adjustable

Modulated Distortion

.. <5%

**1.2.5 Microcontroller**

Auxiliary Ports:

Open Drain Type

.. capable of sinking 2.25mA via 2k2Ω

V<sub>ds</sub> max.

.. 5V

## **1.2.6 Test Standards**

Where applicable, this equipment is tested in accordance with the following standards.

### **1.2.6.1 European Telecommunication Standard**

#### **ETS 300 086 January 1991**

Radio equipment and systems; land mobile service; technical characteristics and test conditions for radio equipment with an internal or external RF connector intended primarily for analogue speech.

#### **ETS 300 113 March 1996**

Radio equipment and systems; land mobile service; technical characteristics and test conditions for radio equipment intended for the transmission of data (and speech) and having an antenna connector.

#### **ETS 300 219 October 1993**

Radio equipment and systems; land mobile service; technical characteristics and test conditions for radio equipment transmitting signals to initiate a specific response in the receiver.

#### **ETS 300 279 February 1996**

Radio equipment and systems; electromagnetic compatibility (EMC) standard for private land mobile radio (PMR) and ancillary equipment (speech and/or non-speech).

### **1.2.6.2 DTI CEPT Recommendation T/R-24-01**

#### **Annex I: 1988**

Technical characteristics and test conditions for radio equipment in the land mobile service intended primarily for analogue speech.

#### **Annex II: 1988**

Technical characteristics of radio equipment in the land mobile service with regard to quality and stability of transmission.

### **1.2.6.3 Telecommunications Industry Association**

#### **ANSI/TIA/EIA-603-1992**

Land mobile FM or PM communications equipment measurement and performance standards.

## 1.3 Product Codes

The three groups of digits in the T820 Series II product code provide information about the model, type and options fitted, according to the conventions described below.

The following explanation of T820 Series II product codes is not intended to suggest that any combination of features is necessarily available in any one product. Consult your nearest Tait Dealer or Customer Service Organisation for more information regarding the availability of specific models, types and options.

### Model

The Model group indicates the basic function of the product, as follows:

<u>T82X</u> -XX-XXXX	T825 receiver
	T826 25W transmitter
	T827 exciter
	T828 50W power amplifier

### Type

The Type group uses two digits to indicate the basic RF configuration of the product.

The first digit in the Type group designates the frequency range:

T82X- <u>X</u> -XXXX	'1' for 66-88MHz
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The second digit in the Type group indicates the channel spacing:

T82X-XX- <u>X</u> XXXX	'0' for wide bandwidth (25kHz)
	'5' for narrow bandwidth (12.5kHz)

### Options

T82X-XX- <u>XXXX</u>	The Options group uses four digits and/or letters to indicate any options that may be fitted to the product. This includes standard options and special options for specific customers. '0000' indicates a standard Tait product with no options fitted. The large number of options precludes listing them here.
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## 1.4 T826 Standard Product Range

The following table lists the range of standard T826 types (i.e. no options fitted) available at the time this manual was published. Consult your nearest Tait Dealer or Customer Service Organisation for more information.

Frequency Range (MHz)		66-88	
Deviation (kHz)		2.5	5
TCXO <sup>a</sup>	±2.5ppm -30°C to +60°C	•	•
Transmitter Type: T826-		15-0000	10-0000

- a. A TCXO with a stability of ±1ppm (0°C to +60°C) is available to suit specific requirements. Contact your nearest authorised Tait Dealer or Customer Service Organisation for further details.

You can identify the transmitter type by checking the product code printed on a label on the rear of the chassis (Figure 1.1 in Part A shows typical labels). You can further verify the transmitter type by checking the placement of an SMD resistor in the table that is screen printed onto the PCB (refer to Section 6.1 for more details).

## 1.5 T827 Standard Product Range

The following table lists the range of standard T827 types (i.e. no options fitted) available at the time this manual was published. Consult your nearest Tait Dealer or Customer Service Organisation for more information.

Frequency Range (MHz)		66-88	
Deviation (kHz)		2.5	5
TCXO <sup>a</sup>	±2.5ppm -30°C to +60°C	•	•
Transmitter Type: T827-		15-0000	10-0000

- a. A TCXO with a stability of ±1ppm (0°C to +60°C) is available to suit specific requirements. Contact your nearest authorised Tait Dealer or Customer Service Organisation for further details.

You can identify the exciter type by checking the product code printed on a label on the rear of the chassis (Figure 1.1 in Part A shows typical labels). You can further verify the exciter type by checking the placement of an SMD resistor in the table that is screen printed onto the PCB (refer to Section 6.1 for more details).

## 2 T826/827 Circuit Operation

This section provides a basic description of the circuit operation of the T826 transmitter and T827 exciter.

**Note:** Unless otherwise specified, the term "PGM800Win" used in this and following sections refers to version 2.00 and later of the software.

Refer to Section 6 where the parts lists, grid reference index and diagrams will provide detailed information on identifying and locating components and test points on the main PCB. The parts list and diagrams for the VCO PCB are in Part E.

The following topics are covered in this section.

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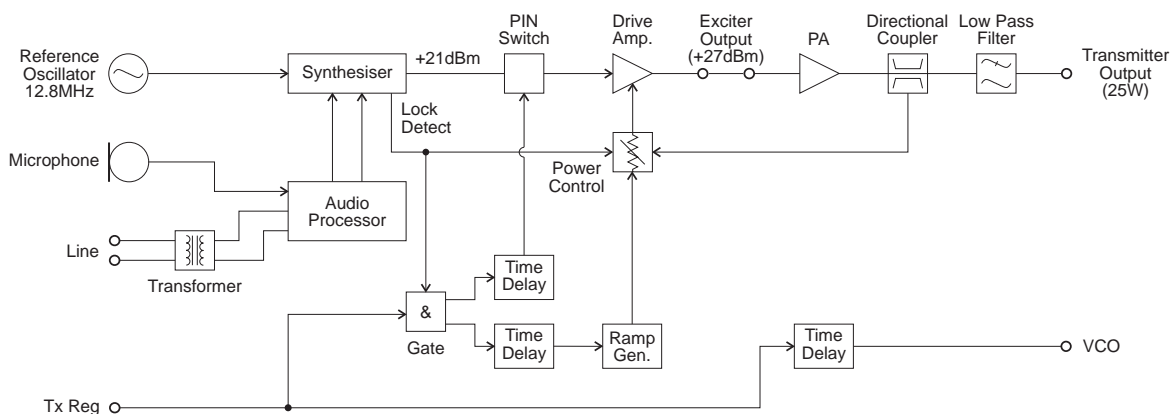
## 2.1 Introduction

The individual circuit blocks which make up the T826 and T827 are:

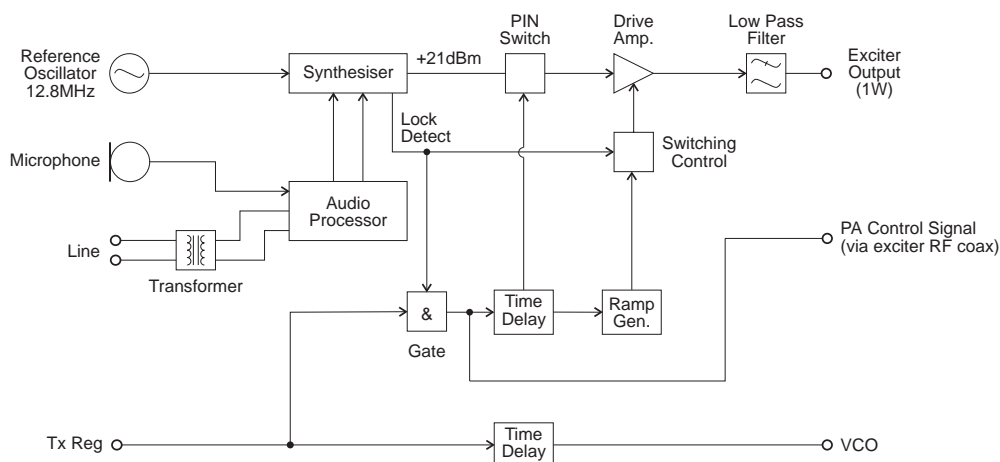
- synthesiser
- VCO
- audio processor
- drive amplifier
- power amplifier (T826 only)
- voltage regulators.

Each of these circuit blocks is set in its own shielded compartment, formed as an integral part of the main chassis.

The configuration of the circuit blocks may be seen on a functional level in [Figure 2.1](#) and [Figure 2.2](#). Refer to the circuit diagrams in Section 6.2 (T826) or 6.3 (T827) for more detail.



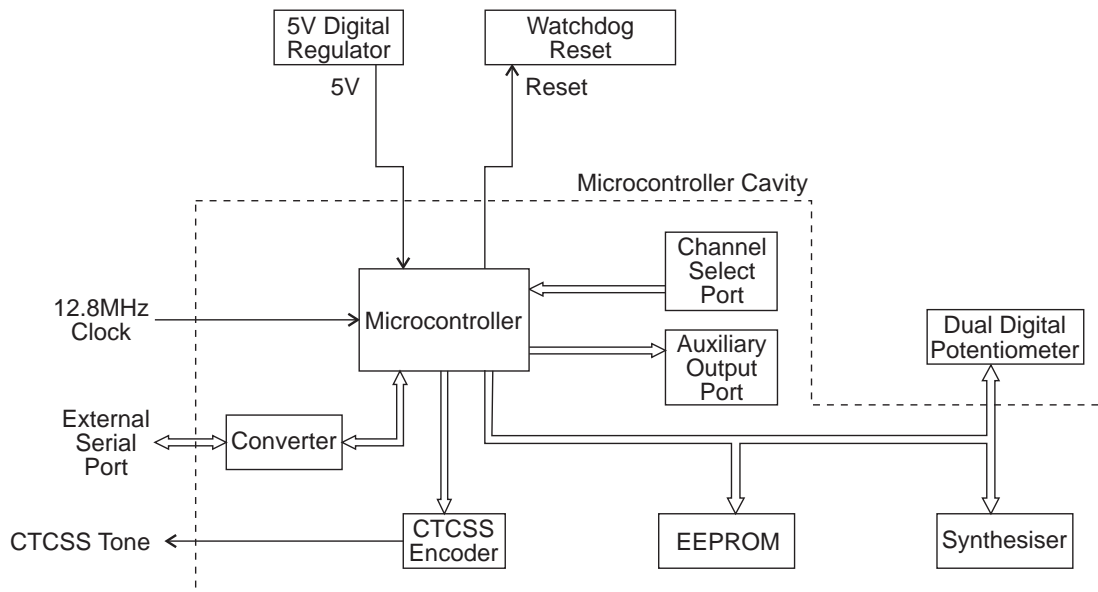
**Figure 2.1 T826 High Level Block Diagram**



**Figure 2.2 T827 High Level Block Diagram**

## 2.2 Microcontroller

(Refer to the microcontroller circuit diagram (sheet 8) in Section 6.2 or 6.3.)



**Figure 2.3 T826/827 Microcontroller Block Diagram**

Overall system control of the T826/827 is accomplished by the use of a member of the 80C51 family of microcontrollers (IC810). It runs from internal ROM and RAM, thus leaving all four ports free for input/output functions.

Non-volatile data storage is achieved by serial communication with a 16kBit EEPROM (IC820). This serial bus is also used by the microcontroller to program the synthesiser (IC740) and deviation control EPOTS (IC220).

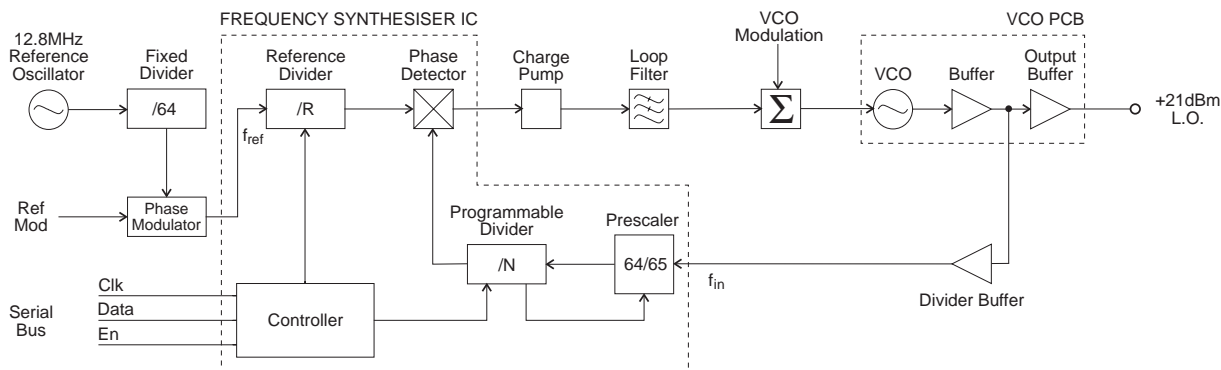
The main tasks of the microcontroller are as follows:

- program the synthesiser and EPOT;
- interface with the PGM800Win programming software at 9600 baud via the serial communication lines on D-range 1 (PL100) & D-range 2;
- monitor channel change inputs from D-range 2;
- generate timing waveforms for CTCSS encoding;
- coordinate and implement timing control of the exciter/transmitter;
- control the front panel "Supply" LED.



## 2.3 Synthesised Local Oscillator

(Refer to the synthesiser circuit diagram (sheet 7) in Section 6.2 or 6.3 and the VCO circuit diagram in Part E.)



**Figure 2.4 T826/827 Synthesiser Block Diagram**

The synthesiser (IC740) employs a phase-locked loop (PLL) to lock a voltage controlled oscillator (VCO) to a given reference frequency. The synthesiser receives the divider information from the control microprocessor via a 3 wire serial bus (clock, data, enable). When the data has been latched in, the synthesiser processes the incoming signals from the VCO buffer ( $f_{in}$ ) and the phase modulator ( $f_{ref}$ ).

A reference oscillator at 12.8MHz (=IC700) is buffered (IC710 pins 5 & 6) and divided down to 200kHz (IC730). This 200kHz square wave is then summed with the modulating audio and passed to an integrator (IC720 pins 9 & 8, Q710, Q720). This produces a ramping waveform which is centred around a DC level determined by the incoming audio. IC720 pins 5 & 6 perform as a comparator, ultimately producing a phase-modulated 200kHz square wave. This is followed by another phase shifting stage (IC720 pins 3 & 4, Q730, Q740), before being divided down to 6.25kHz or 5kHz within the synthesiser IC (IC740).

A buffered output of the VCO (Q795) is divided with a prescaler and programmable divider which is incorporated into the synthesiser chip (IC740). This signal is compared with the phase modulated reference signal at the phase detector (also part of the synthesiser chip). The phase detector outputs drive a balanced charge pump circuit (Q760, Q770, Q775, Q780, Q785) and active loop filter (IC750 pins 5, 6 & 7) which produces a DC voltage between 0V and 20V to tune the VCO. This VCO control line is further filtered to attenuate noise and other spurious signals. Note that the VCO frequency increases with increasing control voltage.

If the synthesiser loop loses lock, a pulsed signal appears at LD (pin 2) of IC740. This signal is filtered and buffered by IC750 pins 1, 2 & 3, producing the Lock-Detect signal used to shut off the power supply to the drive amplifier. IC750 pin 1 is at 20V when the synthesiser is out of lock.

### 2.3.1 Two Point Modulation

Frequency modulation occurs by modulating both the VCO input and the synthesiser reference input. This process is called two point modulation and ensures a flat modulation response from 67Hz to 3kHz (2.55kHz for narrow bandwidth).

The PLL has a fast response time, allowing a Tx key-up time of <30ms. Because of this fast response time the PLL sees lower modulation frequencies superimposed on the VCO as an error and corrects for it, resulting in no modulation on the carrier. At modulation frequencies greater than 300Hz the loop cannot correct fast enough and modulation is seen on the carrier. The response of the loop to VCO modulation is shown by  $f_2$  in Figure 2.5 below.

To achieve low frequency modulation, the reference oscillator is also modulated so that the phase detector of IC740 detects no frequency error under modulation. Thus, the synthesiser loop will not attempt to correct for modulation and the audio frequency response of the transmitter remains unaffected. The response of the loop to reference frequency modulation is shown by  $f_1$  in Figure 2.5.

The reference modulation is controlled by a 256-step 10k electronic potentiometer (EPOT) which is adjustable via PGM800Win. The EPOT is made up of 256 resistive sections (representing approximately  $39\Omega$  each) which can be individually addressed by the microcontroller. Each section can be switched in or out of circuit to achieve the required total resistance, thus giving control of the reference modulation.

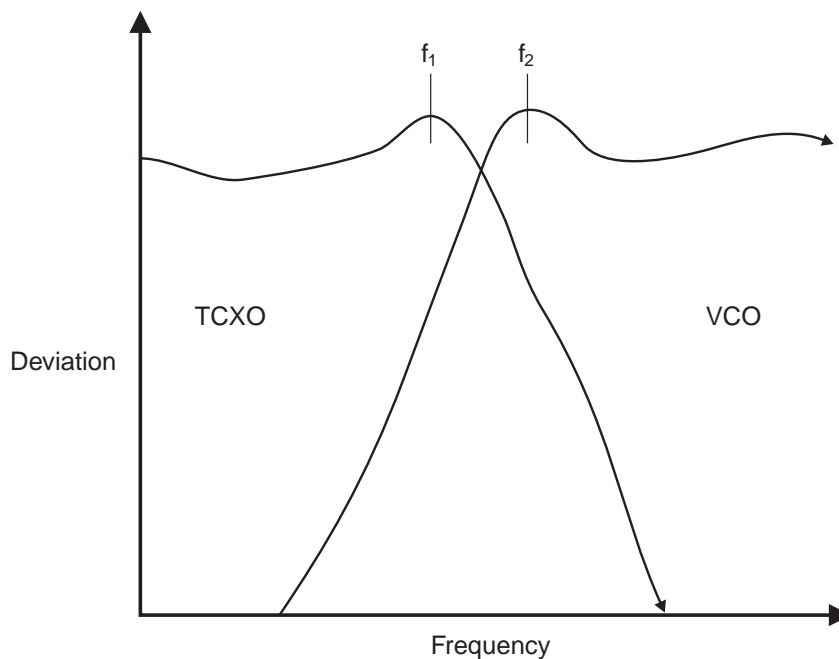


Figure 2.5 T826/827 Two Point Modulation

## 2.4 VCO

(Refer to the VCO circuit diagram in Part E.)

The VCO transistor (Q1) operates in a common source configuration, with an LC tank circuit coupled between its gate and drain to provide the feedback necessary for oscillation. The VCO control voltage from the loop filter (IC750 pin 7) is applied to the varicaps (D1-D6) to facilitate tuning within an 8MHz band of frequencies. A trimcap (&VC1-TX) is used for coarse tuning of the VCO. The output from the oscillator circuit drives a cascode amplifier stage (Q2, Q3) which supplies +10dBm (typically) to a further stage of amplification, Q5. This is the final amplifier on the VCO PCB, and delivers +21dBm (typically) to the exciter drive amplifier.

A low level "sniff" is taken from the output of Q3 and used to drive the divider buffer (Q795) for the synthesiser (IC740).

The VCO operates at the actual output frequency of the exciter, i.e. there are no multiplier stages. The VCO is modulated by superimposing the audio signal onto the control voltage and by phase modulating the reference signal.

### 2.4.1 VCO Supply

The VCO is supplied from two switched +9V supplies under the control of the Tx-Reg. supply.

The VCO (Q1) and buffer amplifier (Q2 & Q3) are supplied from one +9V switched supply by Q540 via the capacitor multiplier (Q550, C550).

The output amplifier is supplied from the other +9V supply by Q520, Q530, and Q510.

A delay circuit holds the VCO on for a short time after the Tx-Reg. supply has been switched off. This is to allow the RF power circuits (both exciter and PA) to ramp down in the correct manner before the VCO is switched off.

## 2.5 Audio Processor

(Refer to the audio processor circuit diagram (sheet 2) in Section 6.2 or 6.3.)

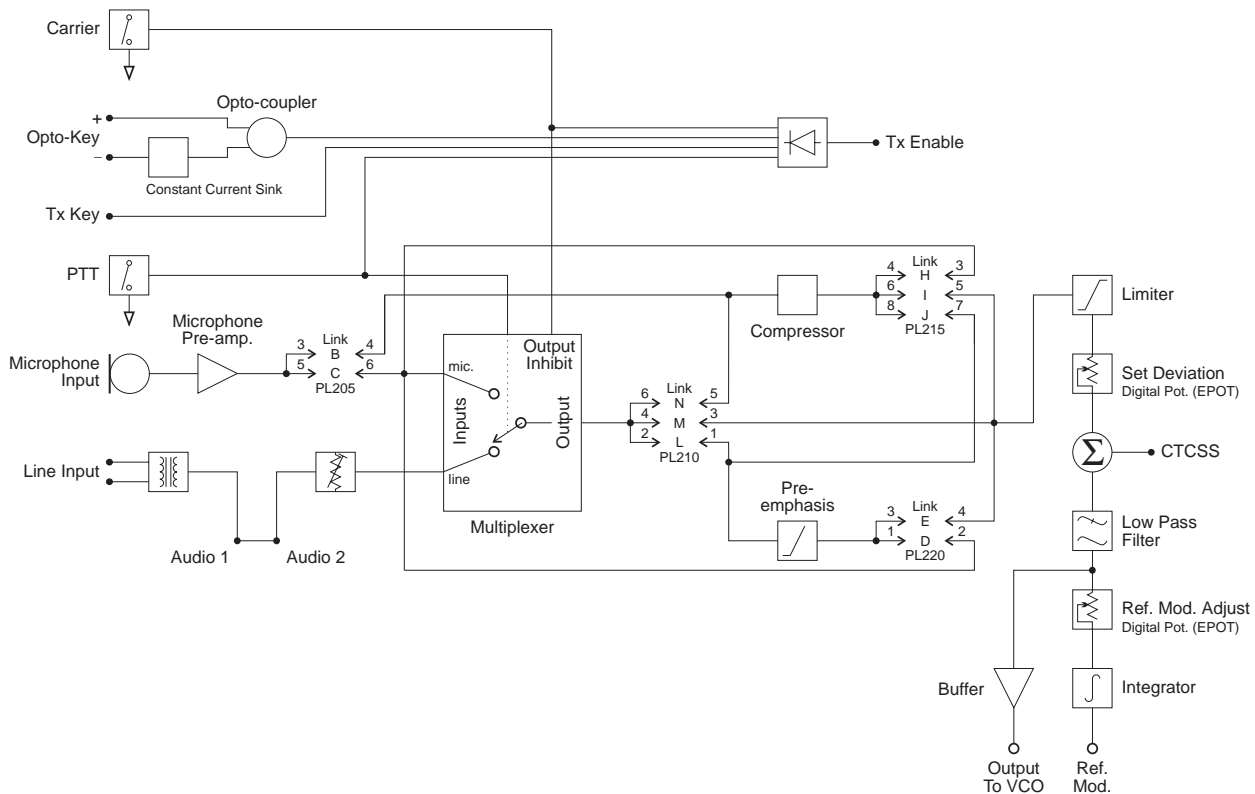


Figure 2.6 T826/827 Audio Processor Block Diagram

### 2.5.1 General

The audio processor comprises several link selectable circuit blocks which may be configured in a variety of combinations to suit individual requirements. The pre-emphasis network and compressor may be linked individually or cascaded between either or both audio inputs and the limiter.

Refer to [Section 3.5.1](#) for linking details.

### 2.5.2 Audio Inputs

Two audio inputs are available: one from a 600 ohm balanced (or unbalanced) line, and the other from a local microphone. The microphone signal is passed first to a pre-amplifier (Q210) and ultimately to a multiplexer (IC240), but in between may pass through the compressor (depending on the linking details). The line transformer is also connected to the multiplexer and is disabled by the microphone PTT switch.

A third input for external CTCSS tones is also provided.

### 2.5.3 Keying Inputs

There are four ways to key the exciter:

- pulling the Tx-Key line low (pin 13 on D-range 1 [PL100]) at the rear of the set);
- pushing the "Carrier" button on the front panel - this will inhibit all audio;
- using the PTT button on the local microphone, disabling audio from the line;
- via the opto-key inputs (pins 11 and 12 on D-range 1 [PL100]) when electrical isolation is required. This features a constant current sink (Q270) to ensure reliable activation of the opto-coupler (IC250) at low keying voltages.

### 2.5.4 Compressor (Automatic Level Control (ALC))

The input signal is fed via a current controlled attenuator (Q230, Q220) to a high gain stage (IC230) from which the output signal is taken. This signal is passed to a comparator (IC230) which toggles whenever the audio signal exceeds a DC threshold determined by RV220. Thus, the comparator produces a square wave whose mark-space ratio is determined by the amplitude of the audio signal. This square wave pumps up the reservoir capacitor (C233) which controls the attenuator (Q230, Q220), thus completing the feedback loop.

The compression level is set by adjustment of the comparator threshold (RV220).

**Note:** Although the high dynamic range of the compressor allows the use of very low audio signal levels, such conditions will be accompanied by a degradation of the signal-to-noise ratio. Very low audio input levels should therefore be avoided where possible.

### 2.5.5 Outputs To Modulators

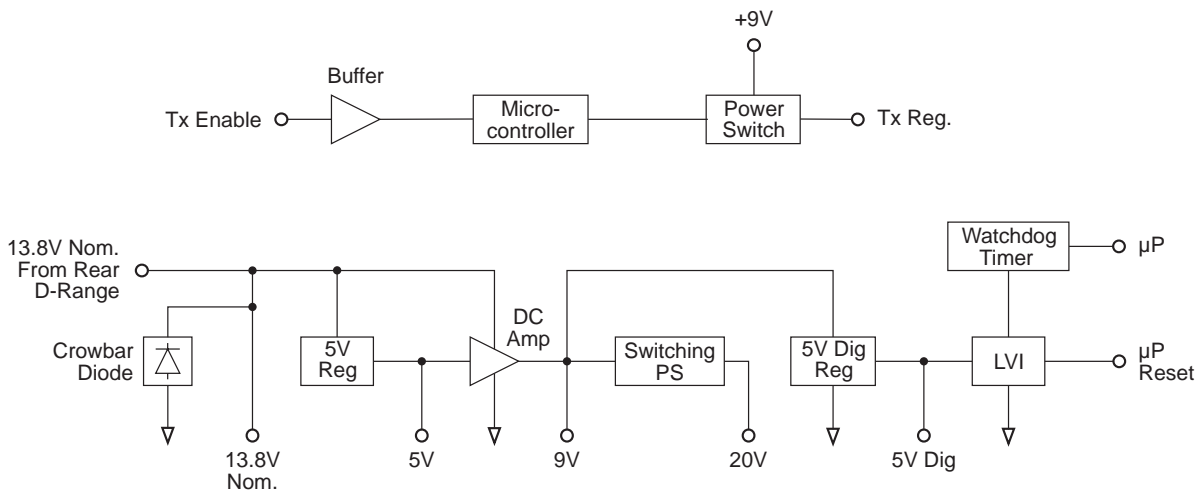
The output signal from the limiter (IC210, IC230) is added with a CTCSS tone at a summing amplifier (IC260). The signal is then low pass filtered (IC260) and split to supply the two modulators.

Since the VCO modulator is a true frequency modulator, its audio is simply buffered (IC260). The reference modulator, however, is a phase modulator and its audio must first be integrated (IC210).

It is vital that the audio levels to the modulators are accurately set, *relative to each other*. Hence the inclusion of level adjustment in the reference modulator path. Once set, adjustments to absolute deviation may be made only by IC220, a 256-step 10k electronic potentiometer (EPOT), which is controlled via PGM800Win. The EPOT is made up of 256 resistive sections (representing approximately  $39\Omega$  each) which can be individually addressed by the microcontroller. Each section can be switched in or out of circuit to achieve the required total resistance, thus adjusting the absolute deviation level.

## 2.6 Power Supply & Regulator Circuits

(Refer to the regulators circuit diagram (sheet 6) in Section 6.2 or 6.3.)



**Figure 2.7 T826/827 Power Supply & Regulators Block Diagram**

The T826 and T827 are designed to operate from a 10.8-16V DC supply (13.8V nominal). A 5.3V regulator (IC630) runs directly from the 13.8V rail, driving much of the synthesiser circuitry. It is also used as the reference for a DC amplifier (IC640, Q630, Q620) which provides a medium current capability 9V supply.

A switching power supply (Q660, Q670) runs from the 9V supply and provides a low current capability +20V supply. This is used to drive the synthesiser loop filter (IC750), giving a VCO control voltage range of up to 20V, and the Lock-Detect amplifiers.

Ultimate control of the transmitter is via the Tx-Reg. supply, switched from 9V by Q610. This is enabled via the Tx-Enable signal from the audio processor, and microprocessor.

A crowbar diode is fitted for protection against connection to a power supply of incorrect polarity. It also provides transient overvoltage protection.

**Note:** A fuse must be fitted in the power supply line for the diode to provide effective protection.

## 2.7 Transmit Timers

The transmit tail timer, transmit timeout timer and transmit lockout timer can all be set from PGM800Win. The fields for setting these are found on the system information page. These three timers operate as follows (refer also to [Figure 2.8](#)):

Timer	Function	Adjustment
Transmit Tail	Sets the tail time during which the transmitter stays keyed after the external key source has been removed.	0-5 seconds in 100ms steps <sup>a</sup>
Transmit Timeout	Sets the maximum continuous transmission time. Once the timer has timed out, the transmitter must be keyed again, unless prevented by the transmit lockout timer.	0-300 seconds <sup>b</sup> in 10 second steps
Transmit Lockout	Sets the period of time that must elapse after a timeout before the transmitter can re-transmit. Once the timer has timed out, the transmitter can be keyed again.	0-60 seconds in 10 second steps

a. Adjustable in 20ms steps in PGM800Win version 2.12 and later.

b. Adjustable from 0 to 600 seconds in PGM800Win version 2.12 and later.

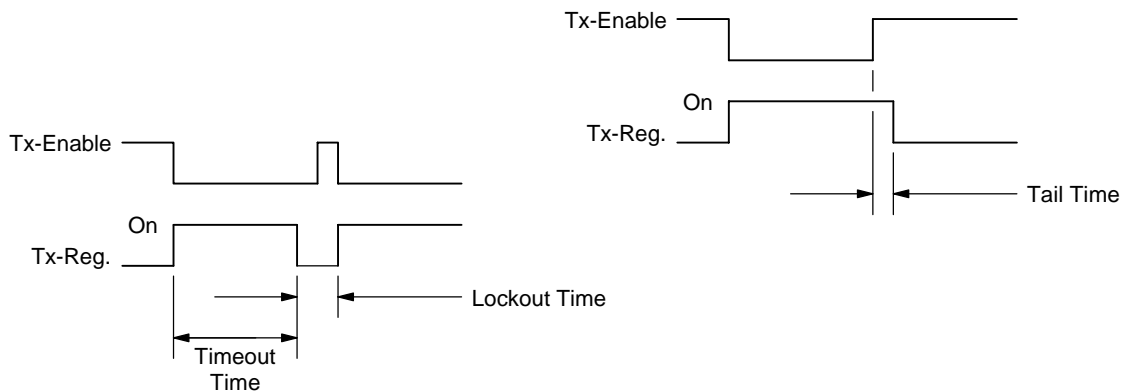


Figure 2.8 T826/827 Transmit Timers

## 2.8 T826 Drive Amplifier & PA

(Refer to [Figure 2.1](#) and the exciter and PA circuit diagrams (sheets 3 & 4) in Section 6.2.)

The output power of the PA is maintained at a constant level via a power control loop applied to the two-stage, wide band exciter amplifier (Q307, Q312). The forward and reverse RF power levels are sensed via a dual directional coupler and detector diodes (D440, D441 in the PA cavity). The detected DC signals are summed with the "power set" level and fed to the control integrator (IC310 pins 1, 2 & 3). The output control voltage is buffered by Q309 and Q315, and applied to the collectors of the wide band exciter amplifiers.

**Note:** Forward and reflected power signals are summed so that, under high VSWR, the power control will turn the output RF level down.

The maximum output power of the transmitter is limited by a voltage clamp circuit (consisting of a potential divider formed by R369//R374 and R375//R359//R360) which turns on Q308, clamping the control voltage to approximately 7.8V. When the maximum operating temperature is exceeded, the clamp voltage is reduced to approximately 5.7V by removing R359//R360 from the circuit (see below).

To reduce the spurious output level when the synthesiser is out-of-lock, the Tx-Reg. and Lock-Detect signals are gated to inhibit the PA control circuit and to switch off the RF signal at the input to the drive amplifier. The RF input signal is switched by a PIN switch attenuator (D300, D301, D302).

Cyclic keying control is provided by additional circuitry consisting of several time delay, ramp and gate stages:

- Q305, IC310                      power ramping
- Q304, Q305                      Tx-Reg. and  $\overline{\text{Lock-Detect}}$  gate
- Q300, Q301, Q302              delay and PIN switch drive.

This is to allow the RF power circuits (both exciter and PA) to ramp up and down in a controlled manner so that minimal adjacent channel interference is generated during the transition.

The output of the wide band amplifier is approximately 550mW (+27.5dBm) for an input of 65mW (+18dBm) when the power control is set to maximum.

**Note:** The VCO output level of 125mW (+21dBm) is attenuated by a 3dB attenuator (R517, R518 & R519) in the VCO cavity. This provides good VCO/exciter isolation as well as the correct exciter drive level.

A temperature sensor (R480) is provided so that the RF output power can be reduced to a preset level when a set temperature is exceeded. This is a protection circuit (IC310 pins 5, 6 & 7, Q311) to prevent overheating, as the unit is *not* rated for continuous operation at high temperatures (refer to [Section 1.2.3](#) for duty cycle specifications). RV302 sets the PA output power while under high temperature fold-back conditions.

The output of the temperature-sense comparator (IC310 pin 7) also feeds to a secondary shutdown clamp circuit (Q303, Q360, Q308). The clamp voltage is set to approximately



5.7V by the potential divider R369//R374 and R375 when the maximum operating temperature is exceeded. This ensures that the temperature shutdown will reduce the output power even if the power control circuit is in an open loop condition.

The attenuator (R410, R411 & R412) aids in reducing exciter/PA interaction while also ensuring a reasonable match for Q312.

The RF output from the exciter is fed to the driver stage (Q415) and then to the final (Q425). The DC supply is fed to the final via a low pass filter with special low frequency decoupling.

The directional coupler provides the required feedback for the power control loop while the harmonics are attenuated by the low pass filter.

## 2.9 T827 Exciter Drive Amplifier

(Refer to [Figure 2.2](#) and the exciter circuit diagram (sheet 3) in Section 6.3.)

A two-stage, wide band amplifier (Q320, Q321) provides an output level of approximately 1W (+30dBm) for an input of 125mW (+21dBm) from the VCO. IC300 pins 5, 6 & 7, Q301 and Q302 provide a 10.5V regulated supply for the exciter.

To reduce the spurious output level when the synthesiser is out-of-lock, the Tx-Reg. and Lock-Detect signals are gated to inhibit the exciter control circuit and to switch off the RF signal at the input to the drive amplifier. This is achieved by a PIN switch attenuator (D320, D321, D322).

Cyclic keying control is provided by additional circuitry consisting of several time delay, ramp and gate stages:

- Q300, IC300 pins 5, 6 & 7                      power ramping
- Q380, Q381    Tx-Reg. and  $\overline{\text{Lock-Detect}}$  gate
- Q365, Q366, Q367, Q368                      delay and PIN switch drive.

This is to allow the RF power circuits (both exciter and PA) to ramp up and down in a controlled manner so that minimal adjacent channel interference is generated during the transition.

R517, R518 and R519 form a 3dB attenuator to provide good VCO/drive amplifier isolation.

The output attenuator (R337, R338, R339) assists in reducing exciter/PA interaction while also ensuring a good match for Q321.

**Note:** The exciter provides a DC control signal to the PA via the RF coax. This is injected via %L382.



## 3 T826/827 Initial Tuning & Adjustment



**Caution:** This equipment contains CMOS devices which are susceptible to damage from static charges. Refer to [Section 1.2](#) in Part A for more information on anti-static procedures when handling these devices.

The following section describes both short and full tuning and adjustment procedures and provides information on:

- channel programming
- selecting required audio links
- synthesiser alignment
- PA alignment (T826 only)
- modulator adjustment
- limiter adjustment
- setting line level
- compressor adjustment
- timer adjustment.

**Note:** Unless otherwise specified, the term "PGM800Win" used in this and following sections refers to version 2.00 and later of the software.

Refer to Section 6 where the parts lists, grid reference index and diagrams will provide detailed information on identifying and locating components and test points on the main PCB. The parts list and diagrams for the VCO PCB are in Part E.

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## 3.1 Introduction

When you receive your T826 transmitter or T827 exciter it will be run up and working on a particular frequency (the "default channel")<sup>1</sup>. If you want to switch to a frequency that is within the 8MHz switching range (i.e.  $\pm 4$ MHz from the factory programmed frequency), you should only need to reprogram the transmitter/exciter with the PGM800Win software (refer to the PGM800Win programming kit and [Section 3.2](#) below).

However, if you want to switch to a frequency outside the 8MHz switching range, you will have to reprogram and re-tune the transmitter/exciter to ensure correct operation. In this case you should carry out the short tuning procedure described in [Section 3.4](#).

If you have carried out repairs or other major adjustments, you must carry out the full tuning and adjustment procedure described in this section (except for [Section 3.4](#)).

## 3.2 Channel Programming

You can program up to 128 channel frequencies into the transmitter/exciter's EEPROM memory (IC820) by using the PGM800Win software package and an IBM™ PC. You can also use PGM800Win to select the transmitter/exciter's current operating frequency (or "default channel").

If the transmitter/exciter is installed in a rack frame, you can program it via the programming port in the speaker panel. However, you can also program the transmitter/exciter before it is installed in a rack frame as follows:

- by using a T800-01-0010 calibration test unit;
- via D-range 1;
- via D-range 2 (standard T800-03-0000 auxiliary D-range only);
- via SK805 (internal Micromatch connector).

If you do not use the T800-01-0010, you will have to connect the PC to the transmitter/exciter via a module programming interface (such as the T800-01-0004).

For a full description of the channel programming procedure, refer to the PGM800Win programming software user's manual.

**Note:** When an auxiliary D-range kit (D-range 2 - T800-03-0000) is fitted, you can also select a channel with an external switch, such as the DIP switch on the rack frame backplane PCB. Refer to Part C in the T800 Series Ancillary Equipment Service Manual (M800-00-101 or later issue) or consult your nearest Tait Dealer or Customer Service Organisation for further details.

---

1. Use the "Read Module" function in PGM800Win to find out what the default channel is.

### 3.3 Test Equipment Required

You will need the following test equipment:

- computer with PGM800Win installed
  - T800 programming kit
  - module programming interface (e.g. T800-01-0004 - optional)
  - 13.8V power supply
  - digital multimeter
  - audio signal generator
  - RF power meter
  - audio voltmeter x 2
  - modulation meter
  - oscilloscope (digital preferred)
  - 20dB or 40dB pad
  - T800-01-0010 calibration test unit (optional)
- } or RF test set (optional)

Figure 3.1 and Figure 3.2 show typical test equipment set-ups.

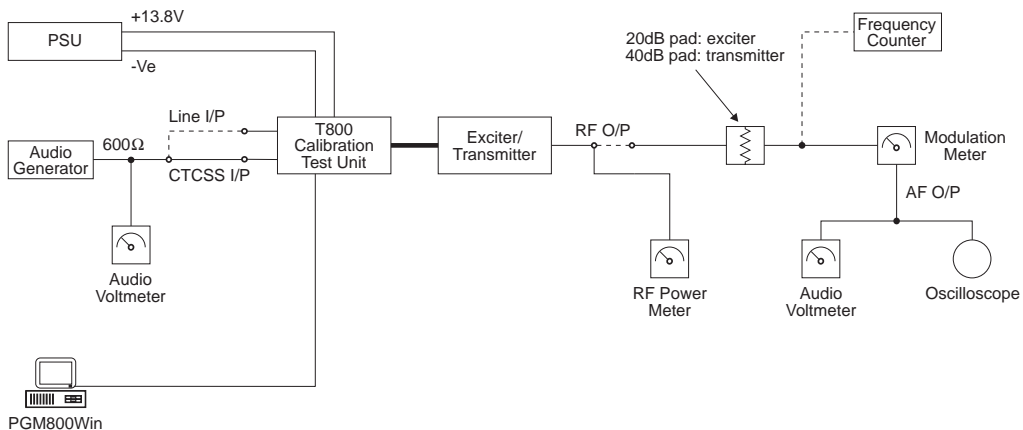


Figure 3.1 T826/827 Test Equipment Set-up With T800-01-0010

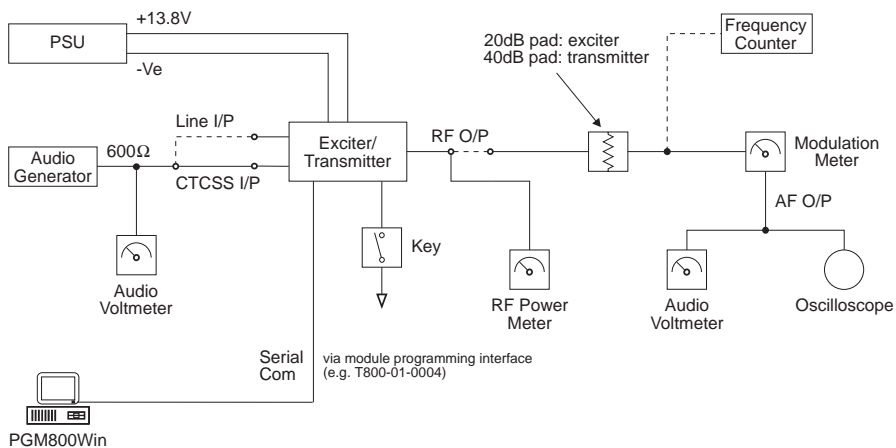


Figure 3.2 T826/827 Test Equipment Set-up Without T800-01-0010

## 3.4 Short Tuning Procedure

Use this procedure only if you want to reprogram the T826/827 to a frequency outside the 8MHz switching range and do not intend to carry out any other major adjustments or repairs.

### 3.4.1 Introduction

Reprogram the operating frequency as described in the PGM800Win programming kit (refer to [Section 3.2](#)).

Remove the top cover (nearest the handle).

Set up the test equipment as described in [Section 3.3](#).

Set the links in the audio processor section as required (refer to [Section 3.5](#)).

### 3.4.2 Synthesiser Alignment

- Connect a high impedance voltmeter to PL4-1 or the junction of L1 & R1 in the VCO (this measures the synthesiser loop voltage).
- Key the transmitter by earthing the Tx-Key line.
- **Single Channel**      Tune VCO trimmer & VC1-TX for a synthesiser loop voltage of 9V.
- **Multichannel**      Tune VCO trimmer & VC1-TX for a synthesiser loop voltage of 9V on the middle channel.  
If there is no middle channel, tune & VC1-TX so that the channels are symmetrically placed around a loop voltage of 9V.  
All channels should lie within the upper and lower limits of 13V and 5V respectively.  
Do not attempt to program channels with a greater frequency separation than the specified switching range of 8MHz.

### 3.4.3 Output Power Adjustment (T826 Only)

Connect an RF power meter with suitable attenuation to the output socket and key the transmitter.

Adjust RV301 for the required output power (between 5 and 25W).

### 3.4.4 Two Point Modulation Adjustment

**Note 1:** In this and following sections deviation settings are given first for wide bandwidth sets, followed by settings in brackets for narrow bandwidth sets [ ].

**Note 2:** The reference modulation and limiter adjustments are controlled by 256-step electronic potentiometers (EPOTs), which are adjusted via the “Reference Modulation” and “Deviation” settings in PGM800Win. This allows the two point modulation and deviation settings to be adjusted for each channel.

**Note 3:** To optimise the modulation response across the switching range, repeat steps 1-4 below for each channel that will be used (usually needed only for data applications). In applications where the modulation response is less critical (e.g. voice use only), carry out steps 1-4 below on the middle channel and use the “EPOT Fill” option<sup>1</sup> in PGM800Win to copy the value to the other channels.

**Note 4:** If you are using an RF test set, turn the low pass filter off and set the high pass filter to 15kHz *before* beginning this procedure.

1. Inject an audio signal of 450Hz 1.5V rms (+5dBm) into the CTCSS input (D-range 1 (PL100) pin 8).

Key the transmitter by earthing the Tx-Key line.

2. Adjust the output from the audio generator to obtain  $\pm 3\text{kHz}$  [ $\pm 1.5\text{kHz}$ ] deviation at 450Hz.

3. Change the input frequency to 100Hz and, using PGM800Win, adjust the value of the “Reference Modulation” EPOT setting for the current channel to obtain  $\pm 3\text{kHz}$  [ $\pm 1.5\text{kHz}$ ] deviation (you can use either the mouse or up and down arrow keys).

4. Change the input frequency back to 450Hz.

Repeat steps 2 and 3 above until the deviations achieved at the two input frequencies are within 0.2dB of each other. You will need to do this at least four times.

5. Sweep the audio between 50 and 300Hz for peaks.

**Note:** A peak between 50 and 300Hz will indicate a fault condition, i.e:

- incorrect set-up
or

  - modulation circuitry fault.

The specification window is  $\pm 1\text{dB}$  relative to 150Hz from 65 to 260Hz.

---

1. Use the “EDIT FILL” button on the tool bar or go to “Edit”, “Fill”, “Epot Settings” on the menu bar.



### 3.4.5 CTCSS Encoder (If Used)

Program a CTCSS tone on the default channel using PGM800Win.

If you are using an RF test set, turn off the 300Hz high pass filter.

Key the T826/827 with the front panel "Carrier" switch.

Adjust RV805 (CTCSS level adjust) to give  $\pm 500\text{Hz}$  [ $\pm 250\text{Hz}$ ] deviation.

Set the maximum deviation as per [Section 3.4.6](#).

### 3.4.6 FM Deviation (Limiter) Adjustment

**Note:** If the T826/827 will be used over the whole 8MHz switching range, you must set the deviation for each channel. However, if the module will be used on frequencies that cover only a 1MHz (or less) switching range, you can set the deviation on the middle channel and use this value for all other channels with the "EPOT Fill" option in PGM800Win.

Inject 1kHz at -10dBm into the line input (D-range 1 (PL100) pins 1 & 4; pins 2 & 3 shorted).

Adjust RV210 (line sensitivity) fully clockwise and key the transmitter by earthing the Tx-Key line. Using PGM800Win, adjust the value of the "Deviation" EPOT setting for the current channel to obtain a deviation limit of  $\pm 4.7\text{kHz}$  [ $\pm 2.3\text{kHz}$ ] (you can use either the mouse or up and down arrow keys).

Sweep the audio frequency from 100Hz to 4kHz and ensure that the maximum deviation does not exceed  $\pm 4.7\text{kHz}$  [ $\pm 2.3\text{kHz}$ ]. Readjust "Deviation" if necessary via PGM800Win.

### 3.4.7 Line-in Level Adjustment

Remove the CTCSS signal (if used).

Set the injected signal at the line input to the required line level (typically -10 to -20dBm).

Adjust RV210 (line sensitivity) to provide  $\pm 3\text{kHz}$  [ $\pm 1.5\text{kHz}$ ] deviation.

Reapply the CTCSS signal (if required).

## 3.5 Audio Processor Links

### 3.5.1 Link Details

Use the following table to set up the audio processor to the configuration you require. You should set the audio processor links before carrying out any of the tuning and adjustment procedures. The factory settings are shown in brackets [ ].

Plug	Link <sup>a</sup>	Function
PL205	1-2 A	not connected
	[3-4] B	microphone pre-amp. output to compressor input
	5-6 C	microphone pre-amp. output to multiplexer input
PL210	[1-2] L	multiplexer output to pre-emphasis input
	3-4 M	multiplexer output to limiter input
	5-6 N	multiplexer output to compressor input
PL215	1-2 G	not connected
	[3-4] H	compressor output to multiplexer input
	5-6 I	compressor output to limiter input
	7-8 J	compressor output to pre-emphasis input
	9-10 K	not connected
PL220	1-2 D	pre-emphasis output to multiplexer input
	[3-4] E	pre-emphasis output to limiter input
	5-6 F	not connected

- a. The letters in this column and in the table in [Section 3.5.2](#) below refer to the identification letters screen printed onto the PCB beside each pair of pins.

### 3.5.2 Typical Options

	PL205	PL210	PL215	PL220
microphone pre-amp. compressed and pre-emphasised; line input pre-emphasised (standard set-up)	[3-4] B	[1-2] L	[3-4] H	[3-4] E
microphone pre-amp. compressed and pre-emphasised; line input unprocessed	3-4 B	3-4 M	7-8 J	1-2 D
line and microphone compressed and pre-emphasised	5-6 C	5-6 N	7-8 J	3-4 E
microphone pre-amp. compressed; line and microphone flat response	3-4 B	3-4 M	3-4 H	5-6 F

## 3.6 Synthesiser Alignment

- Ensure that the T826/827 has been programmed with the required frequencies using PGM800Win software.
- **Single Channel**      Select a channel using PGM800Win.  
**Multichannel**      Select the middle channel via PGM800Win.
- Connect a high impedance voltmeter to PL4-1 or the junction of L1 and R1 in the VCO (this measures the synthesiser loop voltage).
- Key the transmitter by earthing the Tx-Key line.  
**Single Channel**      Tune VCO trimmer &VC1-TX for a synthesiser loop voltage of 9V.  
**Multichannel**      Tune VCO trimmer &VC1-TX for a synthesiser loop voltage of 9V on the middle channel.  
If there is no middle channel, tune &VC1-TX so that the channels are symmetrically placed around a loop voltage of 9V.  
All channels should lie within the upper and lower limits of 13V and 5V respectively.  
Do not attempt to program channels with a greater frequency separation than the specified switching range (8MHz).
- Measure the T826/827 output frequency (at the rear panel N-type connector) and adjust the TCXO (=IC700) trimmer if required.
- **T827 Only**      Check that the exciter output power is 1W  $\pm$ 300mW (measured at the rear panel N-type connector).



**Caution:** This trimmer is susceptible to physical damage. Do not exert a downward force of more than 500g (1lb) when adjusting.

## 3.7 Output Power Adjustment (T826 Only)

Connect an RF power meter to the PA output.

Key the transmitter by earthing the Tx-Key line.

Adjust RV301 for 25W output power and check that the total current drawn is <4.5A.

Adjust RV301 for the required output power (between 5 and 25W).

## 3.8 Thermal Shutdown (T826 Only)

### 3.8.1 Normal Operation

Key the transmitter by earthing the Tx-Key line and set the output power to 25W as described in [Section 3.7](#).

Short L480 to ground by connecting solder link SL480.

Set RV302 (high temperature power adjust) for an output power of 5W.

Remove the solder link on SL480.

**Note:** The thermal shutdown temperature is factory set (%R320 and %R328) to 88°C for 25W continuous operation at 25°C ambient temperature<sup>1</sup>.

### 3.8.2 Continuous Operation

If you want to operate the transmitter continuously at 60°C ambient temperature, you must:

- reduce the output power to 10W;
- increase the thermal shutdown temperature to 105°C by changing the resistor values to those shown in the following table:

Operating Conditions/ Ambient Temperature	%R320	%R328
25W continuous @ 25°C	18k	18k
10W continuous @ 60°C	1k5	8k2

1. Ambient temperature is defined as the temperature of the air immediately surrounding the heatsink.

## 3.9 Audio Processor & CTCSS

### 3.9.1 Two Point Modulation

The T826 and T827 utilise two point modulation to obtain a wide audio bandwidth independent of the synthesiser loop filter response. This is achieved by simultaneously frequency modulating the VCO and phase modulating the synthesiser reference frequency. The relative signal levels fed to the two modulators are quite critical and cause interaction when setting up.

Both modulating signals require readjustment when the exciter is shifted in frequency greater than the switching range (i.e.  $\Delta F > \pm 4\text{MHz}$ ).

**Note 1:** In this and following sections deviation settings are given first for wide bandwidth sets, followed by settings in brackets for narrow bandwidth sets [ ].

**Note 2:** The reference modulation and limiter adjustments are controlled by 256-step electronic potentiometers (EPOTs), which are adjusted via the "Reference Modulation" and "Deviation" settings in PGM800Win. This allows the two point modulation and deviation settings to be adjusted for each channel.

**Note 3:** To optimise the modulation response across the switching range, repeat steps 1-4 below for each channel that will be used (usually needed only for data applications). In applications where the modulation response is less critical (e.g. voice use only), carry out steps 1-4 below on the middle channel and use the "EPOT Fill" option<sup>1</sup> in PGM800Win to copy the value to the other channels.

**Note 4:** If you are using an RF test set, turn the low pass filter off and set the high pass filter to 15kHz *before* beginning this procedure.

### 3.9.2 Modulator Adjustment

1. Inject an audio signal of 450Hz 1.5V rms (+5dBm) into the CTCSS input (D-range 1 (PL100) pin 8).  
Key the transmitter by earthing the Tx-Key line.
2. Adjust the output from the audio generator to obtain  $\pm 3\text{kHz}$  [ $\pm 1.5\text{kHz}$ ] deviation at 450Hz.
3. Change the input frequency to 100Hz and, using PGM800Win, adjust the value of the "Reference Modulation" EPOT setting for the current channel to obtain  $\pm 3\text{kHz}$  [ $\pm 1.5\text{kHz}$ ] deviation (you can use either the mouse or up and down arrow keys).

---

1. Use the "EDIT FILL" button on the tool bar or go to "Edit", "Fill", "Epot Settings" on the menu bar.

4. Change the input frequency back to 450Hz.  
Repeat steps 2 and 3 above until the deviations achieved at the two input frequencies are within 0.2dB of each other. You will need to do this at least four times.
5. Sweep the audio between 50 and 300Hz for peaks.

**Note:** A peak between 50 and 300Hz will indicate a fault condition, i.e:

- incorrect set-up
- or - modulation circuitry fault.

The specification window is  $\pm 1$ dB relative to 150Hz from 65 to 260Hz.

### 3.9.3 CTCSS Encoder (If Used)

Program a CTCSS tone on the default channel using PGM800Win.

If you are using an RF test set, turn off the 300Hz high pass filter.

Key the T826/827 with the front panel "Carrier" switch.

Adjust RV805 (CTCSS level adjust) to give  $\pm 500$ Hz [ $\pm 250$ Hz] deviation.

Set the maximum deviation as per [Section 3.9.4](#).

### 3.9.4 Limiter Adjustment

**Note:** If the T826/827 will be used over the whole 8MHz switching range, you must set the deviation for each channel. However, if the module will be used on frequencies that cover only a 1MHz (or less) switching range, you can set the deviation on the middle channel and use this value for all other channels with the "EPOT Fill" option in PGM800Win.

Set the links in the audio processor section as required (refer to [Section 3.5](#)).

Inject 1kHz at -10dBm into the line input (D-range 1 (PL100) pins 1 & 4; and pins 2 & 3 shorted).

Adjust RV210 (line sensitivity) fully clockwise and key the transmitter by earthing the Tx-Key line. Using PGM800Win, adjust the value of the "Deviation" EPOT setting for the current channel to obtain a deviation limit of  $\pm 4.7$ kHz [ $\pm 2.3$ kHz] (you can use either the mouse or up and down arrow keys).

Sweep the audio frequency from 100Hz to 4kHz and ensure that the maximum deviation does not exceed  $\pm 4.7$ kHz [ $\pm 2.3$ kHz]. Readjust "Deviation" if necessary via PGM800Win.

### 3.9.5 Line Level Without Compressor

This section assumes that the compressor is not used. If the compressor is required, refer to [Section 3.9.6](#).

Remove the CTCSS signal (if used).

Adjust the line sensitivity as follows:

- set the injected signal at the line input to the required line level (typically -10 to -20dBm);
- adjust RV210 (line sensitivity) to provide  $\pm 3\text{kHz}$  [ $\pm 1.5\text{kHz}$ ] deviation.

Reapply the CTCSS signal (if required).

### 3.9.6 Compressor

The compressor may be used on the line input only, the microphone input only, or on both the line and microphone inputs. If the compressor is used, refer to one of the following sections as appropriate.

#### 3.9.6.1 Compressor On Line Input Only

Set RV210 (line sensitivity) fully clockwise and key the transmitter by earthing the Tx-Key line.

Reduce the line level to -50dBm at 1kHz and set RV220 (compression level) fully clockwise.

Check that  $\pm 3\text{kHz}$  [ $\pm 1.5\text{kHz}$ ] deviation is still available.

Slowly increase the audio input level until the demodulated waveform shows significant signs of clipping (approximately  $\pm 4.5\text{kHz}$  [ $\pm 2.3\text{kHz}$ ] deviation).

Adjust RV220 anticlockwise until the demodulated waveform is just clipping (approximately  $\pm 4\text{kHz}$  [ $\pm 2\text{kHz}$ ] deviation).

Increase the input level to -10dBm and check that the test tone is still held just into clipping. The input line level should be typically -10 to -20dBm.

#### 3.9.6.2 Compressor On Microphone Input Only

Key the transmitter by earthing the Tx-Key line and plug a microphone jack into the front panel socket.

Adjust RV220 (compression level) fully clockwise.

Acoustically couple the microphone to a tone box (1kHz) and close the PTT switch.

Increase the audio level until the demodulated waveform shows significant signs of clipping (approximately  $\pm 4.5\text{kHz}$  [ $\pm 2.3\text{kHz}$ ] deviation).

Adjust RV220 anticlockwise until the demodulated waveform is just clipping (approximately  $\pm 4\text{kHz}$  [ $\pm 2\text{kHz}$ ] deviation).

Increase the audio level by 10dB and verify that the test tone is held just into clipping.

Whistle steadily into the microphone, checking that approximately  $\pm 4\text{kHz}$  [ $\pm 2\text{kHz}$ ] deviation is produced. The modulated waveform should be basically sinusoidal.

Speak into the microphone, checking that the modulation peaks reach about  $\pm 5\text{kHz}$  [ $\pm 2.5\text{kHz}$ ] deviation.

As the line is to be used without compression, set RV210 (line sensitivity) as described in [Section 3.9.5](#).

### **3.9.6.3      Compressor On Both Line & Microphone Inputs**

Set up as described in [Section 3.9.6.1](#).



## 6 T826/827 PCB Information



**Caution:** This equipment contains CMOS devices which are susceptible to damage from static charges. Refer to [Section 1.2](#) in Part A for more information on anti-static procedures when handling these devices.

This section provides the following information on the T826 transmitter and T827 exciter:

- parts lists
- grid reference indexes
- PCB layouts
- circuit diagrams.



Section	Title	IPN	Page
6.1	Introduction		6.1.3
6.2	T826 Transmitter PCB	220-01443-04	6.2.1
6.3	T827 Exciter PCB	220-01447-04	6.3.1



## 6.1 Introduction

### Product Type Identification

You can identify the transmitter or exciter type by checking the product code printed on a label on the rear of the chassis (product codes are explained in [Section 1.3](#) in this Part of the manual, and [Figure 1.1](#) in Part A shows typical labels). You can further verify the product type by checking the placement of an SMD resistor in the table that is screen printed onto the top side of the PCB, similar to the example drawn below. In this example, the resistor indicates that the product was built as a T826-10-XXXX.

 T82610
 T82615
PRODUCT TYPE

**Note:** The only function of this resistor is to indicate the product type. It has no effect on the circuitry or operation of the transmitter or exciter.

### PCB Identification

All PCBs are identified by a unique 10 digit “internal part number” (IPN), e.g. 220-01390-02, which is screen printed onto the PCB (usually on the top side), as shown in the example below:



The last 2 digits of this number define the issue status, which starts at 00 and increments through 01, 02, 03, etc. as the PCB is updated. Some issue PCBs never reach full production status and are therefore not included in this manual. A letter following the 10 digit IPN has no relevance in identifying the PCB for service purposes.

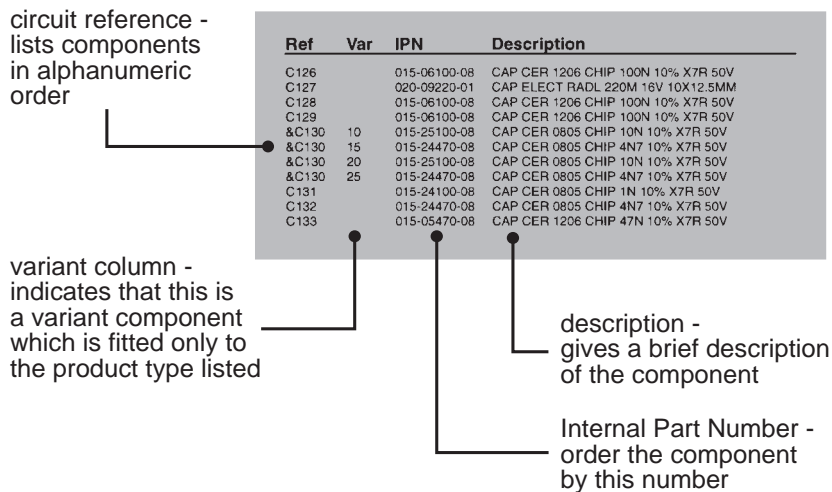
**Note:** It is important that you identify which issue PCB you are working on so that you can refer to the appropriate set of PCB information.

### Parts Lists

The 10 digit numbers (000-00000-00) in this Parts List are “internal part numbers” (IPNs). We can process your spare parts orders more efficiently and accurately if you quote the IPN and provide a brief description of the part.

The components listed in this parts list are divided into two main types: those with a circuit reference (e.g. C2, D1, R121, etc.) and those without (miscellaneous and mechanical).

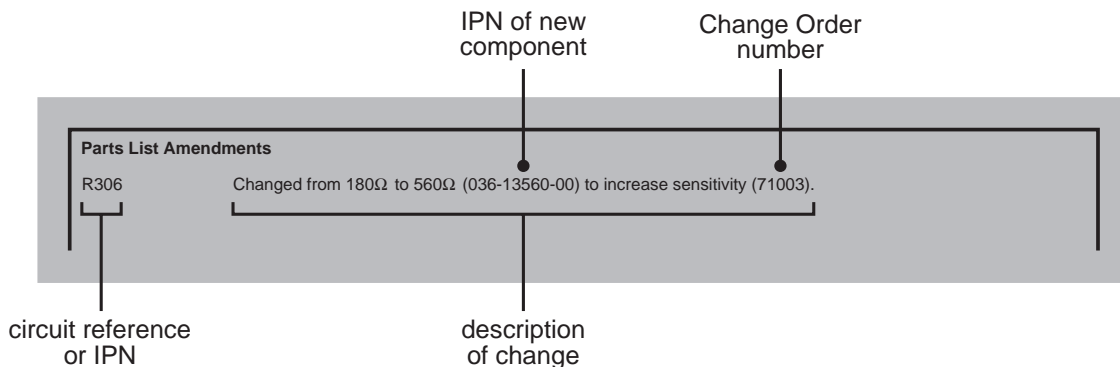
Those with a circuit reference are grouped in alphabetical order and then in numerical order within each group. Each component entry comprises three or four columns, as shown below:



The miscellaneous and mechanical section lists the variant and common parts in IPN order.

### Parts List Amendments

At the front of the parts list is the Parts List Amendments box (an example of which is shown below). This box contains a list of component changes which took place after the parts list and diagrams in this section were compiled. These changes (e.g. value changes, added/deleted components, etc.) are listed by circuit reference in alphanumeric order and supersede the information given in the parts list or diagrams. Components without circuit references are listed in IPN order. The number in brackets at the end of each entry refers to the Tait internal Change Order document.



## Variant Components

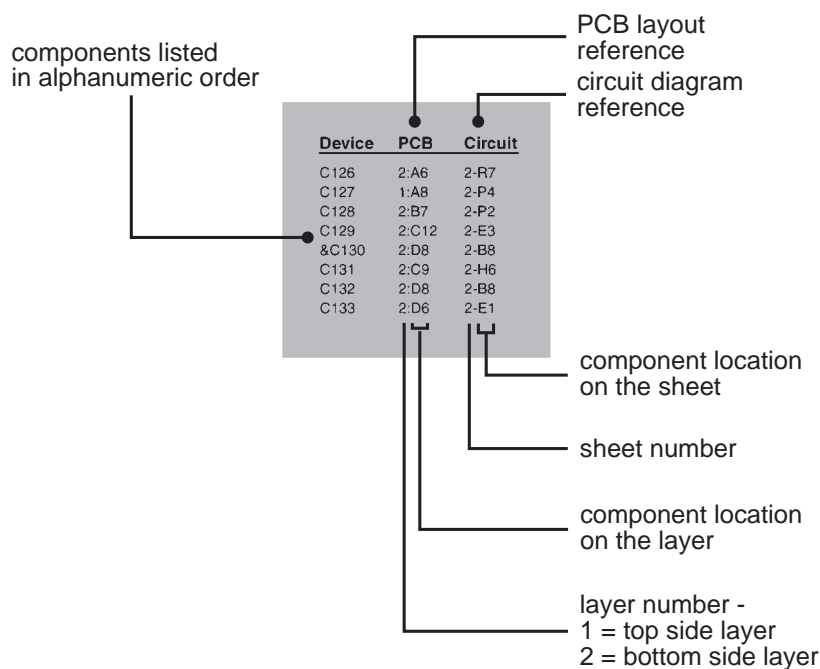
A variant component is one that has the same circuit reference but different value or specification in different product types. Where two products share the same PCB, the term “variant” is also used to describe components unplaced in one product. Variant components have a character prefix, such as “&”, “=” or “#”, before the circuit reference (e.g. &R100).

The table below explains the variant prefixes used in T800 Series II products:

If the variant prefix is. . .	the component will. . .
&	change according to channel spacing
=	change according to frequency stability
#	change according to frequency range
%	change or be placed/unplaced for special applications
*	be unplaced in one product (where two products share the same PCB)

## Grid Reference Index

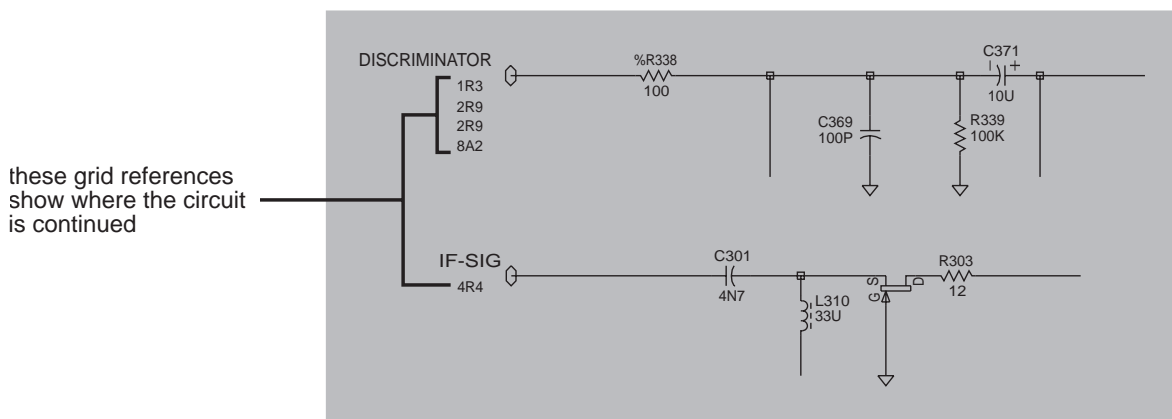
This section contains a component grid reference index to help you find components and labelled pads on the PCB layouts and circuit diagrams. This index lists the components and pads in alphanumeric order, along with the appropriate alphanumeric grid references, as shown below:



## Using CAD Circuit Diagrams

Reading a CAD circuit diagram is similar to reading a road map, in that both have an alphanumeric border. The circuit diagrams in this manual use letters to represent the horizontal axis, and numbers for the vertical axis. These circuit diagram “grid references” are useful in following a circuit that is spread over two or more sheets.

When a line representing part of the circuitry is discontinued, a reference will be given at the end of the line to indicate where the rest of the circuitry is located, as shown below. The first digit refers to the sheet number and the last two characters refer to the location on that sheet of the continuation of the circuit (e.g. 1R3).



## 6.2 T826 Transmitter PCB

This section contains the following information.

IPN	Section	Page
220-01443-04	Parts List	6.2.3
	Mechanical & Miscellaneous Parts	6.2.10
	Grid Reference Index	6.2.11
	PCB Layout - Top Side	6.2.15
	PCB Layout - Bottom Side	6.2.16
	Transmitter Overview Diagram	6.2.17
	Audio Processor Circuit Diagram	6.2.18
	Exciter Circuit Diagram	6.2.19
	PA Circuit Diagram	6.2.20
	VCO Section Circuit Diagram	6.2.21
	Regulators Circuit Diagram	6.2.22
	Synthesiser Circuit Diagram	6.2.23
	Microcontroller Circuit Diagram	6.2.24
Harmonic Filter Circuit Diagram	6.2.25	





## T826 Parts List (IPN 220-01443-04)

### How To Use This Parts List

The components listed in this parts list are divided into two main types: those with a circuit reference (e.g. C2, D1, R121, etc.) and those without (miscellaneous and mechanical).

Those with a circuit reference are grouped in alphabetical order and then in numerical order within each group. Each component entry comprises three or four columns: the circuit reference, variant (if applicable), IPN and description. A number in the variant column indicates that this is a variant component which is fitted only to the product type listed. Static sensitive devices are indicated by an (S) at the start of the description column.

The miscellaneous and mechanical section lists the variant and common parts in IPN order. Where possible, a number in the legend column indicates their position in the mechanical assembly drawing.

The Parts List Amendments box below lists component changes that took place after the parts list and diagrams in this section were compiled. These changes (e.g. value changes, added/deleted components, etc.) are listed by circuit reference in alphanumeric order and supersede the information given in the parts list or diagrams. Components without circuit references are listed in IPN order.

### Parts List Amendments

There were no amendments to the parts list at the time of publication.

**Parts List Amendments - Continued**

This page is provided for entering future amendments to the parts list.

Ref	Var	IPN	Description	Ref	Var	IPN	Description
<b>Note:</b> %D205 and %D210 are optional level limiting diodes for special applications.  =R705 (47 ohm) and =SK710 are fitted in place of =IC700 when an external frequency reference is used. These two components are supplied with the auxiliary D-range kits (T800-06-0000 & T800-06-0001).				C328		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C329		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C330		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C331		015-24100-08	CAP CER 0805 1N 10% X7R 50V
C332		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C333		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C334		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C335		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C336		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C337		015-25220-08	CAP CER 0805 22N 10% X7R 50V				
C338		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C339		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C340		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C341		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C342		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C344		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C346		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C347		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C348		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C349		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C350		015-23100-01	CAP CER 0805 100P 5% NPO 50V				
C351		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C352		015-22470-01	CAP CER 0805 47P 5% NPO 50V				
C353		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C354		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C355		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C356		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C357		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C358		014-07100-02	CAP TANT CHIP 1U0 3.2 X 1.6MM				
C359		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C360		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C361		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C362		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C363		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C364		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C365		014-18220-02	LJCAP TANT SMD 22U 20% 35V				
C366		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C367		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C369		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C370		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C371		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C372		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C373		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C374		015-25100-08	CAP CER 0805 10N 10% X7R 50V				
C375		015-22100-01	CAP CER 0805 10P+-1/2P NPO 50V				
C376		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C377		015-22220-01	CAP CER 0805 22P 5% NPO 50V				
C378		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C379		014-07470-04	CAP TANT SMD 4U7 50V 20%				
C380		015-22560-01	CAP CER 0805 56P 5% NPO 50V				
C381		015-04100-06	CAP CER 1210 1NF NPO200V GRM42				
C385		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C386		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C387		014-07470-01	CAP 4U7 'B'CASE 25V +-10% 267				
C388		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C389		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM				
C390		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C393		015-25100-08	CAP CER 0805 10N 10% X7R 50V				
C395		014-07470-01	CAP 4U7 'B'CASE 25V +-10% 267				
C396		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C397		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C400		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C401		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C402		015-26100-08	CAP CER 0805 100N 10% X7R 50V				
C403		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C410		015-22820-01	CAP CER 0805 82P 5% NPO 50V				
C411		015-03100-06	CAP CER 1210 100P NPO500VGRM42				
C412		014-07470-04	CAP TANT SMD 4U7 50V 20%				
C413		015-02680-06	CAP CER 1210 68P NPO500VGRM42				
C414		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C415		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C416		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C425		015-03120-06	CAP CER 1210 120P NPO500VGRM42				
C426		015-03680-06	CAP CER 1210 680P NPO200VGRM42				
C427		014-07470-04	CAP TANT SMD 4U7 50V 20%				
C428		015-03470-03	CAP CER 470P 5% NPO200V GRH111				
C429		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C430		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C431		015-05470-08	CAP CER 1206 47N 10% X7R 50V				
C440		015-02470-06	CAP CER 1210 47P NPO500VGRM42				
C441		015-02470-06	CAP CER 1210 47P NPO500VGRM42				
C442		015-03120-06	CAP CER 1210 120P NPO500VGRM42				
C443		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C444		015-03150-06	CAP CER 1210 150P NPO500VGRM42				
C445		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C446		015-02390-06	CAP CER 1210 39P NPO500VGRM42				
C447		015-02390-06	CAP CER 1210 39P NPO500VGRM42				
C448		015-03680-06	CAP CER 1210 680P NPO200VGRM42				
C449		015-21560-01	CAP CER 0805 5P6+-1/4P NPO 50V				
C450		015-21560-01	CAP CER 0805 5P6+-1/4P NPO 50V				
C451		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C452		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C480		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C503		015-24220-08	CAP CER 0805 2N2 10% X7R 50V				
C505		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C510		015-25220-08	CAP CER 0805 22N 10% X7R 50V				
C514		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C515		015-24100-08	CAP CER 0805 1N 10% X7R 50V				

Ref	Var	IPN	Description	Ref	Var	IPN	Description
C516		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C838		014-09100-00	CAP TANT SMD 100U 16V 20%
C520		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C841		014-09100-00	CAP TANT SMD 100U 16V 20%
C522		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C844		015-25100-08	CAP CER 0805 10N 10% X7R 50V
C530		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C900		015-02330-06	CAP CER 1210 33P 500V GRM42
C535		015-26100-08	CAP CER 0805 100N 10% X7R 50V	C901		015-02330-06	CAP CER 1210 33P 500V GRM42
C536		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C902		015-02330-06	CAP CER 1210 33P 500V GRM42
C537		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C903		015-02220-06	CAP CER 1210 22P 5% 500V GRM42
C545		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C904		015-02270-06	CAP CER 1210 27P NPO500V/GRM42
C546		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C905		015-02330-06	CAP CER 1210 33P 500V GRM42
C550		014-08220-01	(L)CAP TANT 22UF10V276MSER	C906		015-02330-06	CAP CER 1210 33P 500V GRM42
C600		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C907		015-02330-06	CAP CER 1210 33P 500V GRM42
C601		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C605		015-23120-01	CAP CER 0805 120P 5% NPO 50V	%D111A	10	001-10015-50	DIODE SMD ZENER 1.5SMC22AT3
C610A		015-25100-08	CAP CER 0805 10N 10% X7R 50V	%D111A	15	001-10015-50	DIODE SMD ZENER 1.5SMC22AT3
C610B		014-09100-00	CAP TANT SMD 100U 16V 20%	D220		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23
C611A		014-09100-00	CAP TANT SMD 100U 16V 20%	D230		001-10010-40	DIODE SMD ZENER 33V BZG03-C33
C611B		015-25100-08	CAP CER 0805 10N 10% X7R 50V	D240		001-10000-56	S) DIODE SMD BAW56 D-SW SOT23
C615		015-24100-08	CAP CER 0805 1N 10% X7R 50V	D250		001-10000-56	S) DIODE SMD BAW56 D-SW SOT23
C616		015-24100-08	CAP CER 0805 1N 10% X7R 50V	D260		001-10000-56	S) DIODE SMD BAW56 D-SW SOT23
C623		015-23120-01	CAP CER 0805 120P 5% NPO 50V	D270		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23
C625		020-09470-07	CAPEL470M16V20%V 8*20 3.5L.ESR	D300		001-10000-18	S) DIODE SMD BAT18 S-SW SOT23
C626		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	D301		001-10000-18	S) DIODE SMD BAT18 S-SW SOT23
C628		015-24100-08	CAP CER 0805 1N 10% X7R 50V	D302		001-10000-18	S) DIODE SMD BAT18 S-SW SOT23
C630		015-26100-08	CAP CER 0805 100N 10% X7R 50V	D303		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23
C631A		015-26100-08	CAP CER 0805 100N 10% X7R 50V	D440		001-10066-00	DIODE SCHOTTKY HSMS2815
C634		014-08100-00	CAP TANT CHIP 10M 16VW +20%	D441		001-10066-00	DIODE SCHOTTKY HSMS2815
C636		015-26100-08	CAP CER 0805 100N 10% X7R 50V	D610		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23
C638		015-23120-01	CAP CER 0805 120P 5% NPO 50V	D620		001-10000-70	S) DIODE SMD BAV70 D-SW SOT23
C640		015-24100-08	CAP CER 0805 1N 10% X7R 50V	D630		001-10000-70	S) DIODE SMD BAV70 D-SW SOT23
C655		015-24100-08	CAP CER 0805 1N 10% X7R 50V	D635		001-10165-00	DIODE BAT165 SCHOTTKY SOD-323
C660		015-26100-08	CAP CER 0805 100N 10% X7R 50V	D640		001-10000-70	S) DIODE SMD BAV70 D-SW SOT23
C665		014-08100-03	CAP TANT SMD 10U 35V 20%	D645		001-10010-40	DIODE SMD ZENER 33V BZG03-C33
C670		014-07330-10	CAP TANT SMD 3U3 35V 10%	D710		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23
C673		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	D720		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23
C677		014-07100-02	CAP TANT CHIP 1U0 3.2 X 1.6MM	D730		001-10165-00	DIODE BAT165 SCHOTTKY SOD-323
C681		015-26100-08	CAP CER 0805 100N 10% X7R 50V	D740		001-10165-00	DIODE BAT165 SCHOTTKY SOD-323
C684		014-08100-00	CAP TANT CHIP 10M 16VW +20%	D810		001-10165-00	DIODE BAT165 SCHOTTKY SOD-323
C687		015-23120-01	CAP CER 0805 120P 5% NPO 50V				
C690		015-26100-08	CAP CER 0805 100N 10% X7R 50V	IC210		002-10003-24	S) IC SMD 324 4X O-AMP SO14
C693		014-08100-00	CAP TANT CHIP 10M 16VW +20%	IC220		002-10126-70	S) IC SMD DS1267S10K 2XDIG POT
C700		015-26100-08	CAP CER 0805 100N 10% X7R 50V	IC230		002-10003-24	S) IC SMD 324 4X O-AMP SO14
C703		015-24100-08	CAP CER 0805 1N 10% X7R 50V	IC240		002-10040-53	S)JMC14053B SMD BREAK B4 MAKE
C706		015-22470-01	CAP CER 0805 47P 5% NPO 50V	IC250		002-10020-50	IC SMD 4N25A OPTOCOUPLER
C708		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	IC260		002-10003-24	S) IC SMD 324 4X O-AMP SO14
C709		015-26100-08	CAP CER 0805 100N 10% X7R 50V	IC300		002-10003-58	S) IC SMD LM358 DUAL O-AMP
C710		015-25100-08	CAP CER 0805 10N 10% X7R 50V	IC310		002-10003-58	S) IC SMD LM358 DUAL O-AMP
C712		015-22470-01	CAP CER 0805 47P 5% NPO 50V	IC385		002-12951-00	IC SMD LP2951CM ADJ VLTGE REG
C714		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	IC610		002-10078-05	S) IC SMD 78L05 5V REG
C719		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	IC630		002-12523-17	(S)IC LM317L REG TO-252 0.5A
C720		015-26100-08	CAP CER 0805 100N 10% X7R 50V	IC640		002-10003-58	S) IC SMD LM358 DUAL O-AMP
C722		015-26100-08	CAP CER 0805 100N 10% X7R 50V	IC650		002-10012-32	SMD DS1232LPS-2 LP RESET&W-DOG
C724		014-08220-01	(L)CAP TANT 22UF10V276MSER	=IC700	10	539-00010-41	TCXO 12.8MHZ +-2.5PPM -30 +70C
C725		014-08220-01	(L)CAP TANT 22UF10V276MSER	=IC700	15	539-00010-41	TCXO 12.8MHZ +-2.5PPM -30 +70C
C726		015-25100-08	CAP CER 0805 10N 10% X7R 50V	IC710		002-74900-04	S) IC SMD 74HC04D 6X INV BUFFD
C727		015-23220-01	CAP CER 0805 220P 5% NPO 50V	IC720		002-74910-04	S) IC SMD 74HCU04 6X INV
C729		015-23220-01	CAP CER 0805 220P 5% NPO 50V	IC730		002-10045-20	S) IC SMD 74HC4520T 2XCTR 4BIT
%C733	10	015-23470-08	CAP CER 0805 470P 10% X7R 50V	IC740		002-14519-10	S) IC MC145191F SMD SYNTH
%C733	15	015-23470-08	CAP CER 0805 470P 10% X7R 50V	IC750		002-10330-78	S) IC MC33078D 2X AMP LO NOISE
C735		015-22470-01	CAP CER 0805 47P 5% NPO 50V	IC820		002-12416-00	S)IC SMD AT24C16N-10SC EEPROM
C736		015-22470-01	CAP CER 0805 47P 5% NPO 50V	IC830		002-10003-24	S) IC SMD 324 4X O-AMP SO14
C740A		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L300		056-10820-02	(L) IND SMD 820NH
C740B		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L301		056-10820-02	(L) IND SMD 820NH
C741A		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	L302		056-10820-02	(L) IND SMD 820NH
C741B		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L303		052-08355-40	COIL A/W 4T/5.5mm SMD 0.8mm
C742A		015-26100-08	CAP CER 0805 100N 10% X7R 50V	L304		052-08350-20	COIL A/W 2T/5.0MM SMD 0.8MM
C742B		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L305		052-08330-50	COIL A/W 5T/3.0MM SMD 0.8MM
C743		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L306		056-10820-02	(L) IND SMD 820NH
C745		015-23120-01	CAP CER 0805 120P 5% NPO 50V	L307		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C750		014-08100-03	CAP TANT SMD 10U 35V 20%	L308		056-10102-12	IND SMD 1u2 1812CS 5%
C757		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L309		052-08340-50	COIL A/W 5T/4.0MM SMD 0.8MM
C759		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L310		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C761		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L330		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C762		014-08220-01	(L)CAP TANT 22UF10V276MSER	L385		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C764		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L400		056-00021-00	IND FXD 3.3UH AX
C765		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	L401		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C767		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L410		052-08135-55	COIL A/W 5.5T/3.5MM HOR 0.8MM
C769		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L411		052-08140-15	COIL A/W 1.5T/4.0MM HOR 0.8MM
C770		014-08220-01	(L)CAP TANT 22UF10V276MSER	L412		065-00010-01	BEAD FERR 3B 6 HOLE
C772		014-08220-01	(L)CAP TANT 22UF10V276MSER	L413		052-08140-65	COIL A/W 6.5T/4.0MM HOR 0.8MM
C776		015-25220-08	CAP CER 0805 22N 10% X7R 50V	L414		065-00010-01	BEAD FERR 3B 6 HOLE
C778		022-07100-05	CAP METAL PPS 1U 20% 63V 5MM	L415		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C780		015-26100-08	CAP CER 0805 100N 10% X7R 50V	L416		056-00021-04	IND FXD 330NH AX (uH33)
C781		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L425		052-08130-25	COIL A/W 2.5T/3.0MM HOR 0.8MM
C782		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L426		052-08320-10	COIL A/W 1T/2.0MM SMD 0.8MM
C783		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L427		065-00010-01	BEAD FERR 3B 6 HOLE
C784		015-23100-01	CAP CER 0805 100P 5% NPO 50V	L428		052-08150-55	COIL A/W 5.5T/5.0MM HOR 0.8MM
C785		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L440		052-08130-15	COIL A/W 1.5T/3.0MM HOR 0.8MM
C786		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L441		052-08140-35	COIL A/W 3.5T/4.0MM HOR 0.8MM
C810		015-25470-08	CAP CER 0805 47N 10% X7R 50V	L442		056-14330-02	(L) IND SMD 3.3UH
C812		015-23100-01	CAP CER 0805 100P 5% NPO 50V	L443		056-10820-02	(L) IND SMD 820NH
C813		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L444		056-10820-02	(L) IND SMD 820NH
C822		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	L445		056-14330-02	(L) IND SMD 3.3UH
C823		015-25220-08	CAP CER 0805 22N 10% X7R 50V	L480		056-10820-02	(L) IND SMD 820NH
C824		015-25470-08	CAP CER 0805 47N 10% X7R 50V	L520		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C826		015-23220-01	CAP CER 0805 220P 5% NPO 50V	L535		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C827		015-22330-01	CAP CER 0805 33P 5% NPO 50V	L600		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C828		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L615		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C830		015-25470-08	CAP CER 0805 47N 10% X7R 50V				

Ref	Var	IPN	Description	Ref	Var	IPN	Description
L780		056-10330-02	(L) IND SMD 330NH	R233		036-16100-00	RES M/F 0805 100K 5%
L900		052-08135-85	COIL A/W 8.5T/3.5MM HOR 0.8MM	R235		036-14470-10	RES M/F 0805 4K7 1%
L901		052-08155-45	COIL A/W 4.5T/5.5MM HOR 0.8MM	R237		036-15470-10	RES M/F 0805 47K 1%
L902		052-08155-45	COIL A/W 4.5T/5.5MM HOR 0.8MM	R238		036-15470-10	RES M/F 0805 47K 1%
L903		052-08135-85	COIL A/W 8.5T/3.5MM HOR 0.8MM	R239		036-14150-10	RES M/F 0805 1K5 1%
L904		052-08155-15	COIL A/W 1.5T/5.5MM HOR 0.8MM	R241		036-14470-10	RES M/F 0805 4K7 1%
				R242		036-14220-00	RES M/F 0805 2K2 5%
PL100		070-01001-00	D-RANGE 15 WAY COMPL T800	R244		036-15100-10	RES M/F 0805 10K 1%
PL205		240-00020-67	HEADER 6W 2X3 PCB MTG STD	R245		036-16100-00	RES M/F 0805 100K 5%
PL210		240-00020-67	HEADER 6W 2X3 PCB MTG STD	R247		036-15100-10	RES M/F 0805 10K 1%
PL215		240-00020-44	HEADER 10W X2R PCB MTG 5*2	R248		036-16100-00	RES M/F 0805 100K 5%
PL220		240-00020-67	HEADER 6W 2X3 PCB MTG STD	R249		036-16100-00	RES M/F 0805 100K 5%
				R251		036-16100-00	RES M/F 0805 100K 5%
Q210		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R253		036-16100-00	RES M/F 0805 100K 5%
Q220		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	R254		036-16100-00	RES M/F 0805 100K 5%
Q230		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R255		036-15100-10	RES M/F 0805 10K 1%
Q240		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R256		036-15470-10	RES M/F 0805 47K 1%
Q250		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	R257		036-16560-00	RES M/F 0805 560K 5%
Q260		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R258		036-16150-00	RES M/F 0805 150K 5%
Q270		000-10004-10	S) XSTR SMD MJD41C NPN SW DPAK	R259		036-15220-00	RES M/F 0805 22K 5%
Q300		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R260		036-15470-10	RES M/F 0805 47K 1%
Q301		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R262		036-15470-10	RES M/F 0805 47K 1%
Q302		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R263		036-14470-10	RES M/F 0805 4K7 1%
Q303		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	&R264	10	036-15220-00	RES M/F 0805 22K 5%
Q304		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	&R264	15	036-15270-10	RES M/F 0805 27K 1%
Q305		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	&R265	10	036-15150-00	RES M/F 0805 15K 5%
Q307		000-10095-10	S) XSTR SMD BR951 NPN UHF	&R265	15	036-15180-00	RES M/F 0805 18K 5%
Q308		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	&R266	10	036-15470-10	RES M/F 0805 47K 1%
Q309		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	&R266	15	036-15560-10	RES MF 0805 56K 1%
Q310		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R267		036-14220-00	RES M/F 0805 2K2 5%
Q311		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R268		036-13100-10	RES M/F 0805 100E 1%
Q312		000-10938-20	L)XSTR MRF9382TI HI FRQ PWRFR	R269		036-15100-10	RES M/F 0805 10K 1%
Q315		000-00033-12	XSTR BD242 TO-220 PNP ISOLD	R270		036-14120-00	RES M/F 0805 1K2 5%
Q360		000-10017-00	LS) XSTR SMD BF170LT1 SOT23	R271		036-17100-10	RES M/F 0805 1M 1%
Q415		000-00026-27	S) XSTR 2SC2627 NPN 5W VHF STD	R272		036-13560-00	RES M/F 0805 560E 5%
Q425		000-00000-60	S) XSTR BLW60C 45W 175MHZ RF	R273		036-15120-00	RES M/F 0805 12K 5%
Q510		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R274		036-15150-00	RES M/F 0805 15K 5%
Q520		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R275		036-14270-00	RES M/F 0805 2K2 5%
Q530		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R277		036-16100-00	RES M/F 0805 100K 5%
Q540		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R278		036-16120-00	RES M/F 0805 120K 5%
Q550		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R279		036-17100-10	RES M/F 0805 1M 1%
Q610		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	R280		036-15100-10	RES M/F 0805 10K 1%
Q620		000-00033-12	XSTR BD242 TO-220 PNP ISOLD	R282		036-15560-10	RES MF 0805 56K 1%
Q630		000-10003-00	S) XSTR BSR30 PNP AF SOT-89	R283		036-15560-10	RES MF 0805 56K 1%
Q660		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	R284		036-17100-10	RES M/F 0805 1M 1%
Q670		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R285		036-10000-00	RES M/F 0805 ZERO OHM
Q710		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R286		036-14220-00	RES M/F 0805 2K2 5%
Q720		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R287		036-15100-10	RES M/F 0805 10K 1%
Q730		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R288		036-15120-00	RES M/F 0805 12K 5%
Q740		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R289		036-16100-00	RES M/F 0805 100K 5%
Q750		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF	&R290	10	036-13560-00	RES M/F 0805 560E 5%
Q760		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	&R290	15	036-13560-00	RES M/F 0805 560E 5%
Q770		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R291		036-10000-00	RES M/F 0805 ZERO OHM
Q775		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R292		036-14470-10	RES M/F 0805 4K7 1%
Q780		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R293		036-15470-10	RES M/F 0805 47K 1%
Q785		000-10008-57	S) XSTR SMD BCW70 NPN SOT23 SS	R294		036-14470-10	RES M/F 0805 4K7 1%
Q790		000-10003-12	S) XSTR SMD BFR31 N JFET SOT23	R295		036-14270-00	RES M/F 0805 2K7 5%
Q795		000-10057-10	S) XSTR SMD BR571 NPN SOT23	R296		036-14100-10	RES M/F 0805 1K 1%
Q810		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R297		036-14560-00	RES M/F 0805 5K6 5%
Q820		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	%R298	10	036-16100-00	RES M/F 0805 100K 5%
Q830		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	%R298	15	036-16100-00	RES M/F 0805 100K 5%
Q840		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R299		036-14270-00	RES M/F 0805 2K7 5%
Q850		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R300		036-15100-10	RES M/F 0805 10K 1%
Q860		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R301		036-14100-10	RES M/F 0805 1K 1%
				RV301		042-04220-05	RES PRESET SMD 2K CER 4MM SQ
R160		036-12100-00	RES M/F 0805 10E 5%	R302		036-14100-10	RES M/F 0805 1K 1%
R201		036-13560-00	RES M/F 0805 560E 5%	RV302		042-06500-05	RES PRESET SMD 500K CER 4MM SQ
R202		036-14100-10	RES M/F 0805 1K 1%	R303		036-15220-00	RES M/F 0805 22K 5%
R204		036-14220-00	RES M/F 0805 2K2 5%	R304		036-14150-10	RES M/F 0805 1K5 1%
R205		036-13220-10	RES 0805 220E 1%	R305		036-15330-00	RES M/F 0805 33K 5%
R206		036-14100-10	RES M/F 0805 1K 1%	R306		036-14470-10	RES M/F 0805 4K7 1%
R207		036-14390-10	RES M/F 0805 3K9 1%	R307		036-15100-10	RES M/F 0805 10K 1%
R208		036-13560-00	RES M/F 0805 560E 5%	R308		036-15100-10	RES M/F 0805 10K 1%
R209		036-15100-10	RES M/F 0805 10K 1%	R309		036-12470-00	RES M/F 0805 47E 5%
R210		036-14220-00	RES M/F 0805 2K2 5%	R310		036-15100-10	RES M/F 0805 10K 1%
RV210		040-05100-23	POT 10K LOG PCB 15MM SLOT SFT	R311		036-13100-10	RES M/F 0805 100E 1%
R211		036-13470-00	RES M/F 0805 470E 5%	R312		036-14470-10	RES M/F 0805 4K7 1%
R212		036-16100-00	RES M/F 0805 100K 5%	R313		036-13560-00	RES M/F 0805 560E 5%
R213		036-15100-10	RES M/F 0805 10K 1%	R314		036-13560-00	RES M/F 0805 560E 5%
R214		036-14820-10	RES M/F 0805 8K2 1%	R315		036-11330-00	RES M/F 0805 3E3 5%
R215		036-16100-00	RES M/F 0805 100K 5%	R316		036-14150-10	RES M/F 0805 1K5 1%
R216		036-16100-00	RES M/F 0805 100K 5%	R317		036-14560-00	RES M/F 0805 5K6 5%
R217		036-14100-10	RES M/F 0805 1K 1%	R318		036-14270-00	RES M/F 0805 2K7 5%
R218		036-16150-00	RES M/F 0805 150K 5%	R319		036-15100-10	RES M/F 0805 10K 1%
R219		036-14220-00	RES M/F 0805 2K2 5%	%R320	10	036-15180-00	RES M/F 0805 18K 5%
R220		036-13470-00	RES M/F 0805 470E 5%	%R320	15	036-15180-00	RES M/F 0805 18K 5%
RV220		042-05500-05	RES PRESET SMD 50K CER 4MM SQ	R321		036-15100-10	RES M/F 0805 10K 1%
R221		036-14150-10	RES M/F 0805 1K5 1%	R322		036-14220-00	RES M/F 0805 2K2 5%
R223		036-17100-10	RES M/F 0805 1M 1%	R323		036-15470-10	RES M/F 0805 47K 1%
R224		036-14680-10	RES M/F 0805 6K8 1%	R324		036-15220-00	RES M/F 0805 22K 5%
R225		036-17100-10	RES M/F 0805 1M 1%	R325		036-15470-10	RES M/F 0805 47K 1%
R226		036-15100-10	RES M/F 0805 10K 1%	R326		036-15470-10	RES M/F 0805 47K 1%
R227		036-14220-00	RES M/F 0805 2K2 5%	R327		036-15470-10	RES M/F 0805 47K 1%
R228		036-13120-00	RES M/F 0805 120E 5%	%R328	10	036-15180-00	RES M/F 0805 18K 5%
R229		036-16470-00	RES M/F 0805 470K 5%	%R328	15	036-15180-00	RES M/F 0805 18K 5%
R230		036-16100-00	RES M/F 0805 100K 5%	R329		036-14150-10	RES M/F 0805 1K5 1%
R231		036-15100-10	RES M/F 0805 10K 1%	R330		036-16100-00	RES M/F 0805 100K 5%
R232		036-16330-00	RES M/F 0805 330K 5%	R331		036-15100-10	RES M/F 0805 10K 1%

Ref	Var	IPN	Description	Ref	Var	IPN	Description
R332		036-14220-00	RES M/F 0805 2K2 5%	R633		036-14680-10	RES M/F 0805 6K8 1%
R333		036-12680-00	RES M/F 0805 68E 5%	R637		036-12220-00	RES M/F 0805 22E 5%
R334		036-15220-00	RES M/F 0805 22K 5%	R638		036-12220-00	RES M/F 0805 22E 5%
R335		036-12680-00	RES M/F 0805 68E 5%	R640		036-12100-00	RES M/F 0805 10E 5%
R336		036-15100-10	RES M/F 0805 10K 1%	R641		036-14150-10	RES M/F 0805 1K5 1%
R337		036-16100-00	RES M/F 0805 100K 5%	R645		036-13470-00	RES M/F 0805 470E 5%
R338		036-16100-00	RES M/F 0805 100K 5%	R649		036-14470-10	RES M/F 0805 4K7 1%
R339		036-15150-00	RES M/F 0805 15K 5%	R653		036-15100-10	RES M/F 0805 10K 1%
R340		036-16100-00	RES M/F 0805 100K 5%	R655		036-10000-00	RES M/F 0805 ZERO OHM
R341		036-15150-00	RES M/F 0805 15K 5%	R656		036-10000-00	RES M/F 0805 ZERO OHM
R342		036-15100-10	RES M/F 0805 10K 1%	R657		036-15100-10	RES M/F 0805 10K 1%
R343		036-15470-10	RES M/F 0805 47K 1%	R661		036-15100-10	RES M/F 0805 10K 1%
R344		036-16470-00	RES M/F 0805 470K 5%	R665		036-16100-00	RES M/F 0805 100K 5%
R345		036-03150-02	RES RC-01 1206 150E 200V 250MW	R669		036-15470-10	RES M/F 0805 47K 1%
R346		036-12220-00	RES M/F 0805 22E 5%	R673		036-16100-00	RES M/F 0805 100K 5%
R347		036-12270-00	RES M/F 0805 27E 5%	R677		036-15470-10	RES M/F 0805 47K 1%
R348		036-16330-00	RES M/F 0805 330K 5%	R681		036-13100-10	RES M/F 0805 100E 1%
R349		036-14100-10	RES M/F 0805 1K 1%	R685		036-15150-00	RES M/F 0805 15K 5%
R350		036-13330-00	RES M/F 0805 330E 5%	R689		036-12100-00	RES M/F 0805 10E 5%
R351		036-14100-10	RES M/F 0805 1K 1%	R693		036-16100-00	RES M/F 0805 100K 5%
R352		036-14100-10	RES M/F 0805 1K 1%	R696		036-15560-1K	RES M/F 0805 56K 1%
R353		036-10000-00	RES M/F 0805 ZERO OHM	R701		036-12220-00	RES M/F 0805 22E 5%
R354		036-13100-10	RES M/F 0805 100E 1%	R702		036-17100-10	RES M/F 0805 1M 1%
R355		036-03150-02	RES RC-01 1206 150E 200V 250MW	R703		036-17100-10	RES M/F 0805 1M 1%
R356		036-14220-00	RES M/F 0805 2K2 5%	R705		036-15100-10	RES M/F 0805 10K 1%
R358		036-16150-00	RES M/F 0805 150K 5%	R706		036-12100-00	RES M/F 0805 10E 5%
R359		036-16470-00	RES M/F 0805 470K 5%	R708		036-17100-10	RES M/F 0805 1M 1%
R360		036-14150-10	RES M/F 0805 1K5 1%	R710		036-13100-10	RES M/F 0805 100E 1%
R361		036-16150-00	RES M/F 0805 150K 5%	R711		036-13100-10	RES M/F 0805 100E 1%
R362		036-15470-10	RES M/F 0805 47K 1%	R712		036-12100-00	RES M/F 0805 10E 5%
R363		036-15560-10	RES M/F 0805 56K 1%	R713		036-10000-00	RES M/F 0805 ZERO OHM
R364		036-13100-10	RES M/F 0805 100E 1%	R714		036-12100-00	RES M/F 0805 10E 5%
R365		036-13100-10	RES M/F 0805 100E 1%	%R715	10	036-14100-10	RES M/F 0805 1K 1%
R369		036-14470-10	RES M/F 0805 4K7 1%	%R715	15	036-14100-10	RES M/F 0805 1K 1%
R370		036-11330-00	RES M/F 0805 3E3 5%	R717		036-14270-00	RES M/F 0805 2K7 5%
R371		036-15180-00	RES M/F 0805 18K 5%	R718		036-15150-00	RES M/F 0805 15K 5%
R372		036-14330-10	RES M/F 0805 3K3 1%	R719		036-15150-00	RES M/F 0805 15K 5%
R373		036-12270-00	RES M/F 0805 27E 5%	R720		036-15390-00	RES M/F 0805 39K 5%
R374		036-16100-00	RES M/F 0805 100K 5%	R721		036-15100-10	RES M/F 0805 10K 1%
R375		036-13560-00	RES M/F 0805 560E 5%	R722		036-15100-10	RES M/F 0805 10K 1%
R376		036-14220-00	RES M/F 0805 2K2 5%	R723		036-14270-00	RES M/F 0805 2K7 5%
R377		036-14100-10	RES M/F 0805 1K 1%	R725		036-15390-00	RES M/F 0805 39K 5%
R378		036-12470-00	RES M/F 0805 47E 5%	%R726	10	036-13100-10	RES M/F 0805 100E 1%
R380		036-03033-10	RES 3E3 1W SMD 2512	%R726	15	036-13100-10	RES M/F 0805 100E 1%
R385		036-11330-00	RES M/F 0805 3E3 5%	R727		036-15100-10	RES M/F 0805 10K 1%
R386		036-16100-00	RES M/F 0805 100K 5%	R728		036-15100-10	RES M/F 0805 10K 1%
R387		036-14150-10	RES M/F 0805 1K5 1%	R734		036-13470-00	RES M/F 0805 470E 5%
R388		036-14680-10	RES M/F 0805 6K8 1%	R735		036-13470-00	RES M/F 0805 470E 5%
R389		036-14270-00	RES M/F 0805 2K7 5%	R736		036-13470-00	RES M/F 0805 470E 5%
R392		036-12220-00	RES M/F 0805 22E 5%	R742		036-13150-00	RES M/F 0805 150E 5%
R395		036-12220-00	RES M/F 0805 22E 5%	R743		036-13150-00	RES M/F 0805 150E 5%
R410		036-13270-00	RES M/F 0805 270E 5%	R744		036-12220-00	RES M/F 0805 22E 5%
R411		036-03118-10	RES 18R 1W SMD 2512	R746		036-12220-00	RES M/F 0805 22E 5%
R412		036-13270-00	RES M/F 0805 270E 5%	R747		036-12220-00	RES M/F 0805 22E 5%
R413		036-11330-00	RES M/F 0805 3E3 5%	R748		036-15470-10	RES M/F 0805 47K 1%
R414		036-03180-10	RES 180R 1W SMD 2512	R749		036-15470-10	RES M/F 0805 47K 1%
R415		036-03180-10	RES 180R 1W SMD 2512	R750		036-12220-00	RES M/F 0805 22E 5%
R416		036-03110-10	RES 10R 1W SMD 2512	R752		036-12220-00	RES M/F 0805 22E 5%
R425		036-11330-00	RES M/F 0805 3E3 5%	R753		036-17100-10	RES M/F 0805 1M 1%
R426		036-03110-10	RES 10R 1W SMD 2512	R754		036-14100-10	RES M/F 0805 1K 1%
R427		036-03110-10	RES 10R 1W SMD 2512	R756		036-15120-00	RES M/F 0805 12K 5%
R428		036-03180-10	RES 180R 1W SMD 2512	R757		036-15120-00	RES M/F 0805 12K 5%
R429		036-03180-10	RES 180R 1W SMD 2512	R758		036-14120-00	RES M/F 0805 1K2 5%
R440		036-15470-10	RES M/F 0805 47K 1%	R759		036-13330-00	RES M/F 0805 330E 5%
R441		036-13270-00	RES M/F 0805 270E 5%	R760		036-13180-00	RES M/F 0805 180E 5%
R442		036-13100-10	RES M/F 0805 100E 1%	R762		036-13100-10	RES M/F 0805 100E 1%
R443		036-13100-10	RES M/F 0805 100E 1%	R763		036-13100-10	RES M/F 0805 100E 1%
R444		036-13270-00	RES M/F 0805 270E 5%	R765		036-13680-00	RES M/F 0805 680E 5%
R445		036-15470-10	RES M/F 0805 47K 1%	R766		036-14100-10	RES M/F 0805 1K 1%
R480		045-04470-01	RES NTC 4K7 5% 5MM DISC	R767		036-13680-00	RES M/F 0805 680E 5%
R504		036-13330-00	RES M/F 0805 330E 5%	R769		036-13180-00	RES M/F 0805 180E 5%
R505		036-15270-10	RES M/F 0805 27K 1%	R771		036-14820-10	RES M/F 0805 8K2 1%
R510		036-14150-10	RES M/F 0805 1K5 1%	R772		036-15220-00	RES M/F 0805 22K 5%
R514		036-12180-00	RES M/F 0805 18E 5%	R774		036-14820-10	RES M/F 0805 8K2 1%
R515		036-12560-00	RES M/F 0805 56E 5%	R775		036-14270-00	RES M/F 0805 2K7 5%
R517		036-13330-00	RES M/F 0805 330E 5%	R777		036-14220-00	RES M/F 0805 2K2 5%
R518		036-12180-00	RES M/F 0805 18E 5%	R780		036-12100-00	RES M/F 0805 10E 5%
R519		036-13330-00	RES M/F 0805 330E 5%	R781		036-12100-00	RES M/F 0805 10E 5%
R520		036-16120-00	RES M/F 0805 120K 5%	R782		036-12680-00	RES M/F 0805 68E 5%
R522		036-12680-00	RES M/F 0805 68E 5%	R783		036-13220-10	RES 0805 220E 1%
R525		036-15470-10	RES M/F 0805 47K 1%	R784		036-14330-10	RES M/F 0805 3K3 1%
R530		036-15220-00	RES M/F 0805 22K 5%	R785		036-13100-10	RES M/F 0805 100E 1%
R533		036-12680-00	RES M/F 0805 68E 5%	R786		036-14100-10	RES M/F 0805 1K 1%
R535		036-15100-10	RES M/F 0805 10K 1%	R787		036-12560-00	RES M/F 0805 56E 5%
R540		036-14220-00	RES M/F 0805 2K2 5%	R801		036-16150-00	RES M/F 0805 150K 5%
R545		036-14470-10	RES M/F 0805 4K7 1%	R802		036-15470-10	RES M/F 0805 47K 1%
%R550	10	036-14470-10	RES M/F 0805 4K7 1%	RV805		042-05200-05	RES PRESET SMD 20K CER 4MM SQ
%R550	15	036-14470-10	RES M/F 0805 4K7 1%	R808		036-12100-00	RES M/F 0805 10E 5%
R555		036-14470-10	RES M/F 0805 4K7 1%	R809		036-14470-10	RES M/F 0805 4K7 1%
R560		036-13470-00	RES M/F 0805 470E 5%	R810		036-14470-10	RES M/F 0805 4K7 1%
R609		036-14100-10	RES M/F 0805 1K 1%	R811		036-14470-10	RES M/F 0805 4K7 1%
R613		036-13560-00	RES M/F 0805 560E 5%	R812		036-14470-10	RES M/F 0805 4K7 1%
R615		036-13100-10	RES M/F 0805 100E 1%	R813		036-14470-10	RES M/F 0805 4K7 1%
R617		036-10000-00	RES M/F 0805 ZERO OHM	R815		036-15470-10	RES M/F 0805 47K 1%
R619		036-01100-10	RES 1 OHM 1 WATT 2512 CHIP	R816		036-16150-00	RES M/F 0805 150K 5%
R621		036-01100-10	RES 1 OHM 1 WATT 2512 CHIP	R818		036-14470-10	RES M/F 0805 4K7 1%
R625		036-14100-10	RES M/F 0805 1K 1%	R819		036-14470-10	RES M/F 0805 4K7 1%
R629		036-03270-10	RES 270 OHM 1 WATT 2512 CHIP	R821		036-15470-10	RES M/F 0805 47K 1%

Ref	Var	IPN	Description	Ref	Var	IPN	Description
R822		036-15470-10	RES M/F 0805 47K 1%				
R824		036-14220-00	RES M/F 0805 2K2 5%				
R825		036-14220-00	RES M/F 0805 2K2 5%				
R826		036-14220-00	RES M/F 0805 2K2 5%				
R827		036-14220-00	RES M/F 0805 2K2 5%				
R828		036-14220-00	RES M/F 0805 2K2 5%				
R829		036-14220-00	RES M/F 0805 2K2 5%				
R830		036-14220-00	RES M/F 0805 2K2 5%				
R831		036-14220-00	RES M/F 0805 2K2 5%				
R832		036-14220-00	RES M/F 0805 2K2 5%				
R833		036-14220-00	RES M/F 0805 2K2 5%				
R835		036-14220-00	RES M/F 0805 2K2 5%				
R836		036-14220-00	RES M/F 0805 2K2 5%				
R837		036-14220-00	RES M/F 0805 2K2 5%				
R840		036-14220-00	RES M/F 0805 2K2 5%				
R841		036-14220-00	RES M/F 0805 2K2 5%				
R842		036-14220-00	RES M/F 0805 2K2 5%				
R843		036-14220-00	RES M/F 0805 2K2 5%				
R845		036-13470-00	RES M/F 0805 470E 5%				
R847		036-13470-00	RES M/F 0805 470E 5%				
R848		036-14470-10	RES M/F 0805 4K7 1%				
R849		036-13470-00	RES M/F 0805 470E 5%				
R850		036-13470-00	RES M/F 0805 470E 5%				
R853		036-14470-10	RES M/F 0805 4K7 1%				
R854		036-14470-10	RES M/F 0805 4K7 1%				
R855		036-14470-10	RES M/F 0805 4K7 1%				
R859		036-16150-00	RES M/F 0805 150K 5%				
R861		036-16150-00	RES M/F 0805 150K 5%				
R863		036-16150-00	RES M/F 0805 150K 5%				
R865		036-16100-00	RES M/F 0805 100K 5%				
R867		036-16100-00	RES M/F 0805 100K 5%				
R871		036-15470-10	RES M/F 0805 47K 1%				
R872		036-14470-10	RES M/F 0805 4K7 1%				
R873		036-15330-00	RES M/F 0805 33K 5%				
R874		036-14470-10	RES M/F 0805 4K7 1%				
R875		036-15470-10	RES M/F 0805 47K 1%				
R876		036-14470-10	RES M/F 0805 4K7 1%				
R877		036-14470-10	RES M/F 0805 4K7 1%				
R879		036-15100-10	RES M/F 0805 10K 1%				
SK200		240-10000-05	CONN SMD SKT 8W 2R M-MATCH				
SK205		240-02020-05	SKT STEREO PHONE JACK PCB MTG				
SK805		240-10000-07	CONN SMD SKT 16W 2R M-MATCH				
SK810		240-04020-42	SKT 44 PIN SMD PLCC				
SW230		232-00010-26	SWITCH PUSH SPDT R-ANG PCB MTG				
T210		053-00010-17	XFMR T4030 LINE MATCH POTCORE				
T610		050-15119-52	COIL SMD 680uH XFMR 5119-T052				

## T826 Mechanical & Miscellaneous Parts (220-01443-04)

IPN	Legend	Description	IPN	Legend	Description
002-08951-20		S) IC AT89C51 PLCC44 MIC 12MHZ			
008-00014-79		S)LED 3MM RED WITH WIRE			
008-00014-80		S)LED 3MM GREEN WITH WIRE			
220-01443-04		PCB T826 TX SII			
232-00020-26		BUTTON 232-00010-26 SWITCH			
240-02100-06		SKT COAX N TYPE PNL MTG OP-TER			
240-04020-62		SKT 2 W RECEP SHORTING LINK			
240-04021-77		SKT JACK 1.3 PCB MT 64W			
303-11169-04		CHASSIS PAINTED T800 SER II			
303-23118-00		COVER A3M2247 D RANGE T855/7			
303-50074-00		CLIP A3M2246 SPRING CLAMP T857			
308-01007-01		HANDLE BS SII 2 WASHERS INC			
308-13090-00		HSINK A4M2361 BRKT COPPER T856			
312-01052-02		LID TOP T800 SER II PTND			
312-01053-02		LID BOTTOM T800 SER II PNTD			
316-06621-00		PNL FRT TX T800 SERIES II			
349-00020-36		SCREW TT M3X8m PANTORX BLK			
349-00020-43		SCRW T/T M4X12MM P/POZ BZ			
349-00020-45		SCRW T/T M4X20MM P/POZ BZ			
349-00020-55		SCRW M3*8 P/P T/T BLCKZNC CHR			
352-00010-08		NUT M3 COLD FORM HEX ST BZ			
352-00010-29		NUT M4 NYLOC HEX			
352-00010-35		NUT 8-32 UNC HEX XSTR MTG			
353-00010-13		WSHR M3 S/PROOF INT BZ			
353-00010-24		WSHR M4x8mm Flat			
362-00010-23		GASKET SIL TO-220 CLIP MTG.			
362-00010-33		GROMMET LED MTG 3MM			
399-00010-51		BAG PLASTIC 75*100MM			



**T826 Grid Reference Index (IPN 220-01443-04)****How To Use This Grid Reference Index**

The first digit in the PCB layout reference is a "1" or "2", indicating the top or bottom side layout respectively, and the last two characters give the location of the component on that diagram.

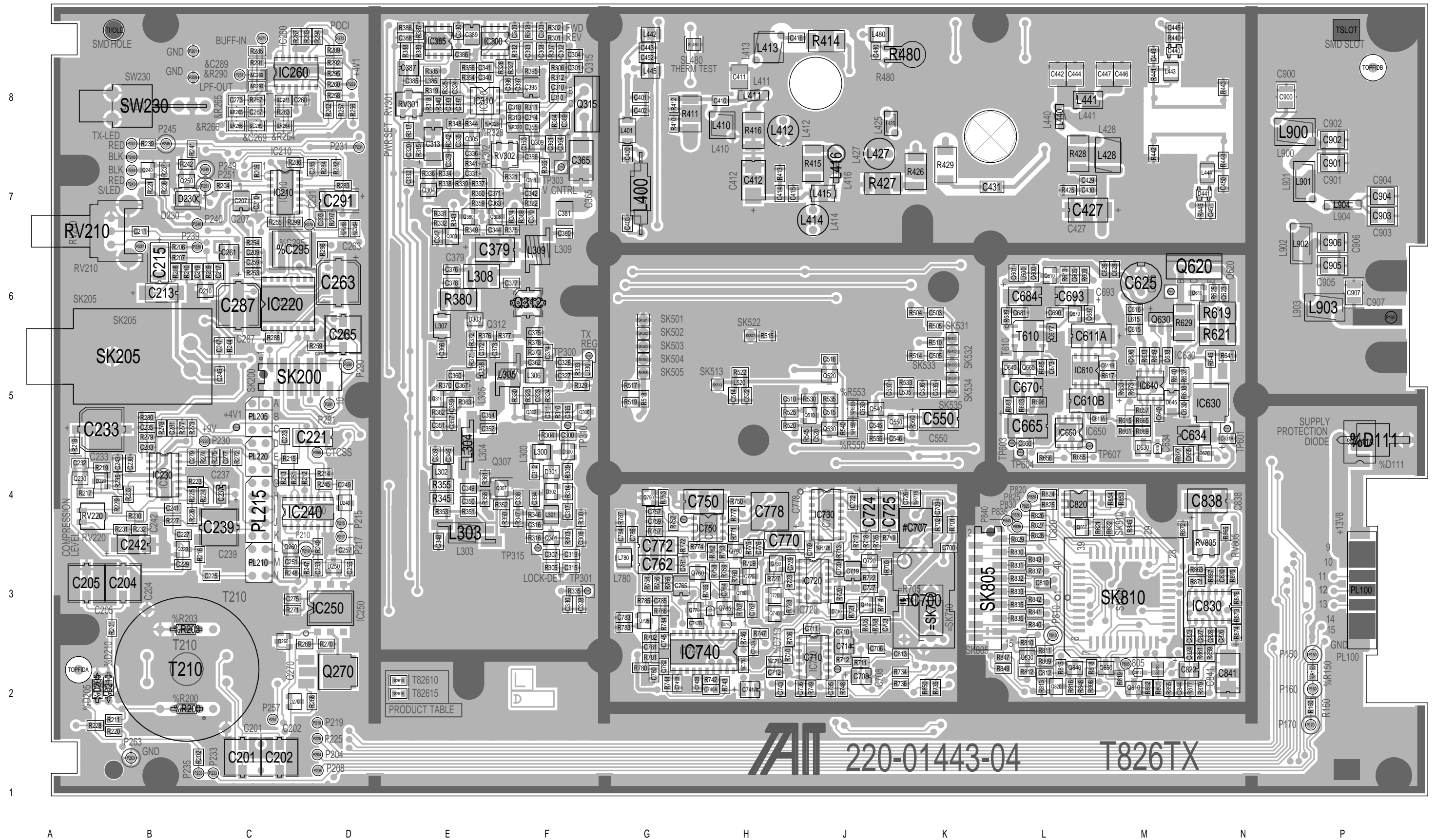
The first digit in the circuit diagram reference is the sheet number, and the last two characters give the location of the component on that sheet.

Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit
C201	1:C1	2-B8	C305	1:F5	3-B4	C370	1:F7	3-N5	C516	1:J5	5-H4
C202	1:C1	2-C8	C306	1:F4	3-B0	C371	1:F7	3-M5	C520	1:J5	5-H0
C204	1:B3	2-E8	C307	1:F3	3-C2	C372	1:E5	3-M1	C522	1:H5	5-H3
C205	1:A3	2-E8	C308	1:F8	3-C8	C373	1:F5	3-N1	C530	1:J5	5-K2
C207	1:C7	2-B6	C309	1:F9	3-C7	C374	1:F5	3-N0	C535	1:K5	5-M2
C209	1:C6	2-D6	C310	1:F8	3-B6	C375	1:F6	3-N0	C536	1:K5	5-L2
C210	1:C7	2-K0	C311	1:F5	3-C4	C376	1:E6	3-P1	C537	1:J5	5-L2
C211	1:B7	2-F8	C312	1:F4	3-C0	C377	1:F6	3-P0	C545	1:J5	5-K2
C213	1:B6	2-G8	C313	1:E8	3-E6	C378	1:E6	3-P2	C546	1:K5	5-J3
C215	1:B6	2-G8	C314	1:F8	3-B6	C379	1:F6	3-Q1	C550	1:K5	5-K3
C217	1:C6	2-H8	C315	1:F3	3-C2	C380	1:F7	3-Q0	C600	1:L6	6-D8
C219	1:C6	2-H7	C316	1:F4	3-C1	C381	1:F7	3-Q0	C601	1:L6	6-D8
C221	1:D5	2-G6	C317	1:F4	3-C0	C385	1:E8	3-H8	C605	1:L6	6-C8
C223	1:C5	2-J6	C318	1:F8	3-C5	C386	1:E8	3-H8	C610A	1:M5	6-F8
C225	1:C3	2-K7	C319	1:F3	3-D2	C387	1:E8	3-J8	C610B	1:L5	6-F8
C227	1:B4	2-K7	C320	1:E7	3-D7	C388	1:E9	3-L8	C611A	1:M6	6-H8
C229	1:B3	2-L7	C323	1:F5	3-D4	C389	1:E9	3-L8	C611B	1:M5	6-H8
C230	1:B4	2-J0	C324	1:E8	3-F6	C390	1:E9	3-M8	C615	1:M6	6-R8
C232	1:A4	2-M7	C326	1:F5	3-D4	C393	1:F8	3-R5	C616	1:M6	6-R8
C233	1:B5	2-N7	C327	1:F5	3-E4	C395	1:F8	3-R3	C623	1:N6	6-M8
C235	1:B5	2-K5	C328	1:F3	3-E2	C396	1:F8	3-R3	C625	1:M6	6-Q8
C237	1:C4	2-K5	C329	1:E7	3-F4	C397	1:F8	3-R3	C626	1:M6	6-Q8
C239	1:C4	2-L4	C330	1:F3	3-F2	C400	1:G7	4-C7	C628	1:M6	6-Q8
C241	1:B4	2-M6	C331	1:E7	3-G3	C401	1:G8	4-C7	C630	1:M5	6-J5
C242	1:B4	2-L6	C332	1:E7	3-G4	C402	1:G8	4-D7	C631A	1:N5	6-L6
C243	1:B4	2-P6	C333	1:E8	3-G6	C403	1:G7	4-B7	C634	1:N5	6-L5
C245	1:C5	2-A4	C334	1:F4	3-G0	C410	1:H8	4-D3	C636	1:M5	6-M5
C247	1:C6	2-B4	C335	1:E8	3-G3	C411	1:H8	4-D2	C638	1:M5	6-N6
C249	1:D4	2-C4	C336	1:E7	3-G3	C412	1:H7	4-D5	C640	1:M5	6-Q6
C251	1:C3	2-E4	C337	1:E8	3-G6	C413	2:H8	4-E2	C655	1:M4	6-C1
C253	1:D3	2-E3	C338	1:F4	3-H0	C414	1:H7	4-E5	C660	1:L5	6-K1
C255	1:D3	2-D2	C339	1:E4	3-H3	C415	1:J7	4-E5	C665	1:L5	6-K1
C257	1:D3	2-F2	C340	1:E8	3-H7	C416	1:J9	4-E4	C670	1:L5	6-L1
C259	1:C6	2-J2	C341	1:E8	3-H7	C425	2:J8	4-G2	C673	1:L5	6-P2
C260	1:D8	2-H0	C342	1:F7	3-F4	C426	2:J8	4-G3	C677	1:L6	6-P1
C261	1:C6	2-K2	C344	1:F7	3-J5	C427	1:L7	4-G5	C681	1:L6	6-R3
C263	1:D6	2-L3	C346	1:E4	3-J1	C428	2:K8	4-G2	C684	1:L6	6-R3
C265	1:D6	2-N4	C347	1:E7	3-H5	C429	1:L7	4-G5	C687	1:L6	6-Q1
C267	1:C8	2-P3	C348	1:E4	3-J0	C430	1:L7	4-H5	C690	1:L6	6-R1
&C269	1:C8	2-P3	C349	1:E4	3-J0	C431	1:L7	4-J4	C693	1:L6	6-R1
&C271	1:C8	2-Q3	C350	1:E4	3-K0	C440	2:L8	4-J2	C700	1:K3	7-A8
C273	1:C8	2-Q4	C351	1:E5	3-K1	C441	2:L7	4-K2	C703	1:J3	7-B7
C275	1:C3	2-E1	C352	1:E5	3-K0	C442	1:L8	4-L2	C706	1:J2	7-B5
C277	1:C4	2-G1	C353	1:F8	3-L5	C443	1:G9	4-M5	#C707	1:K4	7-C8
C279	1:B4	2-G1	C354	1:E5	3-K0	C444	1:L8	4-L2	C708	1:J2	7-C9
C281	1:B5	2-J1	C355	1:F8	3-M7	C445	1:M9	4-M4	C709	1:K4	7-D9
C283	1:B5	2-K0	C356	1:F7	3-M6	C446	1:M8	4-M2	C710	1:J3	7-D8
C285	1:D7	2-L0	C357	1:E5	3-L1	C447	1:M8	4-M2	C711	1:J3	7-C5
C287	1:C6	2-M1	C358	1:E5	3-L1	C448	2:M8	4-N4	C712	1:H2	7-E7
&C289	1:C8	2-N1	C359	1:E5	3-L2	C449	1:M8	4-M4	%C713	1:H2	7-E6
C291	1:D7	2-P1	C360	1:E5	3-L1	C450	1:N7	4-N2	C714	1:J3	7-E8
C293	1:D7	2-Q1	C361	1:F8	3-M7	C451	1:N7	4-P2	C719	1:J3	7-F8
%C294	1:D7	2-Q0	C362	1:F5	3-L0	C452	1:G8	4-Q2	C720	1:J3	7-F8
%C295	1:C7	2-Q0	C363	1:F7	3-L6	C480	1:J8	4-P6	C722	1:J4	7-G8
C300	1:F5	3-B0	C364	1:F8	3-M7	C503	1:K6	5-L9	C724	1:J4	7-H6
C301	1:F8	3-C6	C365	1:F7	3-L7	C505	1:K5	5-M6	C725	1:J4	7-J6
C302	1:F8	3-B8	C366	1:E5	3-P3	C510	1:H5	5-C0	C726	1:K4	7-J6
C303	1:F9	3-B7	C367	1:E5	3-L2	C514	1:H5	5-H3	C727	1:J3	7-J8
C304	1:F8	3-C6	C369	1:F8	3-N7	C515	1:J5	5-F1	C729	1:H3	7-M8

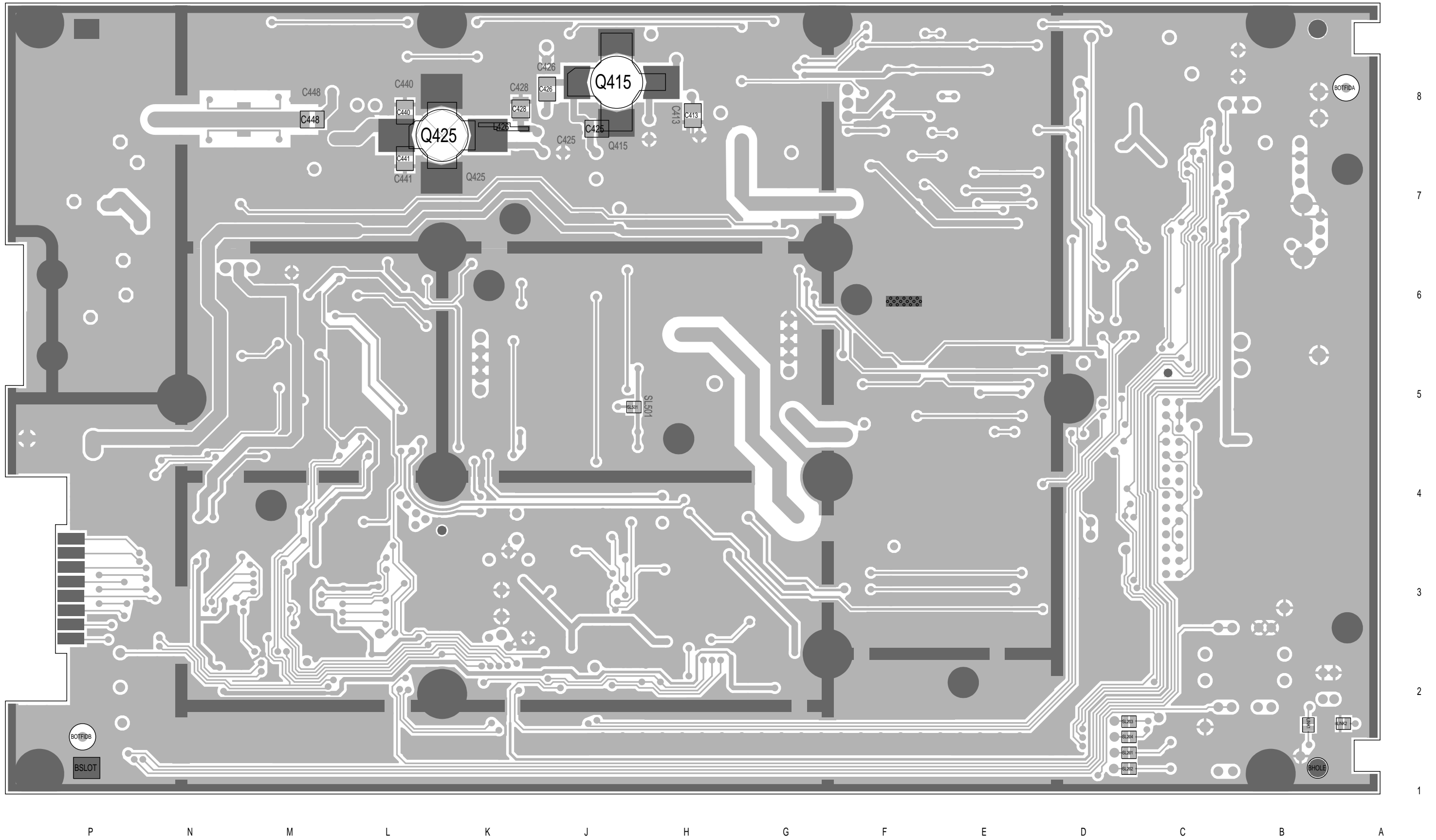
Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit
%C733	1:H2	7-E3	D610	1:N6	6-L6	IC830	1:N3	8-C0	P259	1:B8	2-R3
C735	1:J2	7-A1	D620	1:N4	6-B2				P261	1:B8	2-R3
C736	1:J2	7-B1	D620	1:N4	6-B1	L300	1:F4	3-C0	P263	1:B1	2-R2
C740A	1:H2	7-B4	D630	1:M5	6-G2	L301	1:F4	3-D0	P267	1:C8	2-N2
C740B	1:H2	7-B3	D630	1:M5	6-G3	L302	1:E4	3-J2	P269	1:D8	2-P2
C741A	1:H2	7-C4	D635	1:M4	6-G3	L303	1:E4	3-J0	P271	1:C9	2-N1
C741B	1:G2	7-C3	D640	1:L5	6-M1	L304	1:E5	3-K0	P273	1:D9	2-P0
C742A	1:H2	7-D4	D640	1:L5	6-M2	L305	1:F5	3-L0	P275	1:D7	2-Q0
C742B	1:H3	7-D3	D645	1:M5	6-R6	L306	1:F5	3-L0	P290	1:D5	2-E0
C743	1:H2	7-B1	D710	1:J3	7-L8	L307	1:E6	3-P3	P291	1:D5	2-G0
C745	1:G3	7-D1	D710	1:J3	7-L8	L308	1:E6	3-P1	P805	1:M2	8-A7
C750	1:H4	7-Q7	D720	1:H3	7-P8	L309	1:F6	3-P0	P810	1:L3	8-A5
C757	1:G4	7-F5	D720	1:H3	7-P8	L310	1:F8	3-B6	P820	1:L4	8-M8
C759	1:G4	7-C4	D730	1:H3	7-H1	L330	1:F5	3-E5	P825	1:L4	8-M8
C761	1:G3	7-J4	D740	1:H3	7-J2	L385	1:E8	3-G9	P830	1:L4	8-M8
C762	1:G3	7-J4	D810	1:M2	8-B7	L400	1:G7	4-C7	P835	1:L4	8-M7
C764	1:H3	7-H2				L401	1:G8	4-C7	P840	1:L4	8-M7
C765	1:G3	7-J2	IC210	1:C7	2-C6	L410	1:H8	4-D2			
C767	1:H3	7-K3	IC210	1:C7	2-J0	L411	1:H8	4-E3	PL100	1:P3	1-M0
C769	1:J3	7-M4	IC210	1:C7	2-L1	L412	1:H8	4-E2	PL205	1:C5	2-J8
C770	1:H4	7-N4	IC210	1:C7	2-K2	L413	1:H9	4-E3	PL210	1:C3	2-H4
C772	1:G4	7-M2	IC210	1:C7	2-Q0	L414	1:J7	4-F5	PL215	1:C4	2-K3
C776	1:H3	7-L1	IC220	1:C6	2-D5	L415	1:J7	4-F5	PL220	1:C4	2-H2
C778	1:H4	7-M1	IC220	1:C6	2-P0	L416	1:J7	4-F4			
C780	1:G2	7-N1	IC220	1:C6	2-M3	L425	1:J8	4-G3	Q210	1:C6	2-J8
C781	1:G2	7-P1	IC230	1:B4	2-J0	L426	2:K8	4-H3	Q220	1:B3	2-L7
C782	1:G2	7-P1	IC230	1:B4	2-J0	L427	1:J7	4-H2	Q230	1:A4	2-M8
C783	1:G3	7-P0	IC230	1:B4	2-L5	L428	1:M7	4-J5	Q240	1:B7	2-Q7
C784	1:G4	7-Q0	IC230	1:B4	2-N6	L440	1:L8	4-K4	Q250	1:B7	2-R6
C785	1:G3	7-Q1	IC230	1:B4	2-G1	L441	1:L8	4-L4	Q260	1:C4	2-F3
C786	1:G4	7-Q0	IC240	1:D4	2-F3	L442	1:G9	4-M5	Q270	1:D2	2-D1
C810	1:L3	8-K8	IC250	1:D3	2-E1	L443	1:M8	4-N4	Q300	1:F5	3-B3
C812	1:L2	8-F5	IC260	1:D8	2-N0	L444	1:N7	4-N3	Q301	1:F4	3-C1
C813	1:K2	8-J5	IC260	1:D8	2-H0	L445	1:G8	4-P3	Q302	1:F5	3-C4
C822	1:M2	8-B2	IC260	1:D8	2-Q2	L480	1:J9	4-P6	Q303	1:E7	3-J5
C823	1:M3	8-C2	IC260	1:D8	2-Q3	L520	1:H5	5-G3	Q304	1:E7	3-F3
C824	1:M2	8-C1	IC260	1:D8	2-N3	L535	1:K5	5-L2	Q305	1:E8	3-H3
C826	1:N3	8-C0	IC300	1:F9	3-C7	L600	1:L6	6-D8	Q307	1:F4	3-J0
C827	1:N3	8-D0	IC300	1:F9	3-Q5	L615	1:M6	6-R8	Q308	1:F7	3-K6
C828	1:N3	8-E0	IC300	1:F9	3-C8	L780	1:G3	7-Q0	Q309	1:F8	3-M6
C830	1:N3	8-R1	IC310	1:E8	3-D6	L900	1:P8	9-D6	Q310	1:E5	3-L2
C838	1:N4	8-F0	IC310	1:E8	3-Q3	L901	1:P7	9-E6	Q311	1:F7	3-G5
C841	1:N2	8-L2	IC310	1:E8	3-H7	L902	1:P7	9-F6	Q312	1:F6	3-P0
C844	1:M2	8-L2	IC385	1:E9	3-J8	L903	1:P6	9-H6	Q315	1:F8	3-N6
C900	1:N8	9-D4	IC610	1:L5	6-G8	L904	1:P7	9-F5	Q360	1:E7	3-K5
C901	1:P7	9-E4	IC630	1:N5	6-K5				Q415	2:J8	4-F3
C902	1:P8	9-E4	IC640	1:M5	6-M5	LINK1	2:B2	2-E9	Q425	2:K8	4-J3
C903	1:P7	9-F4	IC640	1:M5	6-Q6	LINK2	2:A2	2-E8	Q510	1:J5	5-D1
C904	1:P7	9-F4	IC640	1:M5	6-F1				Q520	1:J5	5-G3
C905	1:P6	9-G4	IC650	1:L5	6-F4	P100	1:Q6	1-R8	Q530	1:J5	5-G0
C906	1:P7	9-H4	=IC700	1:K3	7-A8	P150	1:P2	1-Q4	Q540	1:J5	5-L2
C907	1:P6	9-H4	IC710	1:J2	7-D8	P160	1:P2	1-Q4	Q550	1:K5	5-L4
%D111	1:P5	1-R1	IC710	1:J2	7-C6	P170	1:P2	1-Q3	Q610	1:L6	6-D8
%D111A	1:P5	1-Q1	IC710	1:J2	7-C5	P204	1:D1	2-A8	Q620	1:N6	6-P8
%D205	1:B2	2-D9	IC710	1:J2	7-D6	P208	1:D1	2-A8	Q630	1:M6	6-P5
%D210	1:B2	2-D9	IC710	1:J2	7-D7	P210	1:D3	2-A3	Q660	1:L5	6-N1
D220	1:B4	2-P7	IC710	1:J2	7-D6	P215	1:D4	2-A2	Q670	1:L6	6-Q2
D220	1:B4	2-P6	IC710	1:J2	7-C6	P217	1:D4	2-A2	Q710	1:J3	7-K8
D230	1:B7	2-R5	IC720	1:J3	7-P6	P219	1:D2	2-A1	Q720	1:J3	7-K8
D240	1:D4	2-C4	IC720	1:J3	7-G0	P225	1:D2	2-A0	Q730	1:H3	7-N8
D240	1:D4	2-B2	IC720	1:J3	7-N7	P230	1:C5	2-B0	Q740	1:H3	7-N8
D250	1:D3	2-E2	IC720	1:J3	7-M7	P231	1:D8	2-B0	Q750	1:G4	7-F3
D250	1:D3	2-D3	IC720	1:J3	7-K7	P233	1:C1	2-R9	Q760	1:H3	7-H3
D260	1:C3	2-C2	IC720	1:J3	7-E8	P235	1:C1	2-R9	Q770	1:H3	7-H1
D260	1:C3	2-C2	IC720	1:J3	7-G0	P237	1:B7	2-R8	Q775	1:H3	7-K3
D270	1:C2	2-C1	IC730	1:J4	7-H8	P239	1:C7	2-R8	Q780	1:H3	7-K3
D270	1:C2	2-C1	IC730	1:J4	7-G7	P240	1:C7	2-R8	Q785	1:H3	7-K2
D300	1:F4	3-B0	IC740	1:H2	7-D1	P243	1:B7	2-R7	Q790	1:H3	7-L3
D301	1:F4	3-C0	IC750	1:H4	7-M3	P244	1:B7	2-R7	Q795	1:G3	7-P0
D302	1:F4	3-C0	IC750	1:H4	7-H5	P245	1:B8	2-R6	Q810	1:M2	8-E7
D303	1:E6	3-M0	IC750	1:H4	7-Q7	P247	1:B8	2-R6	Q820	1:L2	8-D5
D303	1:E6	3-L0	IC820	1:L4	8-N2	P248	1:B7	2-R6	Q830	1:L2	8-D5
D440	1:M8	4-M5	IC830	1:N3	8-J0	P249	1:C7	2-R5	Q840	1:L2	8-F5
D441	1:N7	4-P3	IC830	1:N3	8-Q1	P251	1:C7	2-R5	Q850	1:M2	8-G5
D610	1:N6	6-K6	IC830	1:N3	8-J0	P255	1:D4	2-R4	Q860	1:L4	8-B3
			IC830	1:N3	8-J1	P257	1:C2	2-R4			

<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>
%R150	1:P2	1-R4	R285	1:C8	2-M0	R362	1:E5	3-K2	R653	1:M5	6-P5
R160	1:P2	1-R3	R286	1:C7	2-M0	R363	1:E5	3-K1	R655	1:L4	6-D4
%R200	1:B2	2-C9	R287	1:D9	2-M0	R364	1:F8	3-M7	R656	1:L4	6-D4
R201	1:B3	2-E9	R288	1:C6	2-M2	R365	1:F7	3-M6	R657	1:M5	6-D1
R202	1:C1	2-F9	R289	1:D9	2-M0	R369	1:F7	3-M5	R661	1:M5	6-E3
%R203	1:B3	2-C8	&R290	1:C8	2-N2	R370	1:E5	3-L1	R665	1:M5	6-E2
R204	1:C7	2-B6	R291	1:C8	2-N1	R371	1:E5	3-L1	R669	1:M5	6-E2
R205	1:C7	2-D6	R292	1:D8	2-Q2	R372	1:E6	3-L1	R673	1:M5	6-E0
R206	1:B7	2-G8	R293	1:D9	2-Q2	R373	1:F5	3-M0	R677	1:M4	6-F4
R207	1:B6	2-G8	R294	1:D9	2-Q1	R374	1:F7	3-N5	R681	1:L5	6-L2
R208	1:B6	2-G8	R295	1:D8	2-R1	R375	1:F7	3-N5	R685	1:L5	6-N2
R209	1:C6	2-H8	R296	1:D6	2-P0	R376	1:E6	3-M1	R689	1:L6	6-Q3
R210	1:B6	2-H7	R297	1:D7	2-P1	R377	1:F6	3-N1	R693	1:L5	6-Q1
R211	1:B2	2-D9	%R298	1:D7	2-Q0	R378	1:F6	3-N0	R696	1:L5	6-Q1
R212	1:D4	2-F6	R299	1:C7	2-R0	R380	1:E6	3-P2	R701	1:K4	7-A9
R213	1:C4	2-G6	R300	1:F4	3-B0	R385	1:E8	3-G9	R702	1:K4	7-C9
R214	1:D4	2-G6	R301	1:F9	3-B9	R386	1:E9	3-K8	R703	1:J3	7-C8
R215	1:C4	2-H6	R302	1:F9	3-B8	R387	1:E9	3-L7	=R705	1:K3	7-A7
R216	1:C3	2-K7	R303	1:F4	3-B1	R388	1:E8	3-L8	R705	1:J3	7-C5
R217	1:A4	2-M8	R304	1:F5	3-B0	R389	1:E8	3-L8	R706	1:H3	7-C5
R218	1:A5	2-N7	R305	1:F3	3-B2	R392	1:F8	3-Q5	R708	1:J3	7-B5
R219	1:B4	2-N8	R306	1:F8	3-C6	R395	1:F8	3-Q4	R710	1:H2	7-E7
R220	1:B2	2-E9	R307	1:F8	3-B8	R410	1:G8	4-C2	R711	1:J2	7-B6
R221	1:B7	2-R7	R308	1:F9	3-B7	R411	1:G8	4-C3	R712	1:J2	7-D8
R223	1:B4	2-K6	R309	1:F4	3-B0	R412	1:G8	4-C2	R713	1:J3	7-F8
R224	1:C4	2-K5	R310	1:F5	3-B4	R413	1:H7	4-E5	R714	1:J3	7-D9
R225	1:B4	2-L5	R311	1:F8	3-B6	R414	1:J9	4-F4	%R715	1:K4	7-H6
R226	1:B4	2-L4	R312	1:F8	3-B6	R415	1:J7	4-F5	R717	1:J4	7-H7
R227	1:B4	2-M4	R313	1:F8	3-C5	R416	1:H8	4-F2	R718	1:J4	7-H7
R228	1:A2	2-E9	R314	1:F4	3-C0	R425	1:L7	4-H5	R719	1:J4	7-J6
R229	1:B4	2-M7	R315	1:E7	3-E7	R426	1:K7	4-H3	R720	1:J3	7-K7
R230	1:B4	2-M6	R316	1:F4	3-C1	R427	1:J7	4-H2	R721	1:J3	7-K9
R231	1:B4	2-M6	R317	1:E8	3-E7	R428	1:L7	4-H5	R722	1:J3	7-K8
R232	1:B4	2-M5	R318	1:E8	3-E6	R429	1:K7	4-H4	R723	1:H3	7-M7
R233	1:B4	2-M6	R319	1:E8	3-E6	R440	1:M9	4-L4	R725	1:J4	7-N7
R235	1:B4	2-P6	%R320	1:F8	3-C5	R441	1:M8	4-N4	%R726	1:J3	7-N6
R237	1:B7	2-Q7	R321	1:F7	3-F5	R442	1:M7	4-N3	R727	1:H3	7-N9
R238	1:B7	2-R7	R322	1:F7	3-F4	R443	1:N8	4-N4	R728	1:H3	7-N8
R239	1:B8	2-R6	R323	1:F5	3-D4	R444	1:N7	4-P3	R734	1:K2	7-A2
R241	1:B8	2-Q6	R324	1:F5	3-C3	R445	1:N7	4-P2	R735	1:K2	7-A2
R242	1:B7	2-Q5	R325	1:E8	3-F6	R480	1:J8	4-N6	R736	1:K2	7-A2
R244	1:C6	2-A5	R326	1:F8	3-D8	R504	1:K6	5-K9	R742	1:H2	7-B4
R245	1:D4	2-D4	R327	1:F8	3-D7	R505	1:K6	5-L8	R743	1:H2	7-C5
R247	1:D3	2-E4	%R328	1:E8	3-D5	R510	1:K6	5-L7	R744	1:G2	7-D4
R248	1:C3	2-E3	R329	1:F5	3-D3	R514	1:K5	5-M5	R746	1:H3	7-E4
R249	1:D4	2-F3	R330	1:F5	3-D4	R515	1:H6	5-J5	R747	1:H3	7-E5
R251	1:C4	2-G4	R331	1:E7	3-H5	R517	1:G5	5-E2	R748	1:J2	7-A1
R253	1:C6	2-J2	R332	1:E7	3-H5	R518	1:G5	5-F2	R749	1:J2	7-B1
R254	1:C7	2-K3	R333	1:F5	3-E5	R519	1:G5	5-F2	R750	1:H4	7-Q7
R255	1:C7	2-K2	R334	1:E7	3-E3	R520	1:H5	5-C1	R752	1:G4	7-F5
R256	1:D8	2-M3	R335	1:F3	3-F2	R522	1:H5	5-H3	R753	1:G4	7-F3
R257	1:D8	2-N5	R336	1:E7	3-F4	R525	1:H5	5-D1	R754	1:G3	7-F3
R258	1:D8	2-N4	R337	1:E7	3-F2	R530	1:J5	5-D0	R756	1:G3	7-G5
R259	1:D6	2-P4	R338	1:E7	3-F3	R533	1:K5	5-L2	R757	1:G4	7-G4
R260	1:D8	2-N4	R339	1:E7	3-F3	R535	1:J5	5-F1	R758	1:H3	7-H4
R262	1:D8	2-N3	R340	1:E8	3-G6	R540	1:J5	5-H3	R759	1:H3	7-H4
R263	1:C8	2-P3	R341	1:E7	3-G3	R545	1:J5	5-H0	R760	1:H3	7-K4
&R264	1:C8	2-P3	R342	1:E8	3-G4	%R550	1:J5	5-J2	R762	1:H3	7-K4
&R265	1:C8	2-P3	R343	1:E7	3-J5	%R553	1:J5	5-J2	R763	1:H3	7-L4
&R266	1:C8	2-P3	R344	1:E8	3-G5	R555	1:J5	5-K3	R765	1:H3	7-H2
R267	1:C8	2-R2	R345	1:E4	3-H1	R560	1:K5	5-K4	R766	1:G3	7-J3
R268	1:D2	2-C0	R346	1:F4	3-G0	R609	1:L6	6-B8	R767	1:H3	7-K2
R269	1:D3	2-C1	R347	1:F4	3-H0	R613	1:L6	6-C8	R769	1:H3	7-K3
R270	1:D3	2-D1	R348	1:E8	3-H4	R615	1:M5	6-F9	R771	1:H4	7-L3
R271	1:C3	2-E1	R349	1:E7	3-J5	R617	1:M5	6-J8	R772	1:G4	7-M2
R272	1:C4	2-F2	R350	1:F4	3-H0	R619	1:N6	6-K8	R774	1:H4	7-M3
R273	1:B5	2-G2	R351	1:E4	3-H0	R621	1:N6	6-K8	R775	1:H3	7-L2
R274	1:C4	2-G1	R352	1:F4	3-H0	R625	1:N6	6-K7	R777	1:H4	7-R2
R275	1:C4	2-H0	R353	1:E4	3-H1	R629	1:M6	6-P6	R780	1:G2	7-N2
R277	1:B5	2-J1	R354	1:E8	3-H6	R633	1:M5	6-P8	R781	1:G2	7-N2
R278	1:B5	2-J0	R355	1:E4	3-H1	R637	1:M5	6-J6	R782	1:G3	7-P1
R279	1:B5	2-K0	R356	1:E8	3-J6	R638	1:M5	6-J6	R783	1:G3	7-P0
R280	1:B5	2-K0	R358	1:E4	3-J0	R640	1:M5	6-Q6	R784	1:G3	7-Q2
R282	1:D7	2-K1	R359	1:E7	3-K5	R641	1:N5	6-K5	R785	1:G3	7-Q1
R283	1:D7	2-L1	R360	1:E7	3-K5	R645	1:N5	6-L5	R786	1:G3	7-R1
R284	1:D7	2-L0	R361	1:E4	3-J0	R649	1:M5	6-M5	R787	1:G4	7-R0

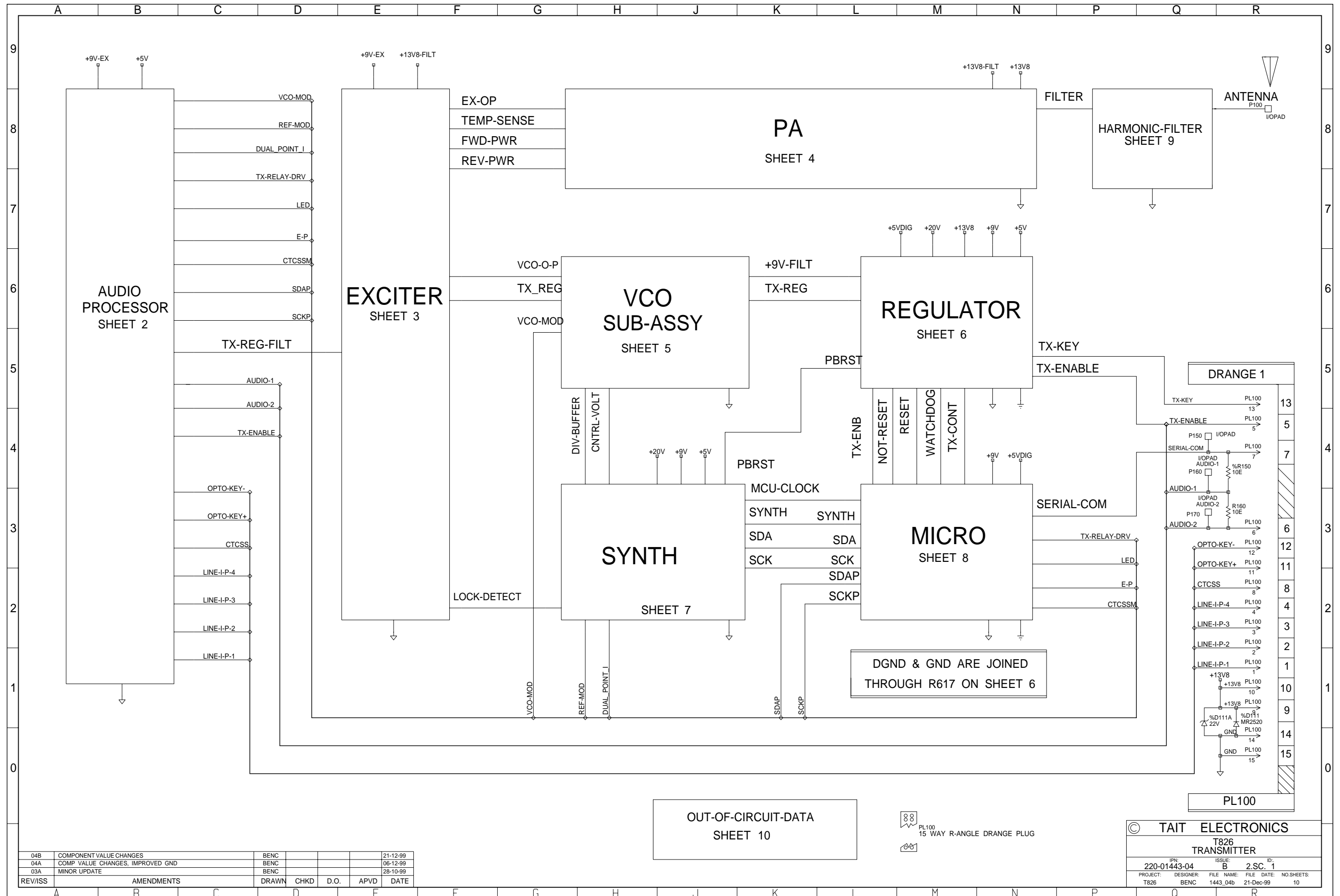
<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>
R801	1:M2	8-D7	SK805	1:K3	8-Q9						
R802	1:M2	8-D7	SK805	1:K3	8-Q6						
R808	1:L2	8-B4	SK805	1:K3	8-Q9						
R809	1:L2	8-D5	SK805	1:K3	8-Q7						
R810	1:L3	8-D6	SK805	1:K3	8-Q8						
R811	1:L2	8-E6	SK805	1:K3	8-Q6						
R812	1:L2	8-D5	SK805	1:K3	8-Q5						
R813	1:L2	8-D4	SK805	1:K3	8-Q7						
R815	1:L2	8-F4	SK805	1:K3	8-Q8						
R816	1:L2	8-F4	SK805	1:K3	8-Q7						
R818	1:M2	8-F5	SK805	1:K3	8-Q8						
R819	1:M2	8-F5	SK805	1:K3	8-Q6						
R821	1:M4	8-B3	SK805	1:K3	8-Q8						
R822	1:M4	8-E3	SK810	1:M3	8-H5						
R824	1:L4	8-L8									
R825	1:L4	8-L8	SL201	2:D1	2-B9						
R826	1:L4	8-L8	SL202	2:D1	2-B8						
R827	1:L4	8-L7	SL203	2:D2	2-B1						
R828	1:L4	8-L7	SL204	2:D2	2-B1						
R829	1:L4	8-P9	SL480	1:H9	4-P6						
R830	1:L3	8-P9	SL501	2:J5	5-E0						
R831	1:L3	8-P9	SL810	1:M2	8-C7						
R832	1:L3	8-P8									
R833	1:L3	8-P8	SW230	1:B8	2-A3						
R835	1:L3	8-P8									
R836	1:L3	8-P8	T210	1:B2	2-C8						
R837	1:L3	8-P7	T610	1:L6	6-N2						
R840	1:L3	8-P7									
R841	1:L3	8-P7	TP206	1:C5	2-H7						
R842	1:L3	8-P6	TP300	1:F5	3-A5						
R843	1:L3	8-P6	TP301	1:F3	3-A2						
R845	1:M4	8-Q5	TP303	1:F7	3-P3						
R847	1:L2	8-Q4	TP310	1:F5	3-B3						
R848	1:L2	8-J4	TP315	1:F3	3-D1						
R849	1:L2	8-Q4	TP601	1:N5	6-K9						
R850	1:K2	8-Q4	TP602	1:M6	6-Q9						
R853	1:M4	8-N3	TP603	1:L5	6-J2						
R854	1:M4	8-N3	TP604	1:L4	6-L6						
R855	1:M2	8-B0	TP607	1:L5	6-J9						
R859	1:N2	8-C1	TP710	1:G4	7-H5						
R861	1:N2	8-D1	TP715	1:J2	7-C6						
R863	1:N3	8-E1									
R865	1:N4	8-E0									
R867	1:N3	8-E1									
R871	1:N3	8-G2									
R872	1:M4	8-H1									
R873	1:N3	8-G1									
R874	1:N3	8-H0									
R875	1:N3	8-G0									
R876	1:N3	8-H0									
R877	1:M2	8-K2									
R879	1:N2	8-L3									
RV210	1:B7	2-F9									
RV220	1:A4	2-M6									
RV301	1:E8	3-E6									
RV302	1:F7	3-G5									
RV805	1:N4	8-F1									
SK200	1:D5	2-F0									
SK205	1:B5	2-A5									
SK501	1:G6	5-D6									
SK502	1:G6	5-D5									
SK503	1:G6	5-D4									
SK504	1:G5	5-D3									
SK505	1:G5	5-D2									
SK513	1:H5	5-G3									
SK522	1:H6	5-K5									
SK531	1:K6	5-N6									
SK532	1:K5	5-N5									
SK533	1:K5	5-N4									
SK534	1:K5	5-N3									
SK535	1:K5	5-N2									
=SK710	1:K3	7-A7									
SK805	1:K3	8-Q9									
SK805	1:K3	8-Q7									
SK805	1:K3	8-Q6									

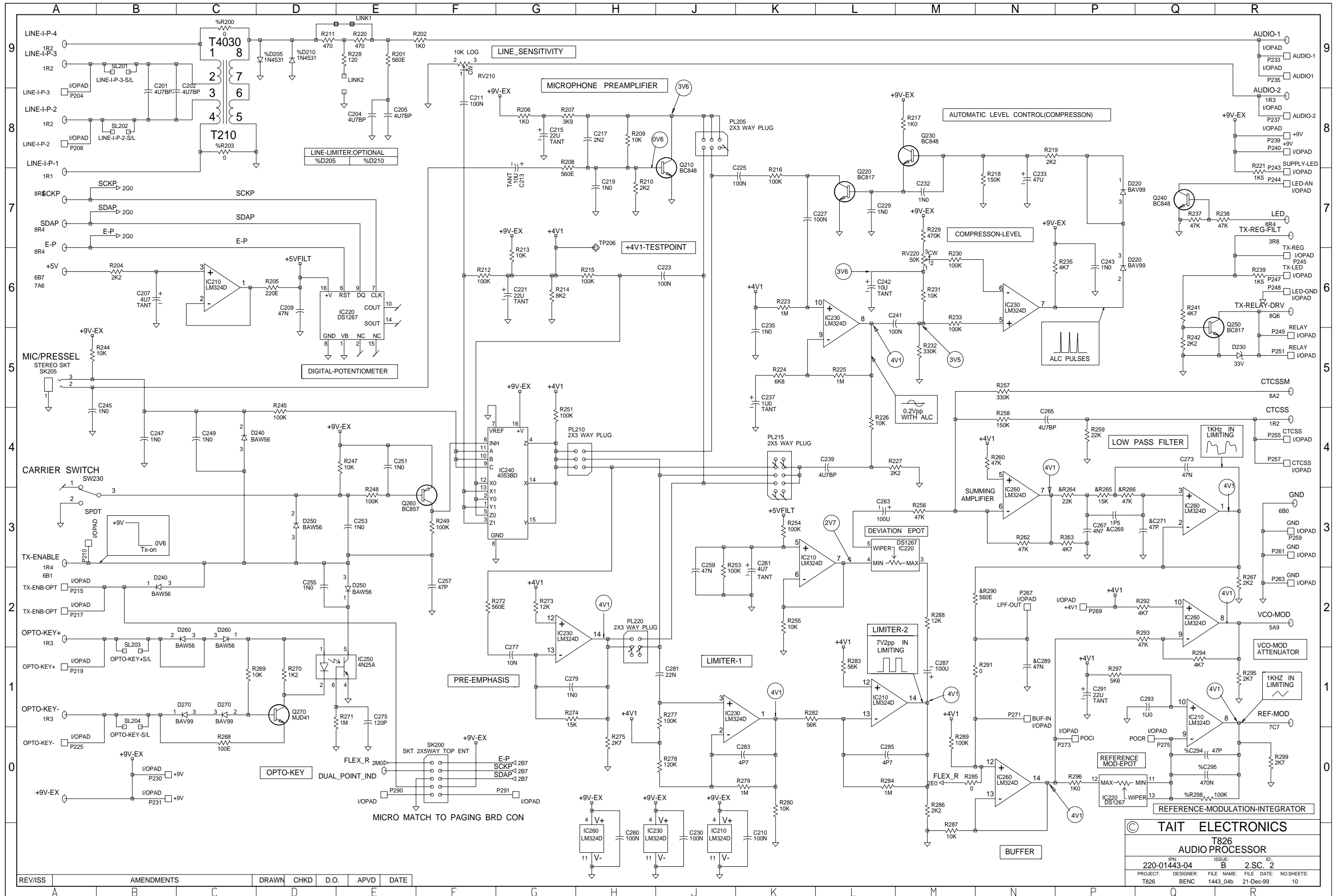


T826 PCB Layout - Top Side  
220-01443-04



T826 PCB Layout - Bottom Side  
220-01443-04

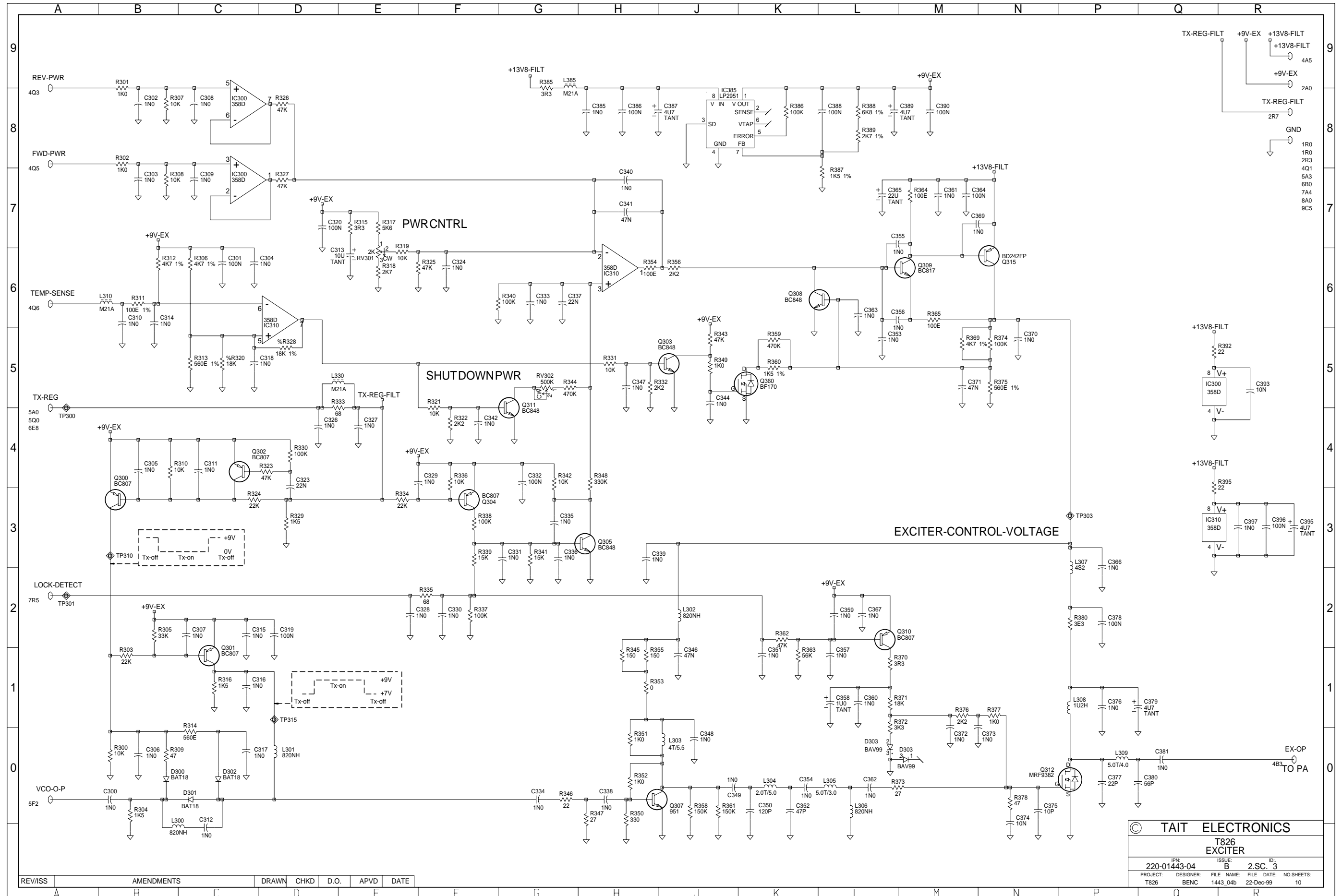


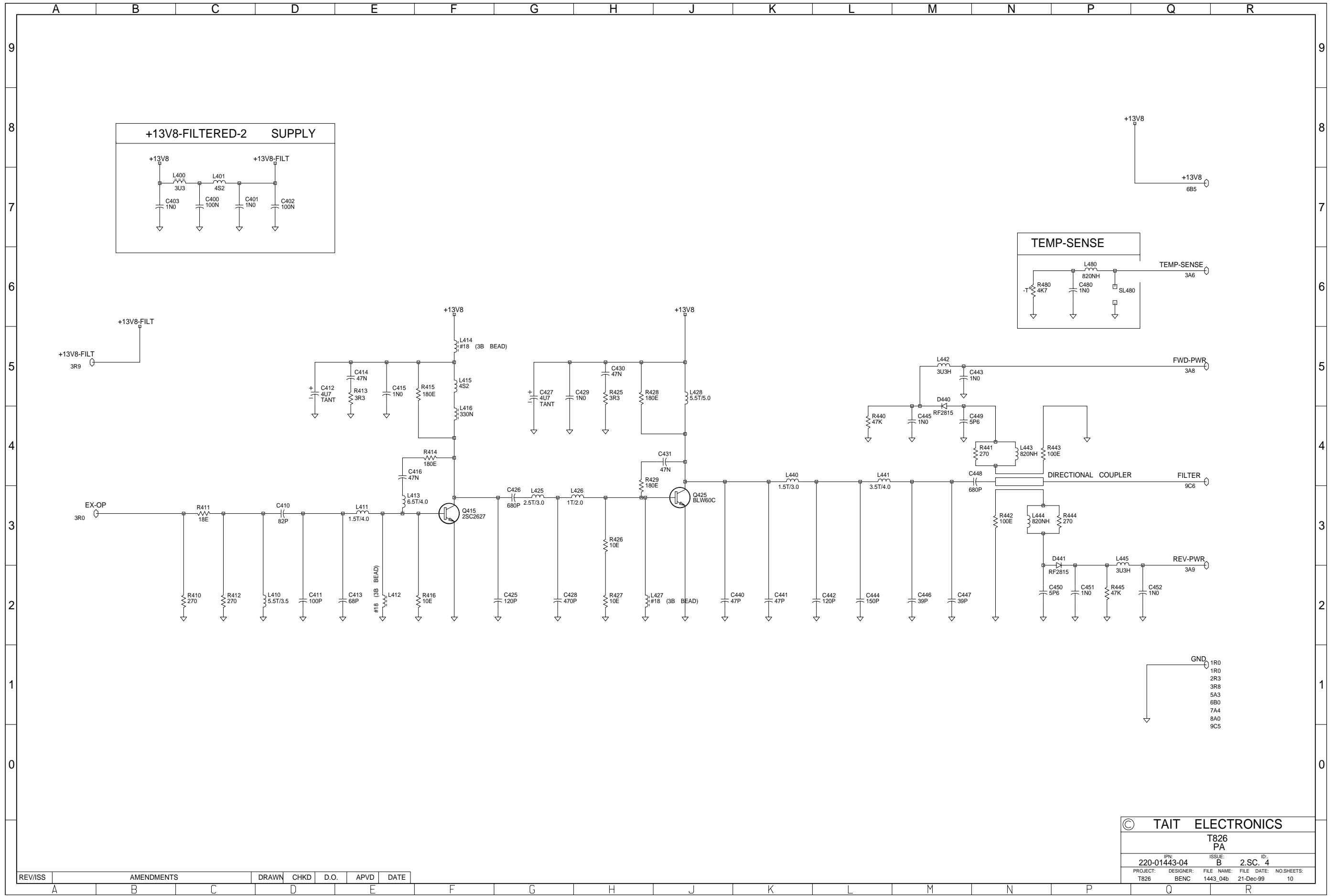


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T826  
AUDIO PROCESSOR  
IPN: 220-01443-04  
ISSUE: B  
ID: 2.S.C. 2  
PROJECT: T826  
DESIGNER: BENC  
FILE NAME: 1443\_04b  
FILE DATE: 21-Dec-99  
NO.SHEETS: 10

REV/ISS	AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE
A						
B						
C						
D						
E						

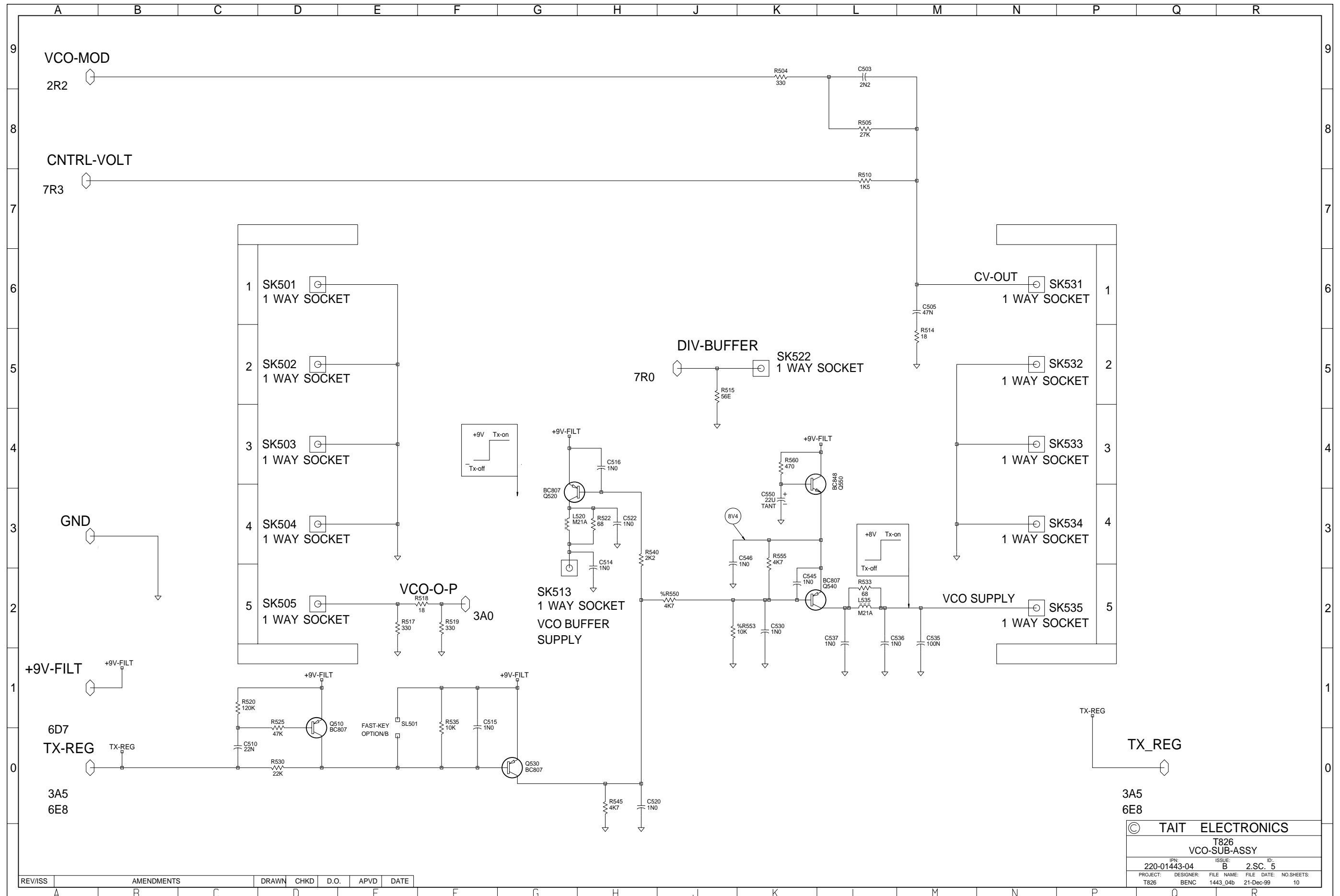


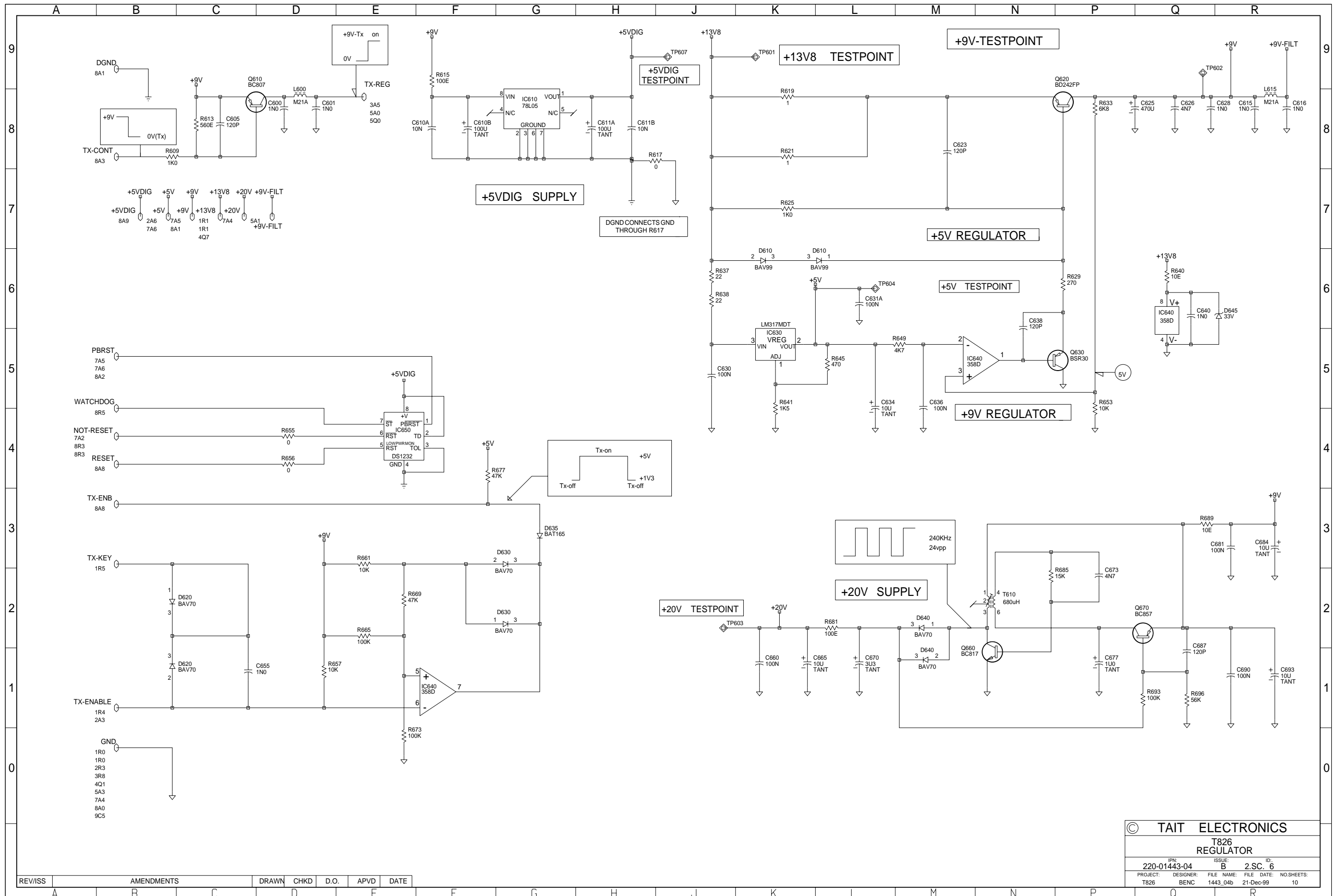




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T826 PA			
IPN:	ISSUE:	ID:	
220-01443-04	B	2.SC. 4	
PROJECT:	DESIGNER:	FILE NAME:	FILE DATE: NO.SHEETS:
T826	BENC	1443_04b	21-Dec-99 10

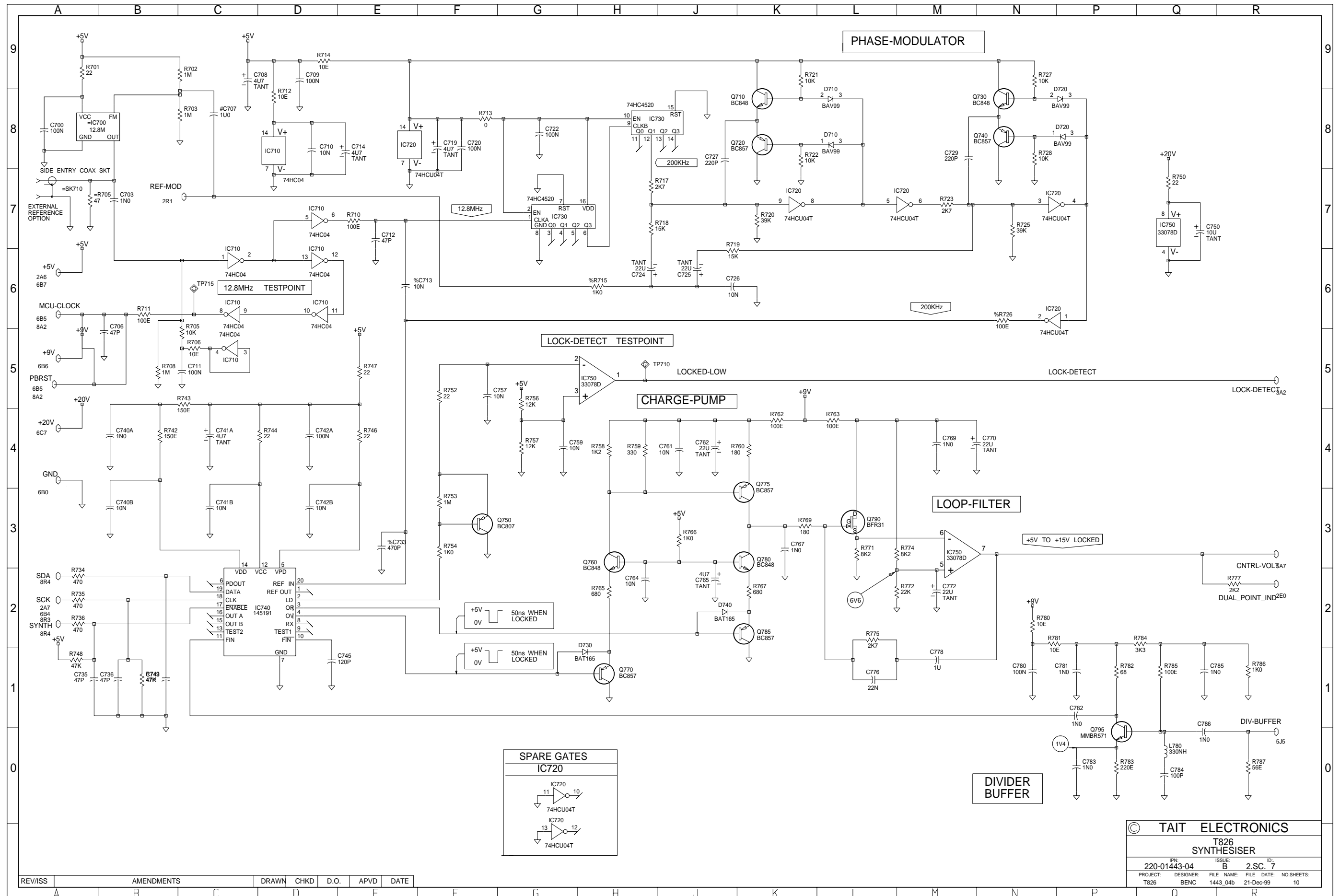
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C						
D						
E						



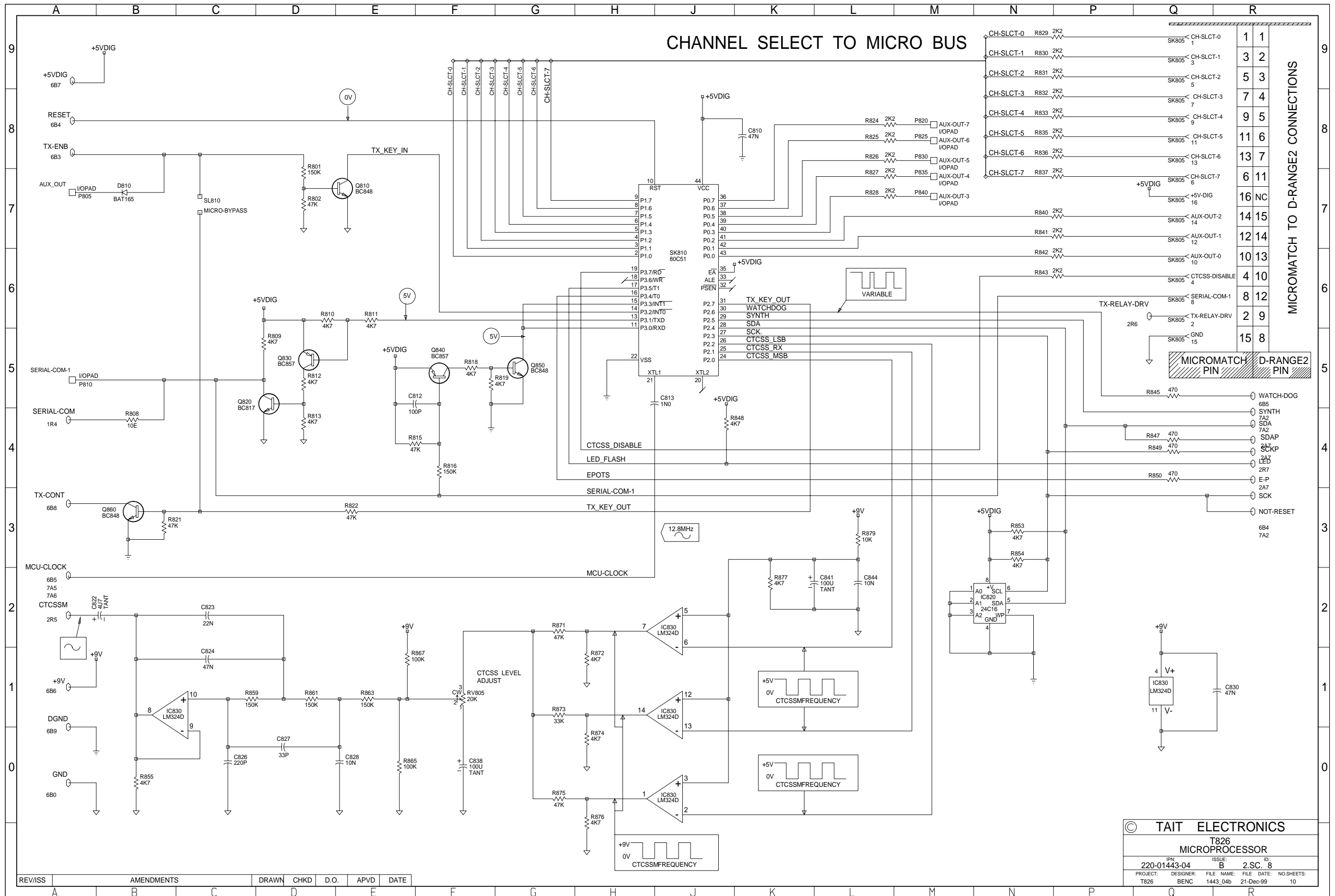


© TAIT ELECTRONICS	
T826 REGULATOR	
IPN: 220-01443-04	ISSUE: B
PROJECT: T826	DESIGNER: BENC
FILE NAME: 1443_04b	FILE DATE: 21-Dec-99
NO. SHEETS: 10	ID: 2.S.C. 6

REV/ISS	AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE
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B						
C						
D						
E						



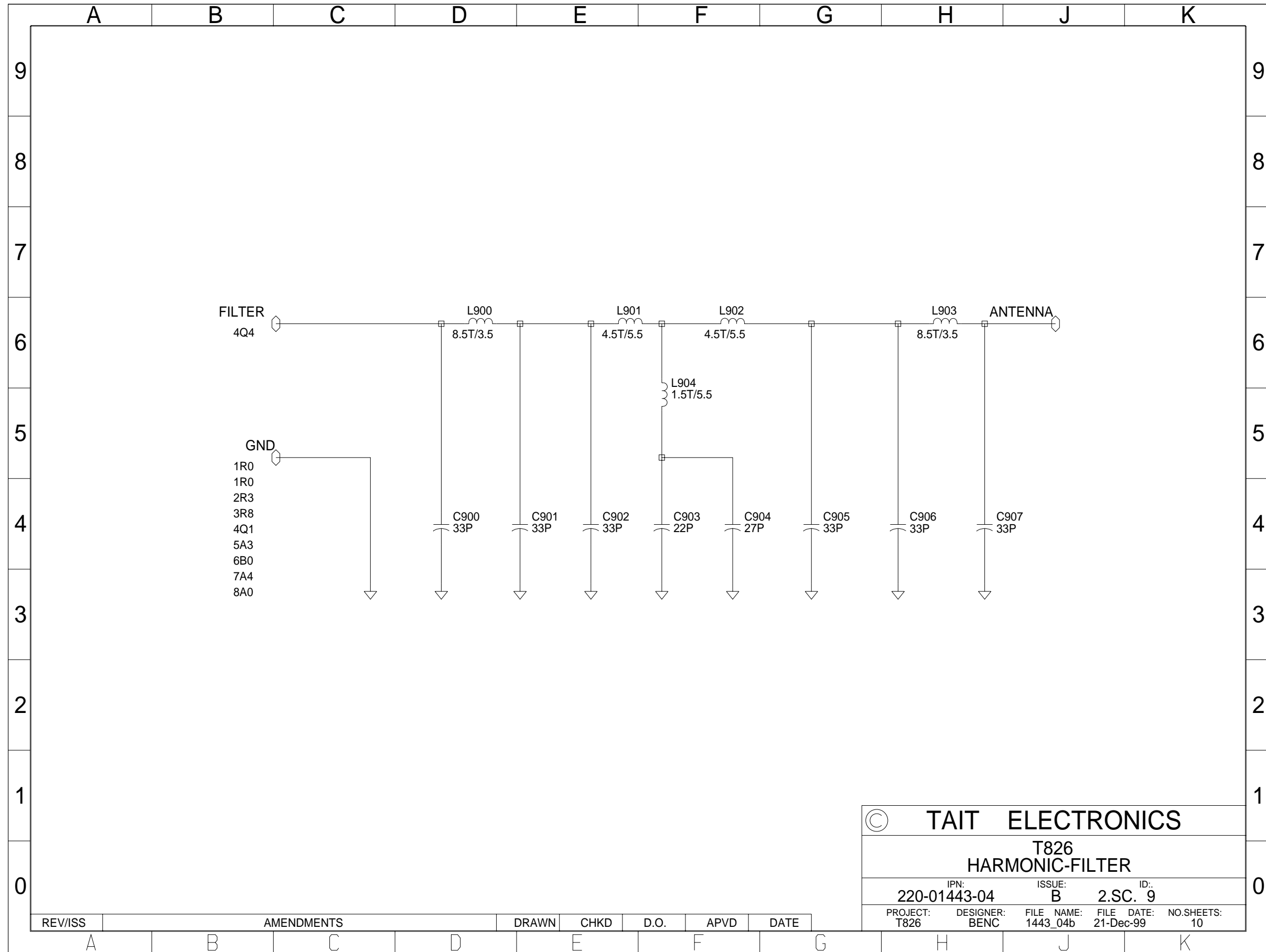
© TAIT ELECTRONICS  
 T826 SYNTHESISER  
 IPN: 220-01443-04  
 ISSUE: B 2.S.C. 7  
 PROJECT: T826 DESIGNER: BENC FILE NAME: 1443\_04b DATE: 21-Dec-99 NO SHEETS: 10



MICROMATCH TO D-RANGE2 CONNECTIONS	
1	1
3	2
5	3
7	4
9	5
11	6
13	7
6	11
16	NC
14	15
12	14
10	13
4	10
8	12
2	9
15	8

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T826 MICROPROCESSOR  
IPN: 220-01443-04  
ISSUE: B  
ID: 2.SC. 8  
PROJECT: T826 DESIGNER: BENC FILE NAME: 1443\_04b FILE DATE: 21-Dec-99 NO.SHEETS: 10

REV/ISS	AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE
A						
B						
C						
D						
E						



© TAIT ELECTRONICS				
T826 HARMONIC-FILTER				
IPN:	ISSUE:	ID:		
220-01443-04	B	2.SC. 9		
PROJECT:	DESIGNER:	FILE NAME:	FILE DATE:	NO.SHEETS:
T826	BENC	1443_04b	21-Dec-99	10

REV/ISS	AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE
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## 6.3 T827 Exciter PCB

This section contains the following information.

IPN	Section	Page
220-01447-04	Parts List	6.3.3
	Mechanical & Miscellaneous Parts	6.3.9
	Grid Reference Index	6.3.11
	PCB Layout - Top Side	6.3.15
	PCB Layout - Bottom Side	6.3.16
	Exciter Overview Diagram	6.3.17
	Audio Processor Circuit Diagram	6.3.18
	Exciter Circuit Diagram	6.3.19
	13.8V Supply Filter Circuit Diagram (PA Cavity)	6.3.20
	VCO Section Circuit Diagram	6.3.21
	Regulators Circuit Diagram	6.3.22
	Synthesiser Circuit Diagram	6.3.23
	Microcontroller Circuit Diagram	6.3.24
Harmonic Filter Circuit Diagram	6.3.25	



## T827 Parts List (IPN 220-01447-04)

### How To Use This Parts List

The components listed in this parts list are divided into two main types: those with a circuit reference (e.g. C2, D1, R121, etc.) and those without (miscellaneous and mechanical).

Those with a circuit reference are grouped in alphabetical order and then in numerical order within each group. Each component entry comprises three or four columns: the circuit reference, variant (if applicable), IPN and description. A number in the variant column indicates that this is a variant component which is fitted only to the product type listed. Static sensitive devices are indicated by an (S) at the start of the description column.

The miscellaneous and mechanical section lists the variant and common parts in IPN order. Where possible, a number in the legend column indicates their position in the mechanical assembly drawing.

The Parts List Amendments box below lists component changes that took place after the parts list and diagrams in this section were compiled. These changes (e.g. value changes, added/deleted components, etc.) are listed by circuit reference in alphanumeric order and supersede the information given in the parts list or diagrams. Components without circuit references are listed in IPN order.

### Parts List Amendments

There were no amendments to the parts list at the time of publication.

**Parts List Amendments - Continued**

This page is provided for entering future amendments to the parts list.

Ref	Var	IPN	Description	Ref	Var	IPN	Description
<p><b>Note:</b> %D205 and %D210 are optional level limiting diodes for special applications.</p> <p>=R705 (47 ohm) and =SK710 are fitted in place of =IC700 when an external frequency reference is used. These two components are supplied with the auxiliary D-range kits (T800-06-0000 &amp; T800-06-0001).</p>				C337		015-22220-01	CAP CER 0805 22P 5% NPO 50V
				C338		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C339		014-07470-01	CAP 4U7 'B'CASE 25V +-10% 267
				C340		015-22560-01	CAP CER 0805 56P 5% NPO 50V
				C341		015-04100-06	CAP CER 1210 1NF NPO200V GRM42
				C342		015-04100-06	CAP CER 1210 1NF NPO200V GRM42
				C343		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C344		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C350		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C351		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C352		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C353		014-07100-02	CAP TANT CHIP 1U0 3.2 X 1.6MM
				C354		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C355		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C356		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C357		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C365		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C366		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C367		015-25100-08	CAP CER 0805 10N 10% X7R 50V
				C368		015-25220-08	CAP CER 0805 22N 10% X7R 50V
				C369		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C370		015-06100-08	CAP CER 1206 100N 10% X7R 50V
				C380		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C381		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C382		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C383		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C384		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C385		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C386		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C390		015-25100-08	CAP CER 0805 10N 10% X7R 50V
				C391		014-08100-03	CAP TANT SMD 10U 35V 20%
				C392		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C393		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C394		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM
				C395		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C396		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM
				C397		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C400		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C401		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C402		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C403		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C503		015-24220-08	CAP CER 0805 2N2 10% X7R 50V
				C505		015-25470-08	CAP CER 0805 47N 10% X7R 50V
				C510		015-25220-08	CAP CER 0805 22N 10% X7R 50V
				C513		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C515		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C516		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C517		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C520		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C535		015-06100-08	CAP CER 1206 100N 10% X7R 50V
				C536		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C537		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C542		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C545		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C546		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C550		014-08220-01	(L)CAP TANT 22UF10V276MSER
				C600		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C601		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C605		015-23120-01	CAP CER 0805 120P 5% NPO 50V
				C610A		015-25100-08	CAP CER 0805 10N 10% X7R 50V
				C610B		014-09100-00	CAP TANT SMD 100U 16V 20%
				C611A		014-09100-00	CAP TANT SMD 100U 16V 20%
				C611B		015-25100-08	CAP CER 0805 10N 10% X7R 50V
				C615		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C616		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C623		015-23120-01	CAP CER 0805 120P 5% NPO 50V
				C625		020-09470-07	CAPEL470M16V20%V 8*20 3.5L.ESR
				C626		015-24470-08	CAP CER 0805 4N7 10% X7R 50V
				C628		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C630		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C631A		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C634		014-08100-00	CAP TANT CHIP 10M 16VW +-20%
				C636		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C638		015-23120-01	CAP CER 0805 120P 5% NPO 50V
				C640		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C655		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C660		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C665		014-08100-03	CAP TANT SMD 10U 35V 20%
				C670		014-07330-10	CAP TANT SMD 3U3 35V 10%
				C673		015-24470-08	CAP CER 0805 4N7 10% X7R 50V
				C677		014-07100-02	CAP TANT CHIP 1U0 3.2 X 1.6MM
				C681		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C684		014-08100-00	CAP TANT CHIP 10M 16VW +-20%
				C687		015-23120-01	CAP CER 0805 120P 5% NPO 50V
				C690		015-26100-08	CAP CER 0805 100N 10% X7R 50V
				C693		014-08100-00	CAP TANT CHIP 10M 16VW +-20%
				C700		015-06100-08	CAP CER 1206 100N 10% X7R 50V
				C703		015-24100-08	CAP CER 0805 1N 10% X7R 50V
				C706		015-22470-01	CAP CER 0805 47P 5% NPO 50V
				C708		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM
				C709		015-06100-08	CAP CER 1206 100N 10% X7R 50V
				C710		015-25100-08	CAP CER 0805 10N 10% X7R 50V
				C711		015-06100-08	CAP CER 1206 100N 10% X7R 50V
				C712		015-22470-01	CAP CER 0805 47P 5% NPO 50V
				C714		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM
				C719		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM
				C720		015-06100-08	CAP CER 1206 100N 10% X7R 50V
				C722		015-06100-08	CAP CER 1206 100N 10% X7R 50V
C201		016-07470-06	CAP SMD ELECT BI-P 4U7 50V 20%				
C202		016-07470-06	CAP SMD ELECT BI-P 4U7 50V 20%				
C204		016-07470-06	CAP SMD ELECT BI-P 4U7 50V 20%				
C205		016-07470-06	CAP SMD ELECT BI-P 4U7 50V 20%				
C207		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM				
C209		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C210		015-06100-08	CAP CER 1206 100N 10% X7R 50V				
C211		015-06100-08	CAP CER 1206 100N 10% X7R 50V				
C213		014-08100-00	CAP TANT CHIP 10M 16VW +-20%				
C215		014-08220-01	(L)CAP TANT 22UF10V276MSER				
C217		015-24220-08	CAP CER 0805 2N2 10% X7R 50V				
C219		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C221		014-08220-01	(L)CAP TANT 22UF10V276MSER				
C223		015-06100-08	CAP CER 1206 100N 10% X7R 50V				
C225		015-06100-08	CAP CER 1206 100N 10% X7R 50V				
C227		015-06100-08	CAP CER 1206 100N 10% X7R 50V				
C229		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C230		015-06100-08	CAP CER 1206 100N 10% X7R 50V				
C232		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C233		016-08470-03	CAP SMD ELEC 47mF 20% 25v 8.3m				
C235		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C237		014-07100-02	CAP TANT CHIP 1U0 3.2 X 1.6MM				
C239		016-07470-06	CAP SMD ELECT BI-P 4U7 50V 20%				
C241		015-06100-08	CAP CER 1206 100N 10% X7R 50V				
C242		014-08100-00	CAP TANT CHIP 10M 16VW +-20%				
C243		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C245		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C247		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C249		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C251		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C253		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C255		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C257		015-22470-01	CAP CER 0805 47P 5% NPO 50V				
C259		015-25470-08	CAP CER 0805 47N 10% X7R 50V				
C260		015-06100-08	CAP CER 1206 100N 10% X7R 50V				
C261		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM				
C263		016-09100-05	CAP SMD ELECT 100U 25V 20%				
C265		016-07470-06	CAP SMD ELECT BI-P 4U7 50V 20%				
C267		015-24470-08	CAP CER 0805 4N7 10% X7R 50V				
&C269	10	015-21150-01	CAP CER 0805 1P5+-1/4P NPO 50V				
&C269	15	015-21470-01	CAP CER 0805 4P7+-1/4P NPO 50V				
&C271	10	015-22470-01	CAP CER 0805 47P 5% NPO 50V				
&C271	15	015-22470-01	CAP CER 0				

Ref	Var	IPN	Description	Ref	Var	IPN	Description
C724		014-08220-01	(L)CAP TANT 22UF10V276MSER	IC720		002-74910-04	S) IC SMD 74HCU04 6X INV
C725		014-08220-01	(L)CAP TANT 22UF10V276MSER	IC730		002-10045-20	S) IC SMD 74HC4520T 2XCTR 4BIT
C726		015-25100-08	CAP CER 0805 10N 10% X7R 50V	IC740		002-14519-10	S) IC MC145191F SMD SYNTH
C727		015-23220-01	CAP CER 0805 220P 5% NPO 50V	IC750		002-10330-78	S) IC MC33078D 2X AMP LO NOISE
C729		015-23220-01	CAP CER 0805 220P 5% NPO 50V	IC820		002-12416-00	S) IC SMD AT24C16N-10SC EEPROM
%C733 10		015-23470-08	CAP CER 0805 470P 10% X7R 50V	IC830		002-10003-24	S) IC SMD 324 4X O-AMP SO14
%C733 15		015-23470-08	CAP CER 0805 470P 10% X7R 50V				
C735		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L320		056-10820-02	(L) IND SMD 820NH
C736		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L321		056-10820-02	(L) IND SMD 820NH
C740A		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L322		056-10820-02	(L) IND SMD 820NH
C740B		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L323		052-08345-60	COIL A/W 6T/4.5mm SMD 0.8mm
C741A		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	L324		052-08340-50	COIL A/W 5T/4.0MM SMD 0.8MM
C741B		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L325		052-08330-50	COIL A/W 5T/3.0MM SMD 0.8MM
C742A		015-06100-08	CAP CER 1206 100N 10% X7R 50V	L326		056-10820-02	(L) IND SMD 820NH
C742B		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L327		065-10009-20	BEAD FER SMD BDS 3/3.8.9-4S2
C743		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L328		056-10102-12	IND SMD 1u2 1812CS 5%
C745		015-23120-01	CAP CER 0805 120P 5% NPO 50V	L329		052-08340-50	COIL A/W 5T/4.0MM SMD 0.8MM
C750		014-08100-03	CAP TANT SMD 10U 35V 20%	L380		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C757		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L381		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C759		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L390		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C761		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L400		065-10009-20	BEAD FER SMD BDS 3/3.8.9-4S2
C762		014-08220-01	(L)CAP TANT 22UF10V276MSER	L510		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C764		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L535		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C765		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	L600		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C767		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L615		057-10120-03	IND 805 EMI SUP 120E@100M 0.2A
C769		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L780		056-10330-02	(L) IND SMD 330NH
C770		014-08220-01	(L)CAP TANT 22UF10V276MSER	L900		052-08135-85	COIL A/W 8.5T/3.5MM HOR 0.8MM
C772		014-08220-01	(L)CAP TANT 22UF10V276MSER	L901		052-08155-45	COIL A/W 4.5T/5.5MM HOR 0.8MM
C776		015-25220-08	CAP CER 0805 22N 10% X7R 50V	L902		052-08155-45	COIL A/W 4.5T/5.5MM HOR 0.8MM
C778		022-07100-05	CAP METAL PPS 1U 20% 63V 5MM	L903		052-08135-85	COIL A/W 8.5T/3.5MM HOR 0.8MM
C780		015-06100-08	CAP CER 1206 100N 10% X7R 50V	L904		052-08155-15	COIL A/W 1.5T/5.5MM HOR 0.8MM
C781		015-24100-08	CAP CER 0805 1N 10% X7R 50V	PL100		070-01001-00	D-RANGE 15 WAY COMPL T800
C782		015-24100-08	CAP CER 0805 1N 10% X7R 50V	PL205		240-00020-67	HEADER 6W 2X3 PCB MTG STD
C783		015-24100-08	CAP CER 0805 1N 10% X7R 50V	PL210		240-00020-67	HEADER 6W 2X3 PCB MTG STD
C784		015-23100-01	CAP CER 0805 100P 5% NPO 50V	PL215		240-00020-44	HEADER 10W X2R PCB MTG 5*2
C785		015-24100-08	CAP CER 0805 1N 10% X7R 50V	PL220		240-00020-67	HEADER 6W 2X3 PCB MTG STD
C786		015-24100-08	CAP CER 0805 1N 10% X7R 50V				
C810		015-25470-08	CAP CER 0805 47N 10% X7R 50V	Q210		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
C812		015-23100-01	CAP CER 0805 100P 5% NPO 50V	Q220		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23
C813		015-24100-08	CAP CER 0805 1N 10% X7R 50V	Q230		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
C822		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM	Q240		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
C823		015-25220-08	CAP CER 0805 22N 10% X7R 50V	Q250		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23
C824		015-25470-08	CAP CER 0805 47N 10% X7R 50V	Q260		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
C826		015-23220-01	CAP CER 0805 220P 5% NPO 50V	Q270		000-10004-10	S) XSTR SMD MJD41C NPN SW DPAK
C827		015-22330-01	CAP CER 0805 33P 5% NPO 50V	Q300		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
C828		015-25100-08	CAP CER 0805 10N 10% X7R 50V	Q301		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
C830		015-25470-08	CAP CER 0805 47N 10% X7R 50V	Q302		000-00033-12	XSTR BD242 TO-220 PNP ISOLTD
C838		014-09100-00	CAP TANT SMD 100U 16V 20%	Q320		000-10095-10	S) XSTR SMD BR951 NPN UHF
C841		014-09100-00	CAP TANT SMD 100U 16V 20%	Q321		000-10938-20	L)XSTR MRF9382TI HI FRQ PWRFFET
C844		015-25100-08	CAP CER 0805 10N 10% X7R 50V	Q350		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
C900		015-02330-06	CAP CER 1210 33P 500V GRM42	Q351		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
C901		015-02330-06	CAP CER 1210 33P 500V GRM42	Q365		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
C902		015-02330-06	CAP CER 1210 33P 500V GRM42	Q366		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
C903		015-02220-06	CAP CER 1210 22P 5% 500V GRM42	Q367		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
C904		015-02270-06	CAP CER 1210 27P NPO500VGRM42	Q368		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
C905		015-02330-06	CAP CER 1210 33P 500V GRM42	Q380		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
C906		015-02330-06	CAP CER 1210 33P 500V GRM42	Q381		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
C907		015-02330-06	CAP CER 1210 33P 500V GRM42	Q510		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
%D111A 10		001-10015-50	DIODE SMD ZENER 1.5SMC22AT3	Q520		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
%D111A 15		001-10015-50	DIODE SMD ZENER 1.5SMC22AT3	Q530		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
D220		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23	Q540		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
D230		001-10010-40	DIODE SMD ZENER 33V BZG03-C33	Q550		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
D240		001-10000-56	S) DIODE SMD BAW56 D-SW SOT23	Q610		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
D250		001-10000-56	S) DIODE SMD BAW56 D-SW SOT23	Q620		000-00033-12	XSTR BD242 TO-220 PNP ISOLTD
D260		001-10000-56	S) DIODE SMD BAW56 D-SW SOT23	Q630		000-10003-00	S) XSTR BSR30 PNP AF SOT-89
D270		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23	Q660		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23
D320		001-10000-18	S) DIODE SMD BAT18 S-SW SOT23	Q670		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
D321		001-10000-18	S) DIODE SMD BAT18 S-SW SOT23	Q710		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
D322		001-10000-18	S) DIODE SMD BAT18 S-SW SOT23	Q720		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
D351		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23	Q730		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
D610		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23	Q740		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
D620		001-10000-70	S) DIODE SMD BAV70 D-SW SOT23	Q750		000-10008-07	S) XSTR SMD BC807 PNP SOT23 AF
D630		001-10000-70	S) DIODE SMD BAV70 D-SW SOT23	Q760		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
D635		001-10165-00	DIODE BAT165 SCHOTTKY SOD-323	Q770		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
D640		001-10000-70	S) DIODE SMD BAV70 D-SW SOT23	Q775		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
D645		001-10010-40	DIODE SMD ZENER 33V BZG03-C33	Q780		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
D710		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23	Q785		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
D720		001-10000-99	S) DIODE SMD BAV99 D-SW SOT23	Q790		000-10003-12	S) XSTR SMD BFR31 N JFET SOT23
D730		001-10165-00	DIODE BAT165 SCHOTTKY SOD-323	Q795		000-10057-10	S) XSTR SMD BR571 NPN SOT23
D740		001-10165-00	DIODE BAT165 SCHOTTKY SOD-323	Q810		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
D810		001-10165-00	DIODE BAT165 SCHOTTKY SOD-323	Q820		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23
				Q830		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
IC210		002-10003-24	S) IC SMD 324 4X O-AMP SO14	Q840		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS
IC220		002-10126-70	S) IC SMD DS1267S10K 2XDIG POT	Q850		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
IC230		002-10003-24	S) IC SMD 324 4X O-AMP SO14	Q860		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS
IC240		002-10040-53	S)MC14053B SMD BREAK B4 MAKE				
IC250		002-10020-50	IC SMD 4N25A OPTOCOUPLER	R160		036-12100-00	RES M/F 0805 10E 5%
IC260		002-10003-24	S) IC SMD 324 4X O-AMP SO14	R201		036-13560-00	RES M/F 0805 560E 5%
IC300		002-10003-58	S) IC SMD LM358 DUAL O-AMP	R202		036-14100-10	RES M/F 0805 1K 1%
IC310		002-12951-00	IC SMD LP2951CM ADJ VLTGE REG	R204		036-14220-00	RES M/F 0805 2K2 5%
IC610		002-10078-05	S) IC SMD 78L05 5V REG	R205		036-13220-10	RES 0805 220E 1%
IC630		002-12523-17	(S)IC LM317L REG TO-252 0.5A	R206		036-14100-10	RES M/F 0805 1K 1%
IC640		002-10003-58	S) IC SMD LM358 DUAL O-AMP	R207		036-14390-10	RES M/F 0805 3K9 1%
IC650		002-10012-32	SMD DS1232LPS-2 LP RESET&W-DIG	R208		036-13560-00	RES M/F 0805 560E 5%
=IC700 10		539-00010-41	TCXO 12.8MHZ +2.5PPM -30 +70C	R209		036-15100-10	RES M/F 0805 10K 1%
=IC700 15		539-00010-41	TCXO 12.8MHZ +2.5PPM -30 +70C	R210		036-14220-00	RES M/F 0805 2K2 5%
IC710		002-74900-04	S) IC SMD 74HC04D 6X INV BUFFD	RV210		040-05100-23	POT 10K LOG PCB 15MM SLOT SFT

Ref	Var	IPN	Description	Ref	Var	IPN	Description
R211		036-13470-00	RES M/F 0805 470E 5%	R313		036-15100-10	RES M/F 0805 10K 1%
R212		036-16100-00	RES M/F 0805 100K 5%	R319		036-12100-00	RES M/F 0805 10E 5%
R213		036-15100-10	RES M/F 0805 10K 1%	R320		036-15100-10	RES M/F 0805 10K 1%
R214		036-14820-10	RES M/F 0805 8K2 1%	R321		036-14150-10	RES M/F 0805 1K5 1%
R215		036-16100-00	RES M/F 0805 100K 5%	R322		036-12470-00	RES M/F 0805 47E 5%
R216		036-16100-00	RES M/F 0805 100K 5%	R323		036-13560-00	RES M/F 0805 560E 5%
R217		036-14100-10	RES M/F 0805 1K 1%	R324		036-12220-00	RES M/F 0805 22E 5%
R218		036-16150-00	RES M/F 0805 150K 5%	R325		036-12270-00	RES M/F 0805 27E 5%
R219		036-14220-00	RES M/F 0805 2K2 5%	R326		036-13330-00	RES M/F 0805 330E 5%
R220		036-13470-00	RES M/F 0805 470E 5%	R327		036-14100-10	RES M/F 0805 1K 1%
RV220		042-05500-05	RES PRESET SMD 50K CER 4MM SQ	R328		036-14100-10	RES M/F 0805 1K 1%
R221		036-14150-10	RES M/F 0805 1K5 1%	R329		036-03150-07	LJRES 150E 0.5W 5% 2010 PWRCHP
R223		036-17100-10	RES M/F 0805 1M 1%	R330		036-03150-07	LJRES 150E 0.5W 5% 2010 PWRCHP
R224		036-14680-10	RES M/F 0805 6K8 1%	R331		036-16150-00	RES M/F 0805 150K 5%
R225		036-17100-10	RES M/F 0805 1M 1%	R332		036-16150-00	RES M/F 0805 150K 5%
R226		036-15100-10	RES M/F 0805 10K 1%	R333		036-12270-00	RES M/F 0805 27E 5%
R227		036-14220-00	RES M/F 0805 2K2 5%	R334		036-12470-00	RES M/F 0805 47E 5%
R228		036-13120-00	RES M/F 0805 120E 5%	R335		036-03130-10	RES 30E 1W SMD 2512
R229		036-16470-00	RES M/F 0805 470K 5%	R336		036-03130-10	RES 30E 1W SMD 2512
R230		036-16100-00	RES M/F 0805 100K 5%	R337		036-14150-10	RES M/F 0805 1K5 1%
R231		036-15100-10	RES M/F 0805 10K 1%	R338		036-03033-10	RES 3E3 1W SMD 2512
R232		036-16330-00	RES M/F 0805 330K 5%	R339		036-14150-10	RES M/F 0805 1K5 1%
R233		036-16100-00	RES M/F 0805 100K 5%	R350		036-14150-10	RES M/F 0805 1K5 1%
R235		036-14470-10	RES M/F 0805 4K7 1%	R351		036-15470-10	RES M/F 0805 47K 1%
R237		036-15470-10	RES M/F 0805 47K 1%	R352		036-15150-00	RES M/F 0805 15K 5%
R238		036-15470-10	RES M/F 0805 47K 1%	R353		036-15150-00	RES M/F 0805 15K 5%
R239		036-14150-10	RES M/F 0805 1K5 1%	R354		036-11330-00	RES M/F 0805 3E3 5%
R241		036-14470-10	RES M/F 0805 4K7 1%	R355		036-15180-00	RES M/F 0805 18K 5%
R242		036-14220-00	RES M/F 0805 2K2 5%	R356		036-14330-10	RES M/F 0805 3K3 1%
R244		036-15100-10	RES M/F 0805 10K 1%	R357		036-14220-00	RES M/F 0805 2K2 5%
R245		036-16100-00	RES M/F 0805 100K 5%	R358		036-14100-10	RES M/F 0805 1K 1%
R247		036-15100-10	RES M/F 0805 10K 1%	R359		036-16100-00	RES M/F 0805 100K 5%
R248		036-16100-00	RES M/F 0805 100K 5%	R365		036-15470-10	RES M/F 0805 47K 1%
R249		036-16100-00	RES M/F 0805 100K 5%	R367		036-13100-10	RES M/F 0805 100E 1%
R251		036-16100-00	RES M/F 0805 100K 5%	R368		036-15100-10	RES M/F 0805 10K 1%
R253		036-16100-00	RES M/F 0805 100K 5%	R369		036-16100-00	RES M/F 0805 100K 5%
R254		036-16100-00	RES M/F 0805 100K 5%	R371		036-15470-10	RES M/F 0805 47K 1%
R255		036-15100-10	RES M/F 0805 10K 1%	R372		036-15150-00	RES M/F 0805 15K 5%
R256		036-15470-10	RES M/F 0805 47K 1%	R373		036-16100-00	RES M/F 0805 100K 5%
R257		036-16560-00	RES M/F 0805 560K 5%	R374		036-14470-10	RES M/F 0805 4K7 1%
R258		036-16150-00	RES M/F 0805 150K 5%	R380		036-14100-10	RES M/F 0805 1K 1%
R259		036-15220-00	RES M/F 0805 22K 5%	R381		036-15150-00	RES M/F 0805 15K 5%
R260		036-15470-10	RES M/F 0805 47K 1%	R382		036-14100-10	RES M/F 0805 1K 1%
R262		036-15470-10	RES M/F 0805 47K 1%	R383		036-15150-00	RES M/F 0805 15K 5%
R263		036-14470-10	RES M/F 0805 4K7 1%	R384		036-12680-00	RES M/F 0805 68E 5%
&R264	10	036-15220-00	RES M/F 0805 22K 5%	R385		036-12680-00	RES M/F 0805 68E 5%
&R264	15	036-15270-10	RES M/F 0805 27K 1%	R390		036-12220-00	RES M/F 0805 22E 5%
&R265	10	036-15150-00	RES M/F 0805 15K 5%	R391		036-13100-10	RES M/F 0805 100E 1%
&R265	15	036-15180-00	RES M/F 0805 18K 5%	R392		036-16100-00	RES M/F 0805 100K 5%
&R266	10	036-15470-10	RES M/F 0805 47K 1%	R393		036-14150-10	RES M/F 0805 1K5 1%
&R266	15	036-15560-10	RES MF 0805 56K 1%	R394		036-14680-10	RES M/F 0805 6K8 1%
R267		036-14220-00	RES M/F 0805 2K2 5%	R395		036-14270-00	RES M/F 0805 2K7 5%
R268		036-13100-10	RES M/F 0805 100E 1%	R504		036-13330-00	RES M/F 0805 330E 5%
R269		036-15100-10	RES M/F 0805 10K 1%	R505		036-15270-10	RES M/F 0805 27K 1%
R270		036-14120-00	RES M/F 0805 1K2 5%	R510		036-14150-10	RES M/F 0805 1K5 1%
R271		036-17100-10	RES M/F 0805 1M 1%	R514		036-12180-00	RES M/F 0805 18E 5%
R272		036-13560-00	RES M/F 0805 560E 5%	R515		036-12560-00	RES M/F 0805 56E 5%
R273		036-15120-00	RES M/F 0805 12K 5%	R517		036-13330-00	RES M/F 0805 330E 5%
R274		036-15150-00	RES M/F 0805 15K 5%	R518		036-12180-00	RES M/F 0805 18E 5%
R275		036-14270-00	RES M/F 0805 2K7 5%	R519		036-13330-00	RES M/F 0805 330E 5%
R277		036-16100-00	RES M/F 0805 100K 5%	R520		036-16120-00	RES M/F 0805 120K 5%
R278		036-16120-00	RES M/F 0805 120K 5%	R525		036-15470-10	RES M/F 0805 47K 1%
R279		036-17100-10	RES M/F 0805 1M 1%	R530		036-15220-00	RES M/F 0805 22K 5%
R280		036-15100-10	RES M/F 0805 10K 1%	R535		036-15100-10	RES M/F 0805 10K 1%
R282		036-15560-10	RES MF 0805 56K 1%	R537		036-12680-00	RES M/F 0805 68E 5%
R283		036-15560-10	RES MF 0805 56K 1%	R540		036-14220-00	RES M/F 0805 2K2 5%
R284		036-17100-10	RES M/F 0805 1M 1%	R545		036-14470-10	RES M/F 0805 4K7 1%
R285		036-10000-00	RES M/F 0805 ZERO OHM	%R550	10	036-14470-10	RES M/F 0805 4K7 1%
R286		036-14220-00	RES M/F 0805 2K2 5%	%R550	15	036-14470-10	RES M/F 0805 4K7 1%
R287		036-15100-10	RES M/F 0805 10K 1%	R555		036-14470-10	RES M/F 0805 4K7 1%
R288		036-15120-00	RES M/F 0805 12K 5%	R560		036-13470-00	RES M/F 0805 470E 5%
R289		036-16100-00	RES M/F 0805 100K 5%	R565		036-12680-00	RES M/F 0805 68E 5%
&R290	10	036-13560-00	RES M/F 0805 560E 5%	R609		036-14100-10	RES M/F 0805 1K 1%
&R290	15	036-13560-00	RES M/F 0805 560E 5%	R613		036-13560-00	RES M/F 0805 560E 5%
R291		036-10000-00	RES M/F 0805 ZERO OHM	R615		036-13100-10	RES M/F 0805 100E 1%
R292		036-14470-10	RES M/F 0805 4K7 1%	R617		036-10000-00	RES M/F 0805 ZERO OHM
R293		036-15470-10	RES M/F 0805 47K 1%	R619		036-01100-10	RES 1 OHM 1 WATT 2512 CHIP
R294		036-14470-10	RES M/F 0805 4K7 1%	R621		036-01100-10	RES 1 OHM 1 WATT 2512 CHIP
R295		036-14270-00	RES M/F 0805 2K7 5%	R625		036-14100-10	RES M/F 0805 1K 1%
R296		036-14100-10	RES M/F 0805 1K 1%	R629		036-03270-10	RES 270 OHM 1 WATT 2512 CHIP
R297		036-14560-00	RES M/F 0805 5K6 5%	R633		036-14680-10	RES M/F 0805 6K8 1%
%R298	10	036-16100-00	RES M/F 0805 100K 5%	R637		036-12220-00	RES M/F 0805 22E 5%
%R298	15	036-16100-00	RES M/F 0805 100K 5%	R638		036-12220-00	RES M/F 0805 22E 5%
R299		036-14270-00	RES M/F 0805 2K7 5%	R640		036-12100-00	RES M/F 0805 10E 5%
R300		036-15220-00	RES M/F 0805 22K 5%	R641		036-14150-10	RES M/F 0805 1K5 1%
RV300		042-04220-05	RES PRESET SMD 2K CER 4MM SQ	R645		036-13470-00	RES M/F 0805 470E 5%
R301		036-14270-00	RES M/F 0805 2K7 5%	R649		036-14470-10	RES M/F 0805 4K7 1%
R302		036-15100-10	RES M/F 0805 10K 1%	R653		036-15100-10	RES M/F 0805 10K 1%
R303		036-16100-00	RES M/F 0805 100K 5%	R655		036-10000-00	RES M/F 0805 ZERO OHM
R304		036-15220-00	RES M/F 0805 22K 5%	R656		036-10000-00	RES M/F 0805 ZERO OHM
R305		036-14150-10	RES M/F 0805 1K5 1%	R657		036-15100-10	RES M/F 0805 10K 1%
R306		036-13150-00	RES M/F 0805 150E 5%	R661		036-15100-10	RES M/F 0805 10K 1%
R307		036-15100-10	RES M/F 0805 10K 1%	R665		036-16100-00	RES M/F 0805 100K 5%
R308		036-14220-00	RES M/F 0805 2K2 5%	R669		036-15470-10	RES M/F 0805 47K 1%
R309		036-14100-10	RES M/F 0805 1K 1%	R673		036-16100-00	RES M/F 0805 100K 5%
R310		036-12220-00	RES M/F 0805 22E 5%	R677		036-15470-10	RES M/F 0805 47K 1%
R311		036-13680-00	RES M/F 0805 680E 5%	R681		036-13100-10	RES M/F 0805 100E 1%
R312		036-13680-00	RES M/F 0805 680E 5%	R685		036-15150-00	RES M/F 0805 15K 5%

Ref	Var	IPN	Description	Ref	Var	IPN	Description
R689		036-12100-00	RES M/F 0805 10E 5%	R845		036-13470-00	RES M/F 0805 470E 5%
R693		036-16100-00	RES M/F 0805 100K 5%	R847		036-13470-00	RES M/F 0805 470E 5%
R696		036-15560-10	RES MF 0805 56K 1%	R848		036-14470-10	RES M/F 0805 4K7 1%
R701		036-12220-00	RES M/F 0805 22E 5%	R849		036-13470-00	RES M/F 0805 470E 5%
R702		036-17100-10	RES M/F 0805 1M 1%	R850		036-13470-00	RES M/F 0805 470E 5%
R703		036-17100-10	RES M/F 0805 1M 1%	R853		036-14470-10	RES M/F 0805 4K7 1%
R705		036-15100-10	RES M/F 0805 10K 1%	R854		036-14470-10	RES M/F 0805 4K7 1%
R706		036-12100-00	RES M/F 0805 10E 5%	R855		036-14470-10	RES M/F 0805 4K7 1%
R708		036-17100-10	RES M/F 0805 1M 1%	R859		036-16150-00	RES M/F 0805 150K 5%
R710		036-13100-10	RES M/F 0805 100E 1%	R861		036-16150-00	RES M/F 0805 150K 5%
R711		036-13100-10	RES M/F 0805 100E 1%	R863		036-16150-00	RES M/F 0805 150K 5%
R712		036-12100-00	RES M/F 0805 10E 5%	R865		036-16100-00	RES M/F 0805 100K 5%
R713		036-10000-00	RES M/F 0805 ZERO OHM	R867		036-16100-00	RES M/F 0805 100K 5%
R714		036-12100-00	RES M/F 0805 10E 5%	R871		036-15470-10	RES M/F 0805 47K 1%
%R715	10	036-14100-10	RES M/F 0805 1K 1%	R872		036-14470-10	RES M/F 0805 4K7 1%
%R715	15	036-14100-10	RES M/F 0805 1K 1%	R873		036-15330-00	RES M/F 0805 33K 5%
R717		036-14270-00	RES M/F 0805 2K7 5%	R874		036-14470-10	RES M/F 0805 4K7 1%
R718		036-15150-00	RES M/F 0805 15K 5%	R875		036-15470-10	RES M/F 0805 47K 1%
R719		036-15150-00	RES M/F 0805 15K 5%	R876		036-14470-10	RES M/F 0805 4K7 1%
R720		036-15390-00	RES M/F 0805 39K 5%	R877		036-14470-10	RES M/F 0805 4K7 1%
R721		036-15100-10	RES M/F 0805 10K 1%	R879		036-15100-10	RES M/F 0805 10K 1%
R722		036-15100-10	RES M/F 0805 10K 1%				
R723		036-14270-00	RES M/F 0805 2K7 5%	SK200		240-10000-05	CONN SMD SKT 8W 2R M-MATCH
R725		036-15390-00	RES M/F 0805 39K 5%	SK205		240-02020-05	SKT STEREO PHONE JACK PCB MTG
%R726	10	036-13100-10	RES M/F 0805 100E 1%	SK805		240-10000-07	CONN SMD SKT 16W 2R M-MATCH
%R726	15	036-13100-10	RES M/F 0805 100E 1%	SK810		240-04020-42	SKT 44 PIN SMD PLCC
R727		036-15100-10	RES M/F 0805 10K 1%				
R728		036-15100-10	RES M/F 0805 10K 1%	SW230		232-00010-26	SWITCH PUSH SPDT R-ANG PCB MTG
R734		036-13470-00	RES M/F 0805 470E 5%				
R735		036-13470-00	RES M/F 0805 470E 5%	T210		053-00010-17	XFMR T4030 LINE MATCH POTCORE
R736		036-13470-00	RES M/F 0805 470E 5%	T610		050-15119-52	COIL SMD 680uH XFMR 5119-T052
R742		036-13150-00	RES M/F 0805 150E 5%				
R743		036-13150-00	RES M/F 0805 150E 5%				
R744		036-12220-00	RES M/F 0805 22E 5%				
R746		036-12220-00	RES M/F 0805 22E 5%				
R747		036-12220-00	RES M/F 0805 22E 5%				
R748		036-15470-10	RES M/F 0805 47K 1%				
R749		036-15470-10	RES M/F 0805 47K 1%				
R750		036-12220-00	RES M/F 0805 22E 5%				
R752		036-12220-00	RES M/F 0805 22E 5%				
R753		036-17100-10	RES M/F 0805 1M 1%				
R754		036-14100-10	RES M/F 0805 1K 1%				
R756		036-15120-00	RES M/F 0805 12K 5%				
R757		036-15120-00	RES M/F 0805 12K 5%				
R758		036-14120-00	RES M/F 0805 1K2 5%				
R759		036-13330-00	RES M/F 0805 330E 5%				
R760		036-13180-00	RES M/F 0805 180E 5%				
R762		036-13100-10	RES M/F 0805 100E 1%				
R763		036-13100-10	RES M/F 0805 100E 1%				
R765		036-13680-00	RES M/F 0805 680E 5%				
R766		036-14100-10	RES M/F 0805 1K 1%				
R767		036-13680-00	RES M/F 0805 680E 5%				
R769		036-13180-00	RES M/F 0805 180E 5%				
R771		036-14820-10	RES M/F 0805 8K2 1%				
R772		036-15220-00	RES M/F 0805 22K 5%				
R774		036-14820-10	RES M/F 0805 8K2 1%				
R775		036-14270-00	RES M/F 0805 2K7 5%				
R777		036-14220-00	RES M/F 0805 2K2 5%				
R780		036-12100-00	RES M/F 0805 10E 5%				
R781		036-12100-00	RES M/F 0805 10E 5%				
R782		036-12680-00	RES M/F 0805 68E 5%				
R783		036-13220-10	RES 0805 220E 1%				
R784		036-14330-10	RES M/F 0805 3K3 1%				
R785		036-13100-10	RES M/F 0805 100E 1%				
R786		036-14100-10	RES M/F 0805 1K 1%				
R787		036-12560-00	RES M/F 0805 56E 5%				
R801		036-16150-00	RES M/F 0805 150K 5%				
R802		036-15470-10	RES M/F 0805 47K 1%				
RV805		042-05200-05	RES PRESET SMD 20K CER 4MM SQ				
R808		036-12100-00	RES M/F 0805 10E 5%				
R809		036-14470-10	RES M/F 0805 4K7 1%				
R810		036-14470-10	RES M/F 0805 4K7 1%				
R811		036-14470-10	RES M/F 0805 4K7 1%				
R812		036-14470-10	RES M/F 0805 4K7 1%				
R813		036-14470-10	RES M/F 0805 4K7 1%				
R815		036-15470-10	RES M/F 0805 47K 1%				
R816		036-16150-00	RES M/F 0805 150K 5%				
R818		036-14470-10	RES M/F 0805 4K7 1%				
R819		036-14470-10	RES M/F 0805 4K7 1%				
R821		036-15470-10	RES M/F 0805 47K 1%				
R822		036-15470-10	RES M/F 0805 47K 1%				
R824		036-14220-00	RES M/F 0805 2K2 5%				
R825		036-14220-00	RES M/F 0805 2K2 5%				
R826		036-14220-00	RES M/F 0805 2K2 5%				
R827		036-14220-00	RES M/F 0805 2K2 5%				
R828		036-14220-00	RES M/F 0805 2K2 5%				
R829		036-14220-00	RES M/F 0805 2K2 5%				
R830		036-14220-00	RES M/F 0805 2K2 5%				
R831		036-14220-00	RES M/F 0805 2K2 5%				
R832		036-14220-00	RES M/F 0805 2K2 5%				
R833		036-14220-00	RES M/F 0805 2K2 5%				
R835		036-14220-00	RES M/F 0805 2K2 5%				
R836		036-14220-00	RES M/F 0805 2K2 5%				
R837		036-14220-00	RES M/F 0805 2K2 5%				
R840		036-14220-00	RES M/F 0805 2K2 5%				
R841		036-14220-00	RES M/F 0805 2K2 5%				
R842		036-14220-00	RES M/F 0805 2K2 5%				
R843		036-14220-00	RES M/F 0805 2K2 5%				



**T827 Mechanical & Miscellaneous Parts (220-01447-04)**

<b>IPN</b>	<b>Legend</b>	<b>Description</b>	<b>IPN</b>	<b>Legend</b>	<b>Description</b>
002-08951-20		S) IC AT89C51 PLCC44 MIC 12MHZ			
008-00014-79		S)LED 3MM RED WITH WIRE			
008-00014-80		S)LED 3MM GREEN WITH WIRE			
220-01447-04		PCB T827 EX SII			
240-02100-06		SKT COAX N TYPE PNL MTG OP-TER			
240-04020-62		SKT 2 W RECEP SHORTING LINK			
240-04021-77		SKT JACK 1.3 PCB MT 64W			
240-10000-05		CONN SMD SKT 8W 2R M-MATCH			
303-11169-04		CHASSIS PAINTED T800 SER II			
303-23118-00		COVER A3M2247 D RANGE T855/7			
303-50074-00		CLIP A3M2246 SPRING CLAMP T857			
308-01007-01		HANDLE BS SII 2 WASHERS INC			
312-01052-02		LID TOP T800 SER II PTND			
312-01053-02		LID BOTTOM T800 SER II PNTD			
316-06619-00		PNL FRT EX, NO EX OUT SER II			
349-00020-36		SCREW TT M3X8m PANTORX BLK			
349-00020-36		SCREW TT M3X8m PANTORX BLK			
349-00020-43		SCRW T/T M4X12MM P/POZ BZ			
349-00020-45		SCRW T/T M4X20MM P/POZ BZ			
349-00020-55		SCRW M3*8 P/P T/T BLCKZNC CHRM			
352-00010-08		NUT M3 COLD FORM HEX ST BZ			
352-00010-29		NUT M4 NYLOC HEX			
353-00010-13		WSHR M3 S/PROOF INT BZ			
353-00010-24		WSHR M4x8mm Flat			
362-00010-33		GROMMET LED MTG 3MM			
365-00100-20		LABEL WHITE S/A 28X11MM			



**T827 Grid Reference Index (IPN 220-01447-04)****How To Use This Grid Reference Index**

The first digit in the PCB layout reference is a "1" or "2", indicating the top or bottom side layout respectively, and the last two characters give the location of the component on that diagram.

The first digit in the circuit diagram reference is the sheet number, and the last two characters give the location of the component on that sheet.

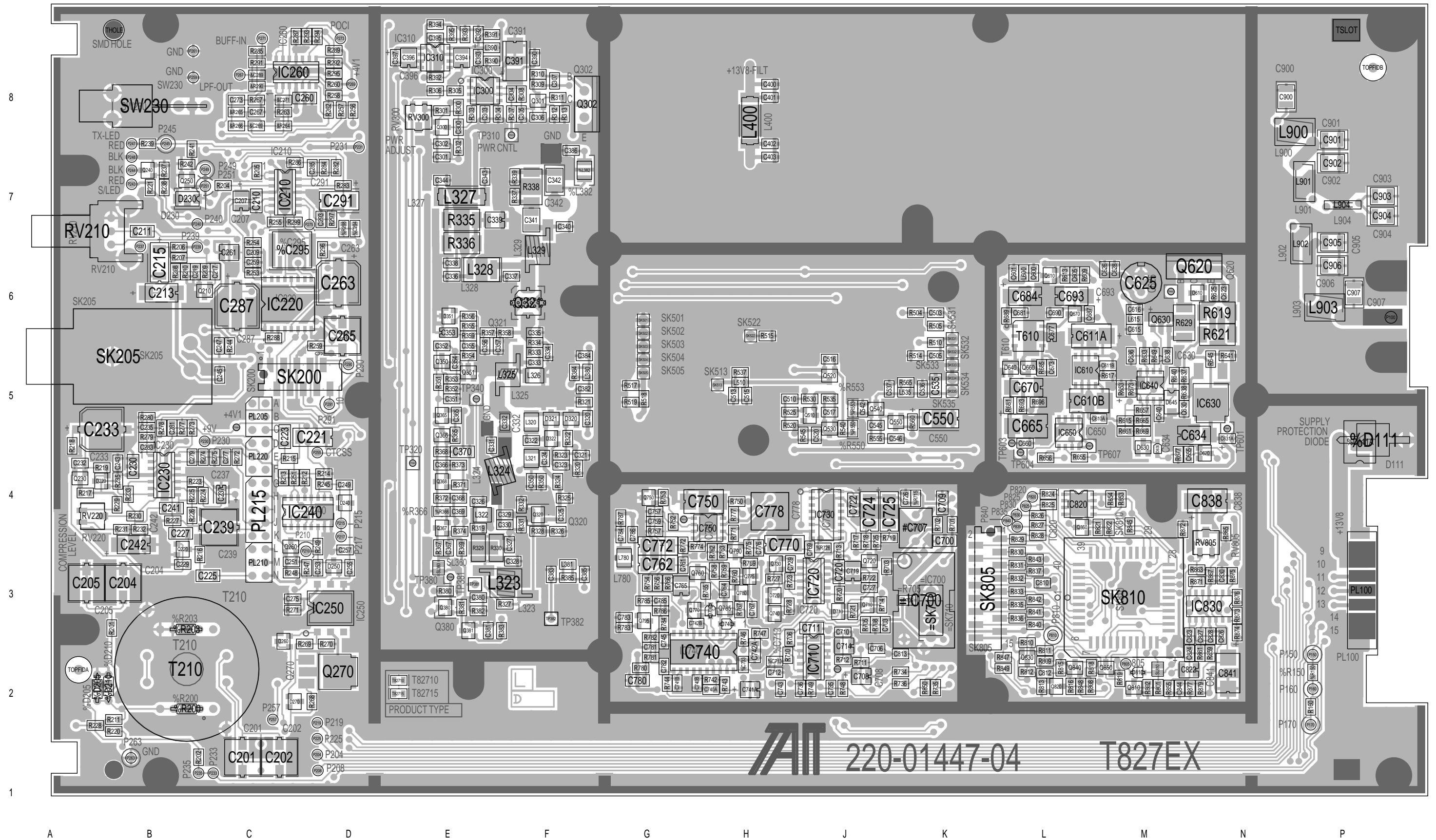
Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit
C201	1:C1	2-B8	C305	1:F8	3-D8	C402	1:H8	4-E4	C720	1:J3	7-F8
C202	1:C1	2-C8	C306	1:F8	3-E8	C403	1:H7	4-F4	C722	1:J4	7-G8
C204	1:B3	2-E8	C307	1:F8	3-E8	C503	1:K6	5-L9	C724	1:J4	7-H6
C205	1:A3	2-E8	C320	1:F5	3-C4	C505	1:K5	5-M6	C725	1:J4	7-J6
C207	1:C7	2-B6	C321	1:F4	3-C5	C510	1:H5	5-C0	C726	1:K4	7-J6
C209	1:C6	2-D6	C322	1:F5	3-D4	C513	1:H5	5-G2	C727	1:J3	7-J8
C210	1:C7	2-K0	C323	1:F4	3-E5	C515	1:H5	5-G2	C729	1:H3	7-M8
C211	1:B7	2-F8	C324	1:F4	3-F4	C516	1:J5	5-H1	%C733	1:H2	7-E3
C213	1:B6	2-G8	C325	1:F4	3-G4	C517	1:J5	5-F1	C735	1:J2	7-A1
C215	1:B6	2-G8	C326	1:E4	3-H6	C520	1:J5	5-H0	C736	1:J2	7-B1
C217	1:C6	2-H8	C327	1:F4	3-H6	C535	1:K5	5-M2	C740A	1:H2	7-B4
C219	1:B6	2-H7	C328	1:F3	3-H5	C536	1:K5	5-L2	C740B	1:H2	7-B3
C221	1:D5	2-G6	C329	1:F4	3-J4	C537	1:J5	5-L2	C741A	1:H2	7-C4
C223	1:C5	2-J6	C330	1:F4	3-J4	C542	1:J5	5-J1	C741B	1:G2	7-C3
C225	1:C3	2-K7	C331	1:E5	3-J4	C545	1:J5	5-K1	C742A	1:H2	7-D4
C227	1:B4	2-K7	C332	1:F5	3-K4	C546	1:K5	5-K0	C742B	1:H3	7-D3
C229	1:B3	2-L7	C333	1:F5	3-L4	C550	1:K5	5-L0	C743	1:H2	7-B1
C230	1:B4	2-J0	C334	1:F5	3-M4	C600	1:L6	6-D8	C745	1:G3	7-D1
C232	1:A4	2-M7	C335	1:F6	3-M4	C601	1:L6	6-D8	C750	1:H4	7-Q7
C233	1:B5	2-N7	C336	1:E6	3-N5	C605	1:L6	6-C8	C757	1:G4	7-F5
C235	1:B5	2-K5	C337	1:F6	3-N4	C610A	1:M5	6-F8	C759	1:G4	7-G4
C237	1:C4	2-K5	C338	1:E6	3-P6	C610B	1:L5	6-F8	C761	1:G3	7-J4
C239	1:C4	2-L4	C339	1:F7	3-P5	C611A	1:M6	6-H8	C762	1:G3	7-J4
C241	1:B4	2-M6	C340	1:F7	3-P4	C611B	1:M5	6-H8	C764	1:H3	7-H2
C242	1:B4	2-L6	C341	1:F7	3-P5	C615	1:M6	6-R8	C765	1:G3	7-J2
C243	1:B4	2-P6	C342	1:F7	3-Q5	C616	1:M6	6-R8	C767	1:H3	7-K3
C245	1:C5	2-A4	C343	1:E7	3-M7	C623	1:N6	6-M8	C769	1:J3	7-M4
C247	1:C6	2-B4	C344	1:E7	3-M6	C625	1:M6	6-Q8	C770	1:H4	7-N4
C249	1:D4	2-C4	C350	1:F4	3-E3	C626	1:M6	6-Q8	C772	1:G4	7-M2
C251	1:C3	2-E4	C351	1:E5	3-F3	C628	1:M6	6-Q8	C776	1:H3	7-L1
C253	1:D3	2-E3	C352	1:E6	3-J3	C630	1:M5	6-J5	C778	1:H4	7-M1
C255	1:D3	2-D2	C353	1:E6	3-K2	C631A	1:N5	6-L6	C780	1:G2	7-N1
C257	1:D3	2-F2	C354	1:E5	3-K3	C634	1:N5	6-L5	C781	1:G2	7-P1
C259	1:C6	2-J2	C355	1:E6	3-K2	C636	1:M5	6-M5	C782	1:G2	7-P1
C260	1:D8	2-H0	C356	1:E6	3-L2	C638	1:M5	6-N6	C783	1:G3	7-P0
C261	1:C6	2-K2	C357	1:F6	3-M2	C640	1:M5	6-Q6	C784	1:G4	7-Q0
C263	1:D6	2-L3	C365	1:E5	3-B1	C655	1:M4	6-C1	C785	1:G3	7-Q1
C265	1:D6	2-N4	C366	1:E4	3-C1	C660	1:L5	6-K1	C786	1:G4	7-Q0
C267	1:C8	2-P3	C367	1:E3	3-C0	C665	1:L5	6-K1	C810	1:L3	8-K8
&C269	1:C8	2-P3	C368	1:E4	3-D1	C670	1:L5	6-L1	C812	1:L2	8-F5
&C271	1:C8	2-Q3	C369	1:E4	3-D1	C673	1:L5	6-P2	C813	1:K2	8-J5
C273	1:C8	2-Q4	C370	1:E4	3-E2	C677	1:L6	6-P1	C822	1:M2	8-B2
C275	1:C3	2-E1	C380	1:E3	3-P2	C681	1:L6	6-R3	C823	1:M3	8-C2
C277	1:C4	2-G1	C381	1:E3	3-P1	C684	1:L6	6-R3	C824	1:M2	8-C1
C279	1:B4	2-G1	C382	1:F5	3-Q2	C687	1:L6	6-Q1	C826	1:N3	8-C0
C281	1:B5	2-J1	C383	1:F3	3-Q1	C690	1:L6	6-R1	C827	1:N3	8-D0
C283	1:B5	2-K0	C384	1:F5	3-Q2	C693	1:L6	6-R1	C828	1:N3	8-E0
C285	1:D7	2-L0	C385	1:F3	3-Q1	C700	1:K4	7-A8	C830	1:N3	8-R1
C287	1:C6	2-M1	C386	1:F7	3-R1	C703	1:J3	7-B7	C838	1:N4	8-F0
&C289	1:C8	2-N1	C390	1:F8	3-J8	C706	1:J2	7-B5	C841	1:N2	8-L2
C291	1:D7	2-P1	C391	1:F8	3-J8	#C707	1:K4	7-C8	C844	1:M2	8-L2
C293	1:D7	2-Q1	C392	1:E9	3-K8	C708	1:J2	7-C9	C900	1:N8	9-D4
%C294	1:D7	2-Q0	C393	1:E8	3-K8	C709	1:K4	7-D9	C901	1:P8	9-E4
%C295	1:C6	2-Q0	C394	1:E8	3-L8	C710	1:J3	7-D8	C902	1:P7	9-E4
C300	1:E8	3-A8	C395	1:E9	3-N8	C711	1:J3	7-C5	C903	1:P7	9-F4
C301	1:E7	3-B8	C396	1:E8	3-P8	C712	1:H2	7-E7	C904	1:P7	9-F4
C302	1:E8	3-B8	C397	1:E8	3-P8	%C713	1:H2	7-E6	C905	1:P7	9-G4
C303	1:E8	3-C8	C400	1:H8	4-D4	C714	1:J3	7-E8	C906	1:P6	9-H4
C304	1:F8	3-D7	C401	1:H8	4-D4	C719	1:J3	7-F8	C907	1:P6	9-H4

Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit
%D111	1:P5	1-R1	IC720	1:J3	7-P6	P259	1:B8	2-R3	R201	1:B3	2-E9
%D111A	1:P5	1-Q1	IC720	1:J3	7-G0	P261	1:B8	2-R3	R202	1:C1	2-F9
%D205	1:B2	2-D9	IC720	1:J3	7-N7	P263	1:B1	2-R2	%R203	1:B3	2-C8
%D210	1:B2	2-D9	IC720	1:J3	7-M7	P267	1:C8	2-N2	R204	1:C7	2-B6
D220	1:B4	2-P7	IC720	1:J3	7-K7	P269	1:D8	2-P2	R205	1:C7	2-D6
D220	1:B4	2-P6	IC720	1:J3	7-E8	P271	1:C9	2-N1	R206	1:B7	2-G8
D230	1:B7	2-R5	IC720	1:J3	7-G0	P273	1:D9	2-P0	R207	1:B6	2-G8
D240	1:D4	2-C4	IC730	1:J4	7-H8	P275	1:D7	2-Q0	R208	1:B6	2-G8
D240	1:D4	2-B2	IC730	1:J4	7-G7	P290	1:D5	2-E0	R209	1:C6	2-H8
D250	1:D3	2-E2	IC740	1:H2	7-D1	P291	1:D5	2-G0	R210	1:B6	2-H7
D250	1:D3	2-D3	IC750	1:H4	7-M3	P805	1:M2	8-A7	R211	1:B2	2-D9
D260	1:C3	2-C2	IC750	1:H4	7-H5	P810	1:L3	8-A5	R212	1:D4	2-F6
D260	1:C3	2-C2	IC750	1:H4	7-Q7	P820	1:L4	8-M8	R213	1:C4	2-G6
D270	1:C2	2-C1	IC820	1:L4	8-N2	P825	1:L4	8-M8	R214	1:D4	2-G6
D270	1:C2	2-C1	IC830	1:N3	8-J0	P830	1:L4	8-M8	R215	1:C4	2-H6
D320	1:F5	3-D4	IC830	1:N3	8-Q1	P835	1:L4	8-M7	R216	1:C3	2-K7
D321	1:F5	3-D4	IC830	1:N3	8-J0	P840	1:L4	8-M7	R217	1:A4	2-M8
D322	1:F5	3-D4	IC830	1:N3	8-J1				R218	1:A5	2-N7
D351	1:E6	3-L1	IC830	1:N3	8-C0	PL100	1:P3	1-M0	R219	1:B4	2-N8
D351	1:E6	3-L2				PL205	1:C5	2-J8	R220	1:B2	2-E9
D610	1:N6	6-L6	L320	1:F5	3-D4	PL210	1:C3	2-H4	R221	1:B7	2-R7
D610	1:N6	6-K6	L321	1:F4	3-E4	PL215	1:C4	2-K3	R223	1:B4	2-K6
D620	1:N4	6-B2	L322	1:E4	3-H7	PL220	1:C4	2-H2	R224	1:C4	2-K5
D620	1:N4	6-B1	L323	1:F3	3-H5				R225	1:B4	2-L5
D630	1:M5	6-G3	L324	1:F4	3-J4	Q210	1:C6	2-J8	R226	1:B4	2-L4
D630	1:M5	6-G2	L325	1:F5	3-K4	Q220	1:B3	2-L7	R227	1:B4	2-M4
D635	1:M4	6-G3	L326	1:F5	3-L4	Q230	1:A4	2-M8	R228	1:A2	2-E9
D640	1:L5	6-M1	L327	1:E7	3-N7	Q240	1:B7	2-Q7	R229	1:B4	2-M7
D640	1:L5	6-M2	L328	1:E6	3-N5	Q250	1:B7	2-R6	R230	1:B4	2-M6
D645	1:M5	6-R6	L329	1:F6	3-P5	Q260	1:C4	2-F3	R231	1:B4	2-M6
D710	1:J3	7-L8	L380	1:F5	3-Q2	Q270	1:D2	2-D1	R232	1:B4	2-M5
D710	1:J3	7-L8	L381	1:F3	3-Q1	Q300	1:E8	3-B7	R233	1:B4	2-M6
D720	1:H3	7-P8	%L382	1:F7	3-R1	Q301	1:F8	3-E8	R235	1:B4	2-P6
D720	1:H3	7-P8	L390	1:E9	3-K9	Q302	1:F8	3-F8	R237	1:B7	2-Q7
D730	1:H3	7-H1	L400	1:H8	4-E5	Q320	1:F4	3-H4	R238	1:B7	2-R7
D740	1:H3	7-J2	L510	1:H5	5-H2	Q321	1:F6	3-N4	R239	1:B8	2-R6
D810	1:M2	8-B7	L535	1:K5	5-L2	Q350	1:E5	3-K3	R241	1:B8	2-Q6
			L600	1:L6	6-D8	Q351	1:E5	3-L3	R242	1:B7	2-Q5
			L615	1:M6	6-R8	Q365	1:E5	3-B1	R244	1:C6	2-A5
IC210	1:C7	2-C6	L780	1:G3	7-Q0	Q366	1:E5	3-C1	R245	1:D4	2-D4
IC210	1:C7	2-J0	L900	1:P8	9-D6	Q367	1:E4	3-C0	R247	1:D3	2-E4
IC210	1:C7	2-L1	L901	1:P7	9-E6	Q368	1:E4	3-D1	R248	1:C3	2-E3
IC210	1:C7	2-K2	L902	1:P7	9-F6	Q380	1:E3	3-P3	R249	1:D4	2-F3
IC210	1:C7	2-Q0	L903	1:P6	9-H6	Q381	1:E3	3-P2	R251	1:C4	2-G4
IC220	1:C6	2-D5	L904	1:P7	9-F5	Q510	1:J5	5-D1	R253	1:C6	2-J2
IC220	1:C6	2-M3				Q520	1:J5	5-H2	R254	1:C7	2-K3
IC230	1:B4	2-J0	LINK1	2:B2	2-E9	Q530	1:J5	5-H0	R255	1:C7	2-K2
IC230	1:B4	2-J0	LINK2	2:A2	2-E8	Q540	1:J5	5-L2	R256	1:D8	2-M3
IC230	1:B4	2-L5				Q550	1:K5	5-L0	R257	1:D8	2-N5
IC230	1:B4	2-N6	P100	1:Q6	1-R8	Q610	1:L6	6-D8	R258	1:D8	2-N4
IC230	1:B4	2-G1	P150	1:P2	1-Q4	Q620	1:N6	6-P8	R259	1:D6	2-P4
IC240	1:D4	2-F3	P160	1:P2	1-Q4	Q630	1:M6	6-P5	R260	1:D8	2-N4
IC250	1:D3	2-E1	P170	1:P2	1-Q3	Q660	1:L5	6-N1	R262	1:D8	2-N3
IC260	1:D8	2-N0	P204	1:D1	2-A8	Q670	1:L6	6-Q2	R263	1:C8	2-P3
IC260	1:D8	2-H0	P208	1:D1	2-A8	Q710	1:J3	7-K8	&R264	1:C8	2-P3
IC260	1:D8	2-Q2	P210	1:D3	2-A3	Q720	1:J3	7-K8	&R265	1:C8	2-P3
IC260	1:D8	2-Q3	P215	1:D4	2-A2	Q730	1:H3	7-N8	&R266	1:C8	2-P3
IC260	1:D8	2-N3	P217	1:D4	2-A2	Q740	1:H3	7-N8	R267	1:C8	2-R2
IC300	1:E8	3-H8	P219	1:D2	2-A1	Q750	1:G4	7-F3	R268	1:D2	2-C0
IC300	1:E8	3-E0	P225	1:D2	2-A0	Q760	1:H3	7-H3	R269	1:D3	2-C1
IC300	1:E8	3-C8	P230	1:C5	2-B0	Q770	1:H3	7-H1	R270	1:D3	2-D1
IC310	1:E8	3-L8	P231	1:D8	2-B0	Q775	1:H3	7-K3	R271	1:C3	2-E1
IC610	1:L5	6-G8	P233	1:C1	2-R9	Q780	1:H3	7-K3	R272	1:C4	2-F2
IC630	1:N5	6-K5	P235	1:C1	2-R9	Q785	1:H3	7-K2	R273	1:B5	2-G2
IC640	1:M5	6-M5	P237	1:B7	2-R8	Q790	1:H3	7-L3	R274	1:C4	2-G1
IC640	1:M5	6-Q6	P239	1:C7	2-R8	Q795	1:G3	7-P0	R275	1:C4	2-H0
IC640	1:M5	6-F1	P240	1:C7	2-R8	Q810	1:M2	8-E7	R277	1:B5	2-J1
IC650	1:L5	6-F4	P243	1:B7	2-R7	Q820	1:L2	8-D5	R278	1:B5	2-J0
=IC700	1:K3	7-A8	P244	1:B7	2-R7	Q830	1:L2	8-D5	R279	1:B5	2-K0
IC710	1:J2	7-D8	P245	1:B8	2-R6	Q840	1:L2	8-F5	R280	1:B5	2-K0
IC710	1:J2	7-C6	P247	1:B8	2-R6	Q850	1:M2	8-G5	R282	1:D7	2-K1
IC710	1:J2	7-C5	P248	1:B7	2-R6	Q860	1:L4	8-B3	R283	1:D7	2-L1
IC710	1:J2	7-D6	P249	1:C7	2-R5				R284	1:D7	2-L0
IC710	1:J2	7-D7	P251	1:C7	2-R5	%R150	1:P2	1-R4	R285	1:C8	2-M0
IC710	1:J2	7-D6	P255	1:D4	2-R4	R160	1:P2	1-R3	R286	1:C7	2-M0
IC710	1:J2	7-C6	P257	1:C2	2-R4	%R200	1:B2	2-C9	R287	1:D9	2-M0

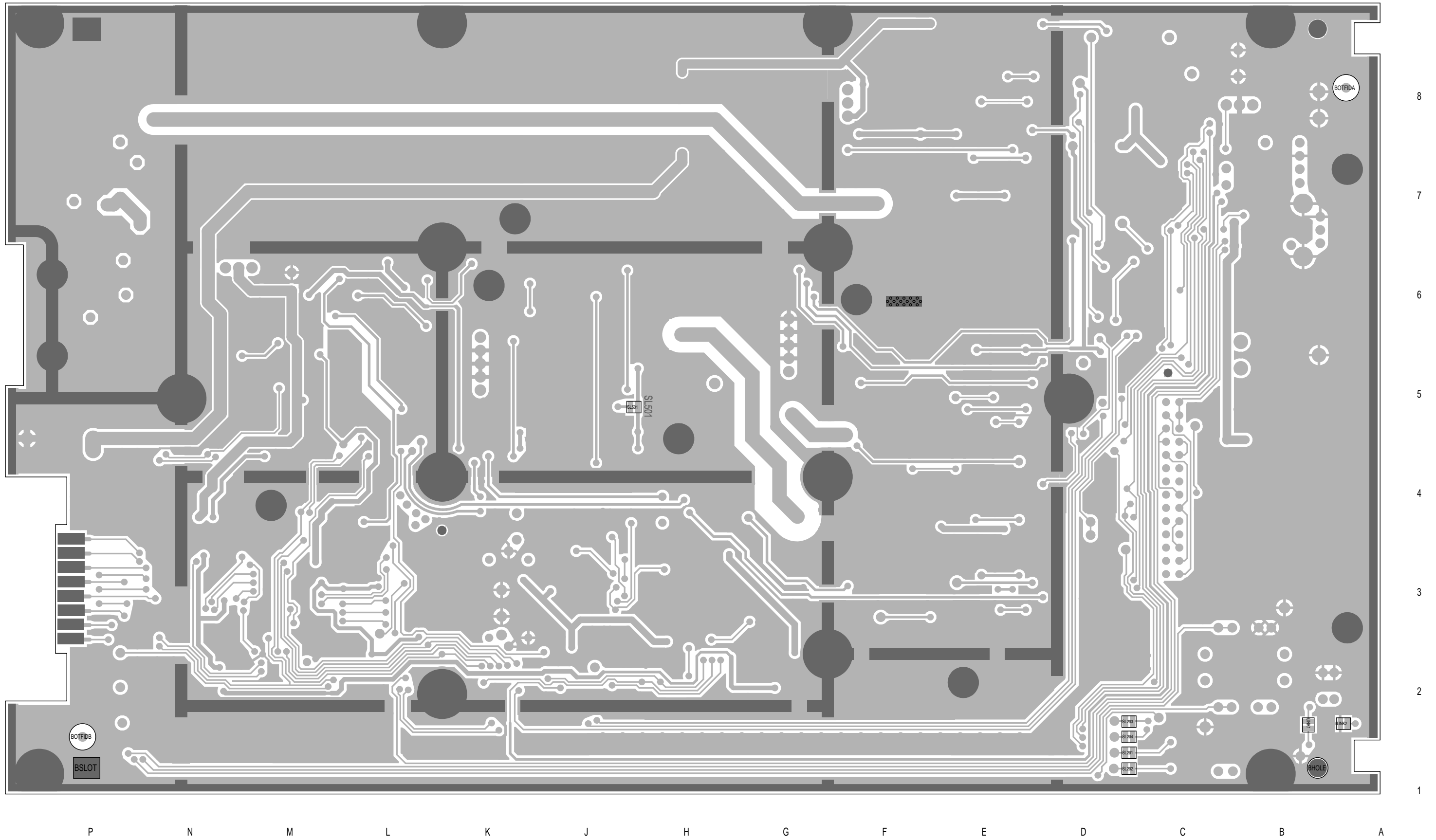
Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit
R288	1:C6	2-M2	R394	1:E9	3-N8	R735	1:K2	7-A2	R859	1:N2	8-C1
R289	1:D9	2-M0	R395	1:E9	3-N8	R736	1:K2	7-A2	R861	1:N2	8-D1
&R290	1:C8	2-N2	R504	1:K6	5-K9	R742	1:H2	7-B4	R863	1:N3	8-E1
R291	1:C8	2-N1	R505	1:K6	5-L8	R743	1:H2	7-C5	R865	1:N4	8-E0
R292	1:D8	2-Q2	R510	1:K6	5-L7	R744	1:G2	7-D4	R867	1:N3	8-E1
R293	1:D9	2-Q2	R514	1:K5	5-M5	R746	1:H3	7-E4	R871	1:N3	8-G2
R294	1:D9	2-Q1	R515	1:H6	5-J5	R747	1:H3	7-E5	R872	1:M4	8-H1
R295	1:D8	2-R1	R517	1:G5	5-E2	R748	1:J2	7-A1	R873	1:N3	8-G1
R296	1:D6	2-P0	R518	1:G5	5-F2	R749	1:J2	7-B1	R874	1:N3	8-H0
R297	1:D7	2-P1	R519	1:G5	5-F2	R750	1:H4	7-Q7	R875	1:N3	8-G0
%R298	1:D7	2-Q0	R520	1:H5	5-C1	R752	1:G4	7-F5	R876	1:N3	8-H0
R299	1:C7	2-R0	R525	1:H5	5-D1	R753	1:G4	7-F3	R877	1:M2	8-K2
R300	1:E8	3-A7	R530	1:J5	5-D0	R754	1:G3	7-F3	R879	1:N2	8-L3
R301	1:E8	3-A7	R535	1:J5	5-E1	R756	1:G3	7-G5			
R302	1:E8	3-A8	R537	1:H5	5-G2	R757	1:G4	7-G4	RV210	1:B7	2-F9
R303	1:E8	3-B8	R540	1:J5	5-H2	R758	1:H3	7-H4	RV220	1:A4	2-M6
R304	1:F8	3-B8	R545	1:J5	5-J1	R759	1:H3	7-H4	RV300	1:E8	3-C6
R305	1:E8	3-C7	%R550	1:J5	5-J2	R760	1:H3	7-K4	RV805	1:N4	8-F1
R306	1:E8	3-C6	%R553	1:J5	5-J1	R762	1:H3	7-K4			
R307	1:F8	3-D7	R555	1:J5	5-K1	R763	1:H3	7-L4	SK200	1:D5	2-F0
R308	1:F8	3-D8	R560	1:K5	5-M0	R765	1:H3	7-H2	SK205	1:B5	2-A5
R309	1:F8	3-E8	R565	1:K5	5-L2	R766	1:G3	7-J3	SK501	1:G6	5-D6
R310	1:F8	3-E8	R609	1:L6	6-B8	R767	1:H3	7-K2	SK502	1:G6	5-D5
R311	1:F8	3-F8	R613	1:L6	6-C8	R769	1:H3	7-K3	SK503	1:G6	5-D4
R312	1:F8	3-F7	R615	1:M5	6-F9	R771	1:H4	7-L3	SK504	1:G5	5-D3
R313	1:F8	3-F8	R617	1:M5	6-J8	R772	1:G4	7-M2	SK505	1:G5	5-D2
R319	1:E4	3-H6	R619	1:N6	6-K8	R774	1:H4	7-M3	SK513	1:H5	5-H3
R320	1:F4	3-C5	R621	1:N6	6-K8	R775	1:H3	7-L2	SK522	1:H6	5-K5
R321	1:F5	3-C4	R625	1:N6	6-K7	R777	1:H4	7-R2	SK531	1:K6	5-N6
R322	1:F5	3-D5	R629	1:M6	6-P6	R780	1:G2	7-N2	SK532	1:K5	5-N5
R323	1:F4	3-D5	R633	1:M5	6-P8	R781	1:G2	7-N2	SK533	1:K5	5-N4
R324	1:F4	3-F4	R637	1:M5	6-J6	R782	1:G3	7-P1	SK534	1:K5	5-N3
R325	1:F4	3-G4	R638	1:M5	6-J6	R783	1:G3	7-P0	SK535	1:K5	5-N2
R326	1:F4	3-G4	R640	1:M5	6-Q6	R784	1:G3	7-Q2	=SK710	1:K3	7-A7
R327	1:F3	3-G5	R641	1:N5	6-K5	R785	1:G3	7-Q1	SK805	1:K3	8-Q9
R328	1:F4	3-G4	R645	1:N5	6-L5	R786	1:G3	7-R1	SK805	1:K3	8-Q7
R329	1:E3	3-G6	R649	1:M5	6-M5	R787	1:G4	7-R0	SK805	1:K3	8-Q6
R330	1:F3	3-H6	R653	1:M5	6-P5	R801	1:M2	8-D7	SK805	1:K3	8-Q9
R331	1:F4	3-H4	R655	1:L4	6-D4	R802	1:M2	8-D7	SK805	1:K3	8-Q6
R332	1:F4	3-H4	R656	1:L4	6-D4	R808	1:L2	8-B4	SK805	1:K3	8-Q9
R333	1:F5	3-L4	R657	1:M5	6-D1	R809	1:L2	8-D5	SK805	1:K3	8-Q7
R334	1:F6	3-M4	R661	1:M5	6-E3	R810	1:L3	8-D6	SK805	1:K3	8-Q8
R335	1:E7	3-N6	R665	1:M5	6-E2	R811	1:L2	8-E6	SK805	1:K3	8-Q6
R336	1:E7	3-N6	R669	1:M5	6-E2	R812	1:L2	8-D5	SK805	1:K3	8-Q8
R337	1:F7	3-P4	R673	1:M5	6-E0	R813	1:L2	8-D4	SK805	1:K3	8-Q5
R338	1:F7	3-Q5	R677	1:M4	6-F4	R815	1:L2	8-F4	SK805	1:K3	8-Q7
R339	1:F7	3-Q4	R681	1:L5	6-L2	R816	1:L2	8-F4	SK805	1:K3	8-Q8
R350	1:F4	3-F3	R685	1:L5	6-N2	R818	1:M2	8-F5	SK805	1:K3	8-Q7
R351	1:E5	3-J3	R689	1:L6	6-Q3	R819	1:M2	8-F5	SK805	1:K3	8-Q8
R352	1:E5	3-K3	R693	1:L5	6-Q1	R821	1:M4	8-B3	SK805	1:K3	8-Q6
R353	1:E5	3-K3	R696	1:L5	6-Q1	R822	1:M4	8-E3	SK810	1:M3	8-H5
R354	1:E5	3-L2	R701	1:K4	7-A9	R824	1:L4	8-L8			
R355	1:E6	3-L2	R702	1:K4	7-C9	R825	1:L4	8-L8	SL201	2:D1	2-B9
R356	1:E6	3-L2	R703	1:J3	7-C8	R826	1:L4	8-L8	SL202	2:D1	2-B8
R357	1:E6	3-M2	=R705	1:K3	7-A7	R827	1:L4	8-L7	SL203	2:D2	2-B1
R358	1:F6	3-M2	R705	1:J3	7-C5	R828	1:L4	8-L7	SL204	2:D2	2-B1
R359	1:E6	3-L2	R706	1:H3	7-C5	R829	1:L4	8-P9	SL360	1:E3	3-C0
R365	1:E5	3-B1	R708	1:J3	7-B5	R830	1:L3	8-P9	SL501	2:J5	5-F0
%R366	1:E4	3-C0	R710	1:H2	7-E7	R831	1:L3	8-P9	SL810	1:M2	8-C7
R367	1:E3	3-C0	R711	1:J2	7-B6	R832	1:L3	8-P8			
R368	1:E4	3-C1	R712	1:J2	7-D8	R833	1:L3	8-P8	SW230	1:B8	2-A3
R369	1:E3	3-C0	R713	1:J3	7-F8	R835	1:L3	8-P8			
R371	1:E4	3-D1	R714	1:J3	7-D9	R836	1:L3	8-P8	T210	1:B2	2-C8
R372	1:E4	3-D1	%R715	1:K4	7-H6	R837	1:L3	8-P7	T610	1:L6	6-N2
R373	1:E4	3-D2	R717	1:J4	7-H7	R840	1:L3	8-P7			
R374	1:E4	3-E1	R718	1:J4	7-H7	R841	1:L3	8-P7	TP206	1:C5	2-H7
R380	1:E3	3-P1	R719	1:J4	7-J6	R842	1:L3	8-P6	TP310	1:F8	3-G8
R381	1:E3	3-P3	R720	1:J3	7-K7	R843	1:L3	8-P6	TP320	1:E4	3-C5
R382	1:E3	3-Q2	R721	1:J3	7-K9	R845	1:M4	8-Q5	TP340	1:E5	3-E3
R383	1:F3	3-Q2	R722	1:J3	7-K8	R847	1:L2	8-Q4	TP380	1:E3	3-P1
R384	1:F5	3-Q3	R723	1:H3	7-M7	R848	1:L2	8-J4	TP381	1:E3	3-P3
R385	1:F3	3-Q2	R725	1:J4	7-N7	R849	1:L2	8-Q4	TP382	1:F3	3-Q2
R390	1:E8	3-H9	%R726	1:J3	7-N6	R850	1:K2	8-Q4	TP601	1:N5	6-K9
R391	1:E9	3-K9	R727	1:H3	7-N9	R853	1:M4	8-N3	TP602	1:M6	6-Q9
R392	1:E8	3-M8	R728	1:H3	7-N8	R854	1:M4	8-N3	TP603	1:L5	6-J2
R393	1:E9	3-N7	R734	1:K2	7-A2	R855	1:M2	8-B0	TP604	1:L4	6-L6

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<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>
TP607	1:L5	6-J9									
TP710	1:G4	7-H5									
TP715	1:J2	7-C6									

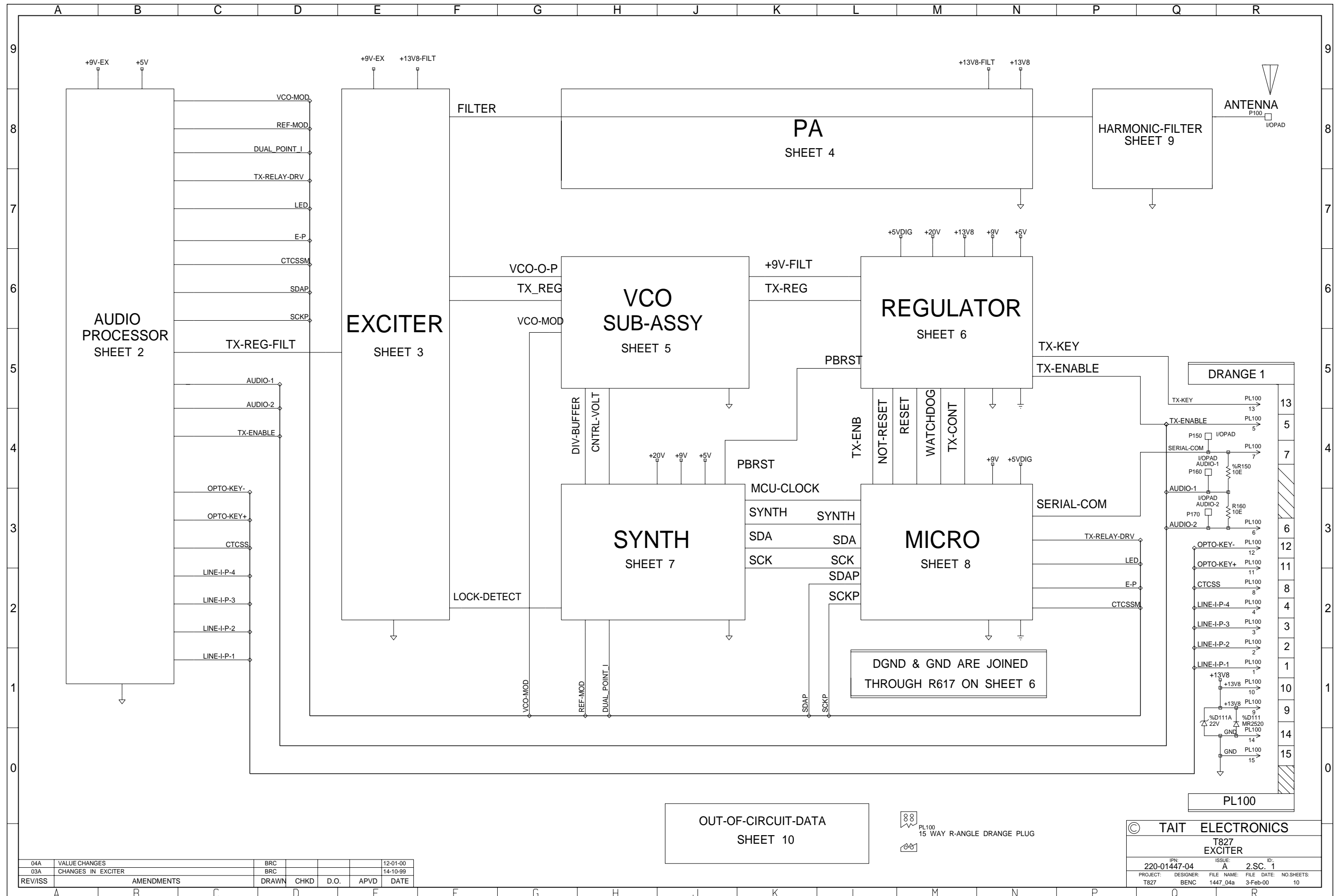


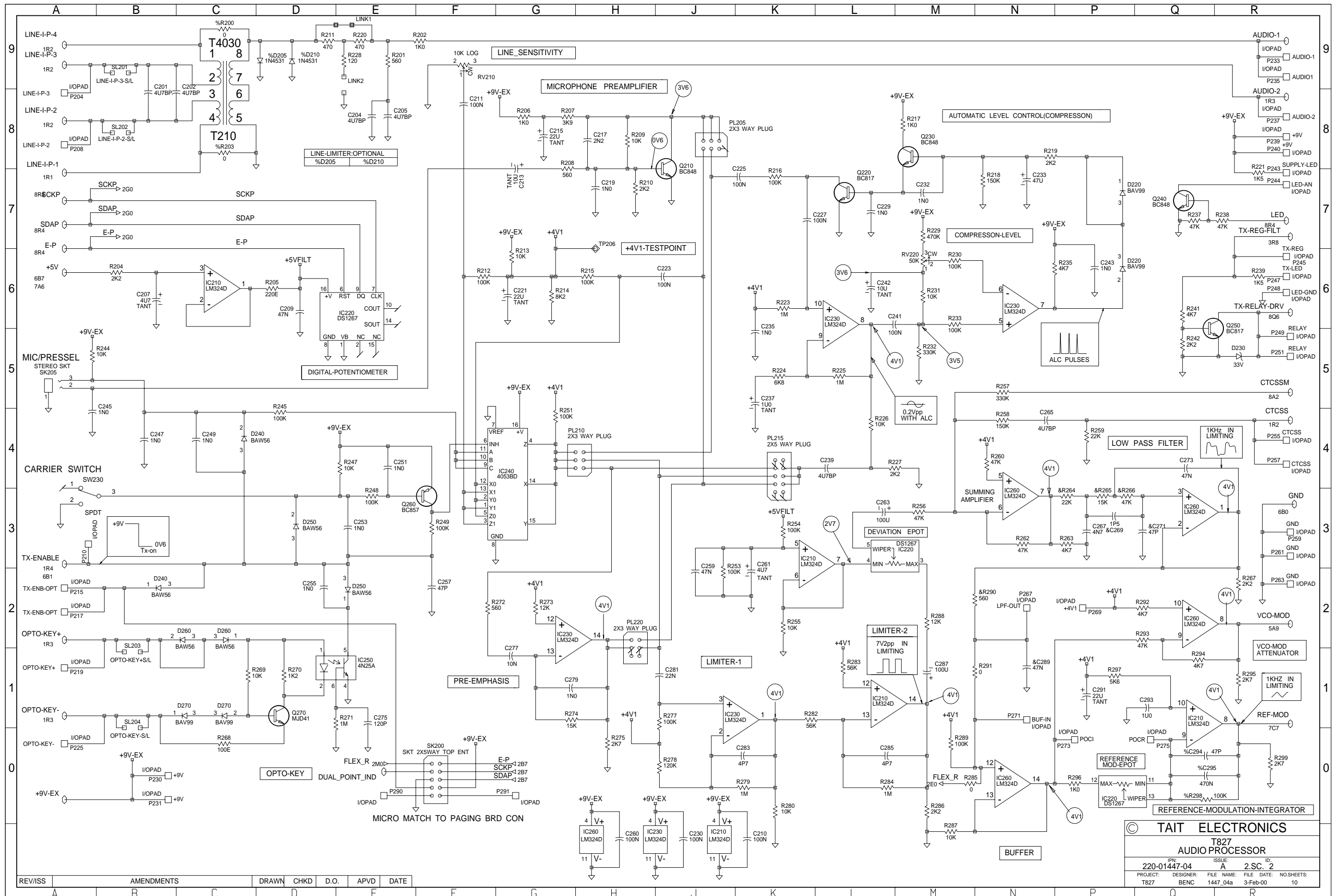
T827 PCB Layout - Top Side  
220-01447-04

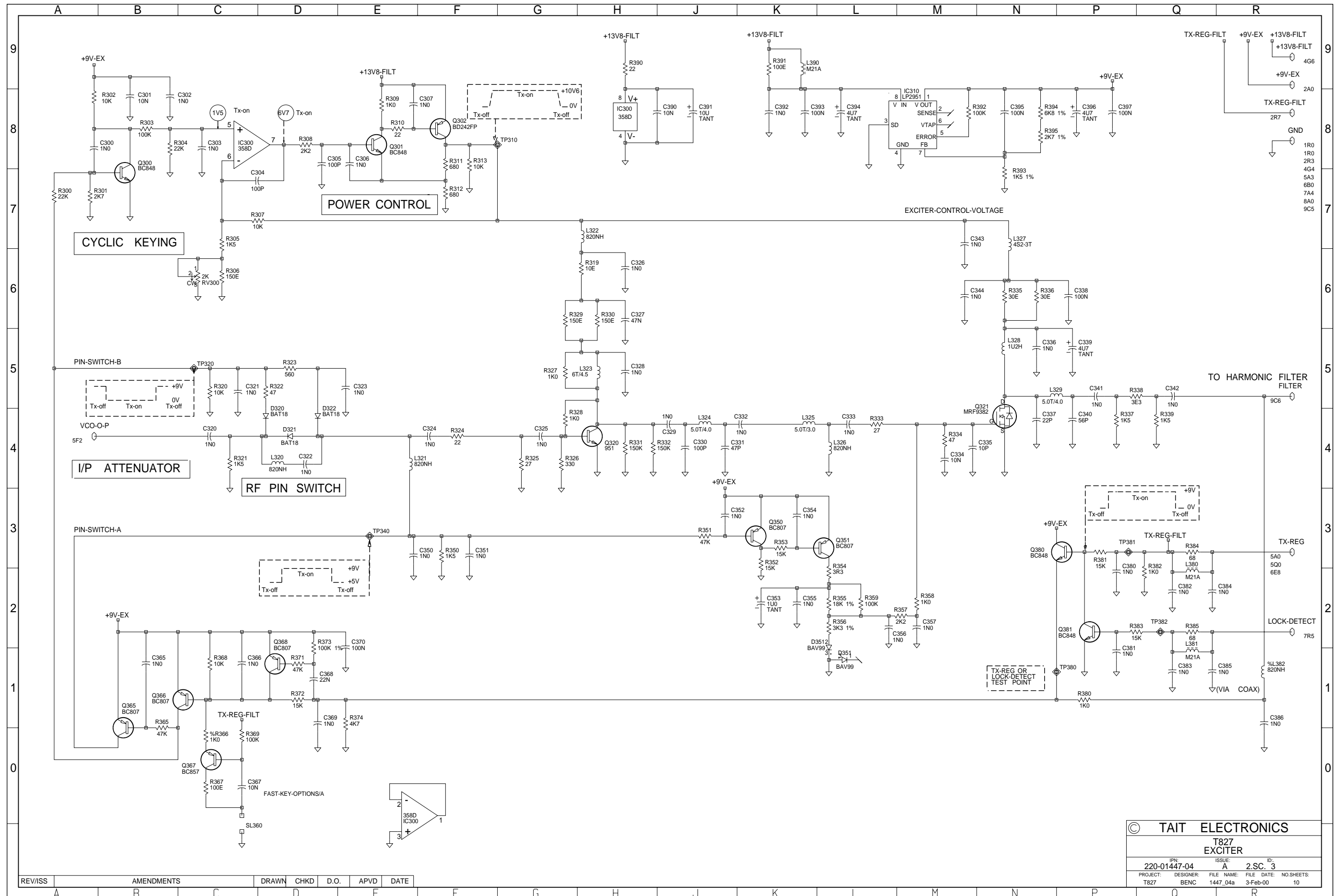


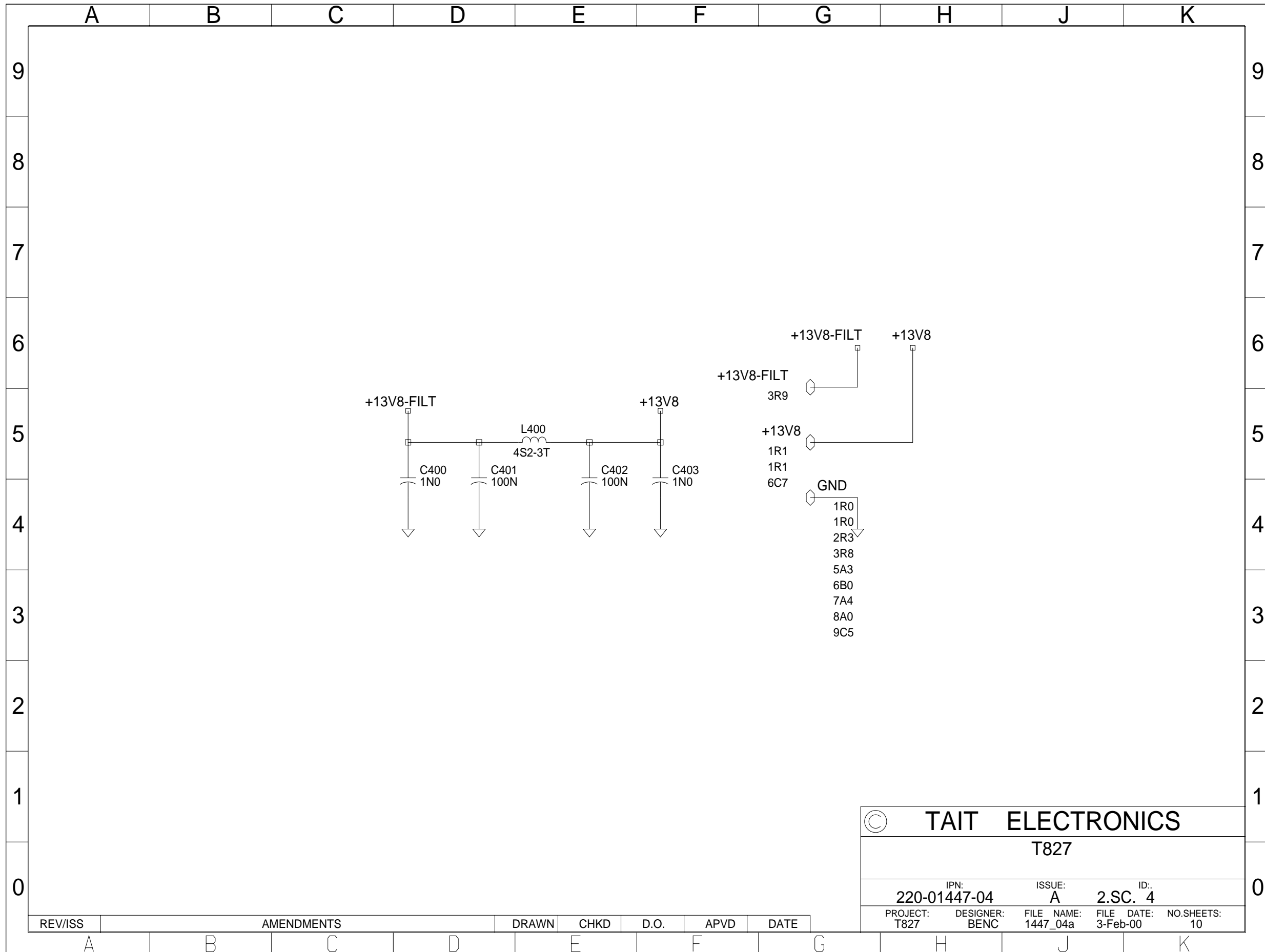
T827 PCB Layout - Bottom Side  
220-01447-04





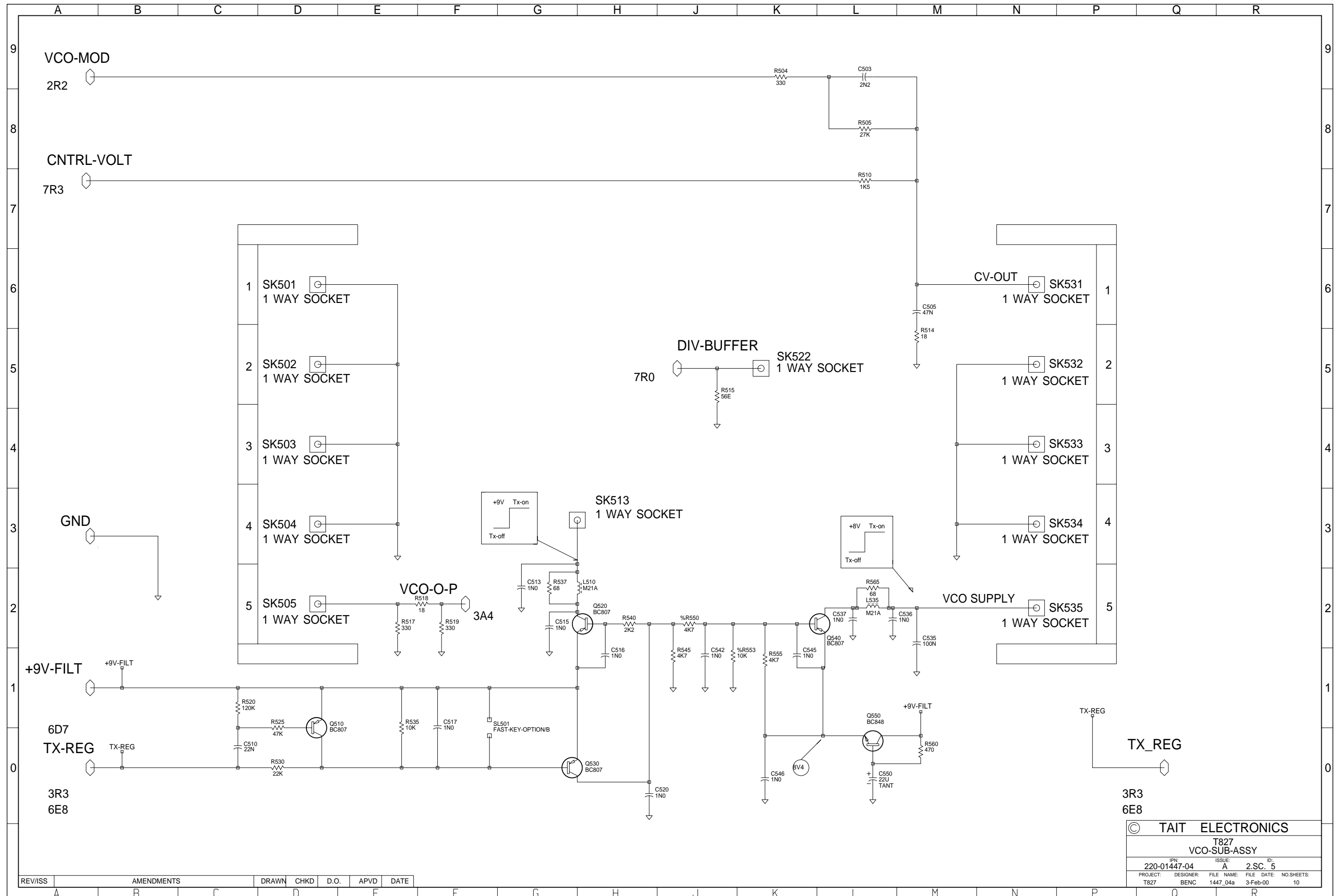




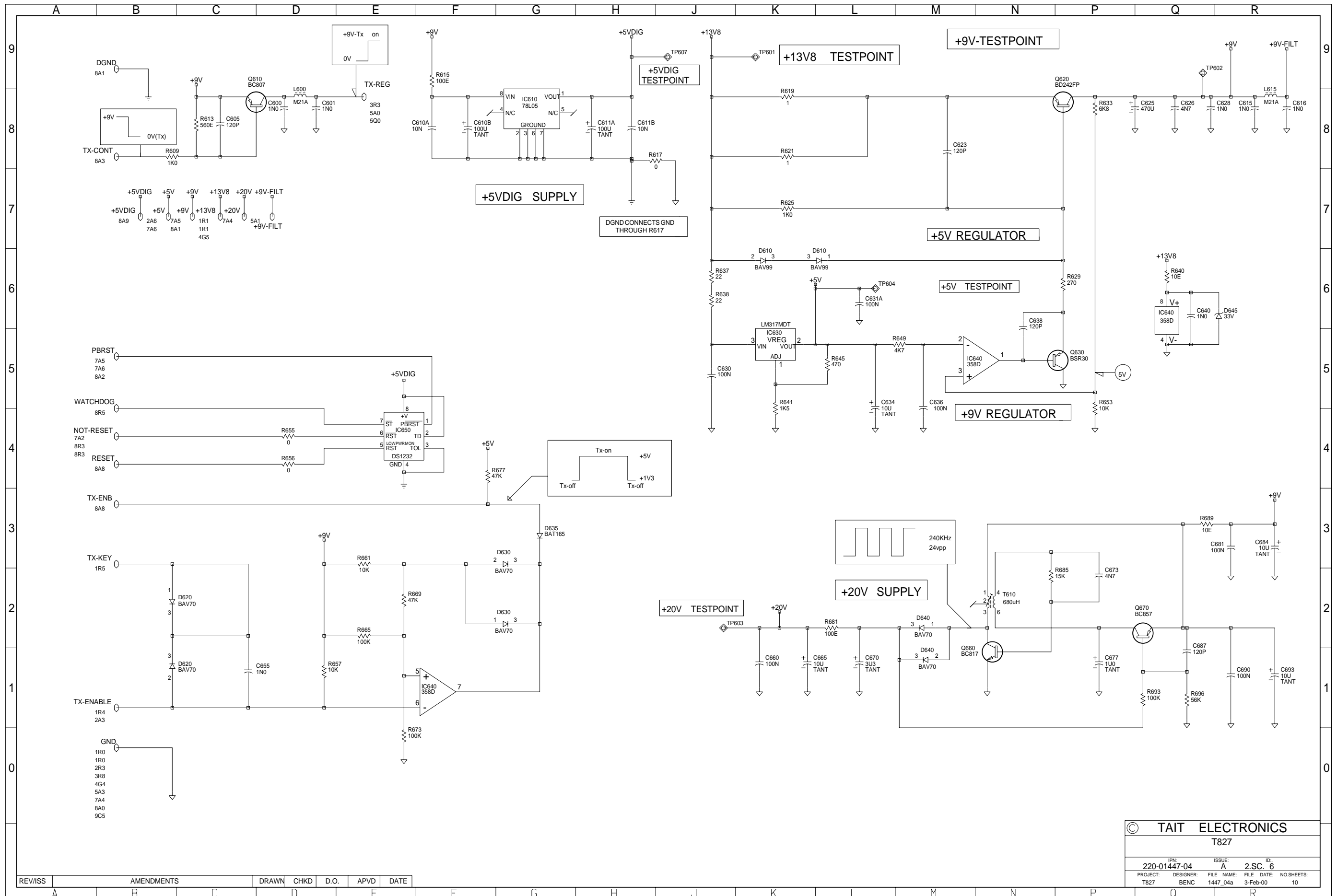


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T827				
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220-01447-04	A	2.SC. 4		
PROJECT:	DESIGNER:	FILE NAME:	FILE DATE:	NO.SHEETS:
T827	BENC	1447_04a	3-Feb-00	10

REV/ISS	AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE
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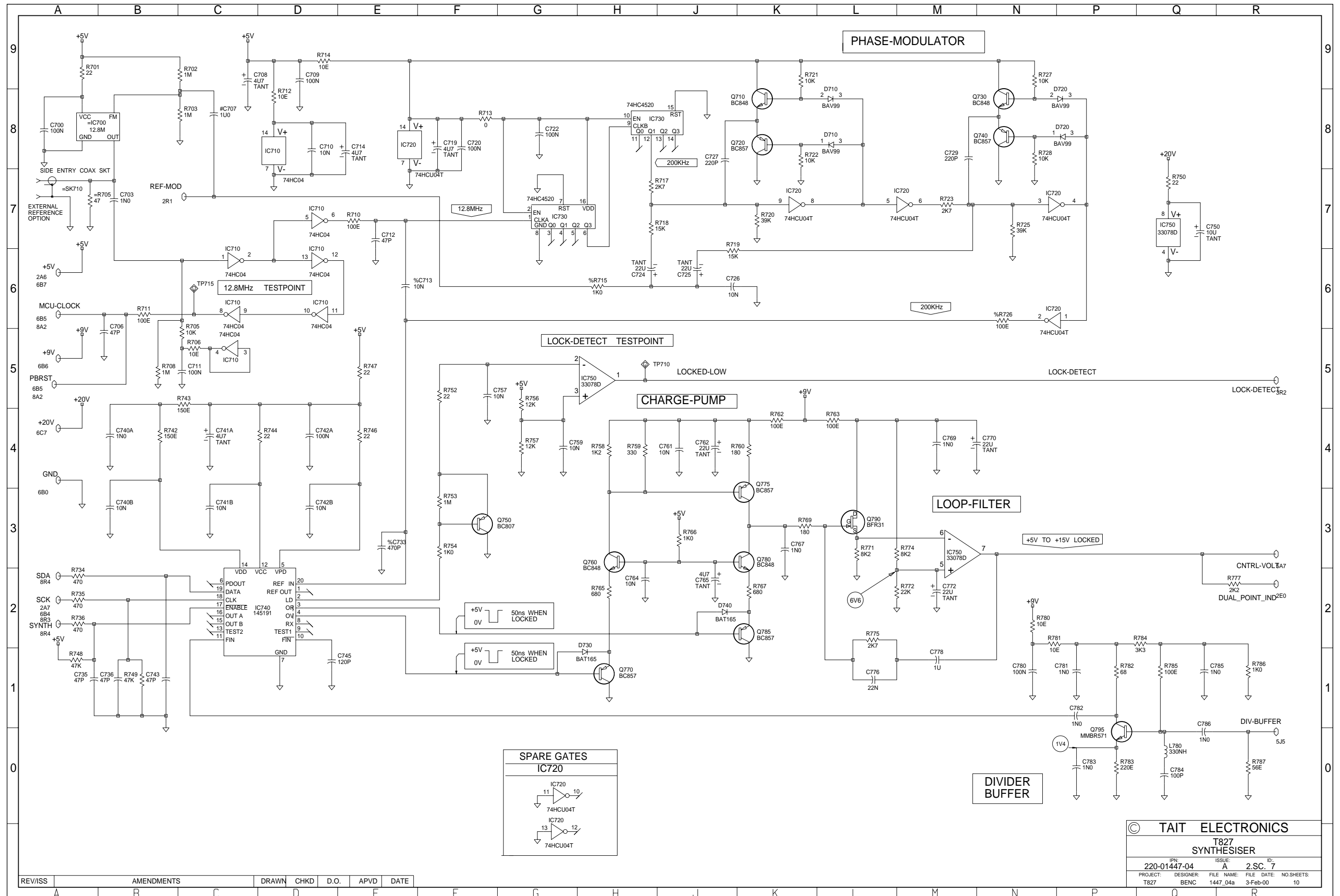


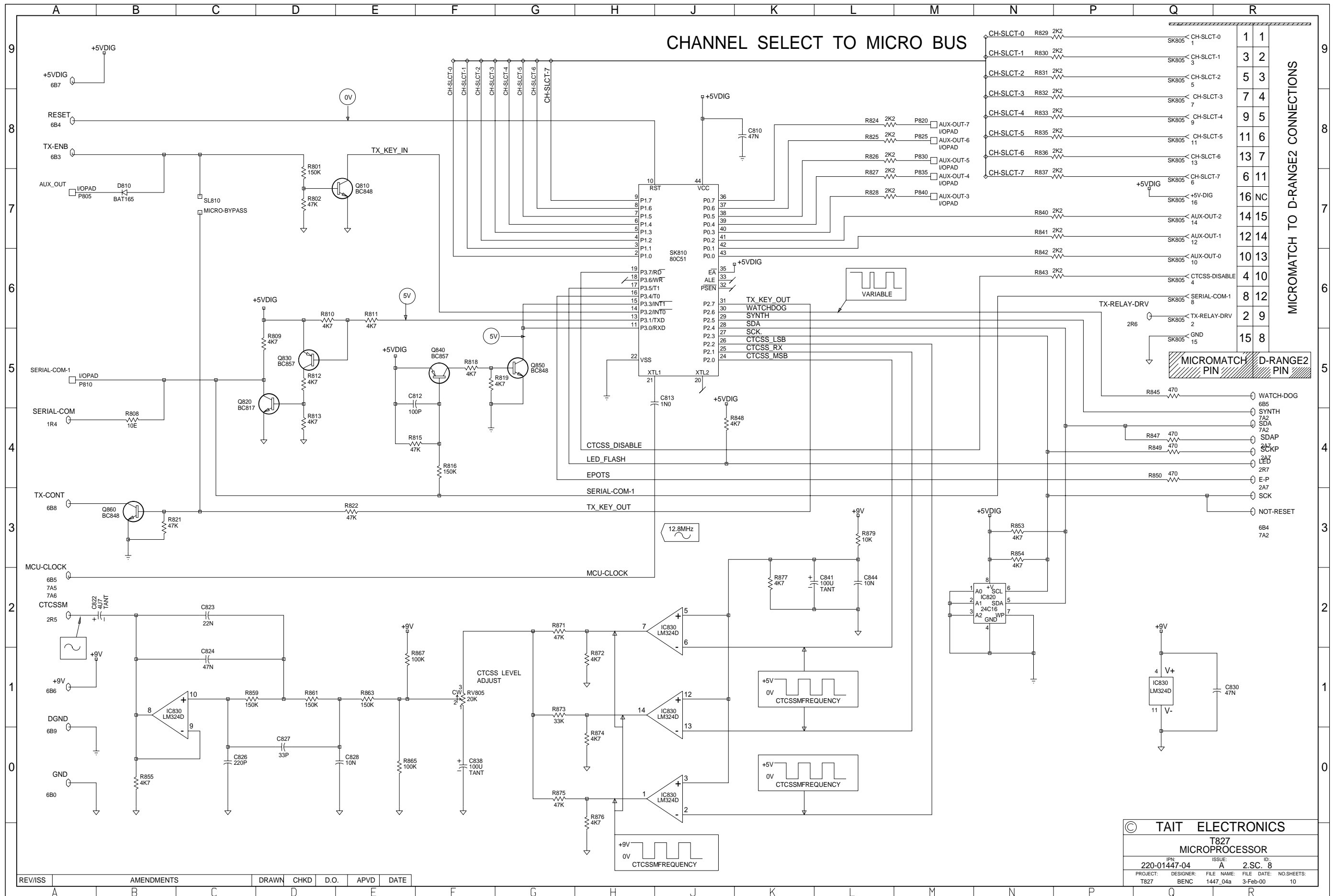
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T827	
VCO-SUB-ASSY	
IPN: 220-01447-04	ISSUE: A
DESIGNER: T827	FILE DATE: 3-Feb-00
BENC	NO SHEETS: 10



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T827	
IPN: 220-01447-04	ISSUE: A
PROJECT: T827	DESIGNER: BENC
FILE NAME: 1447_04a	FILE DATE: 3-Feb-00
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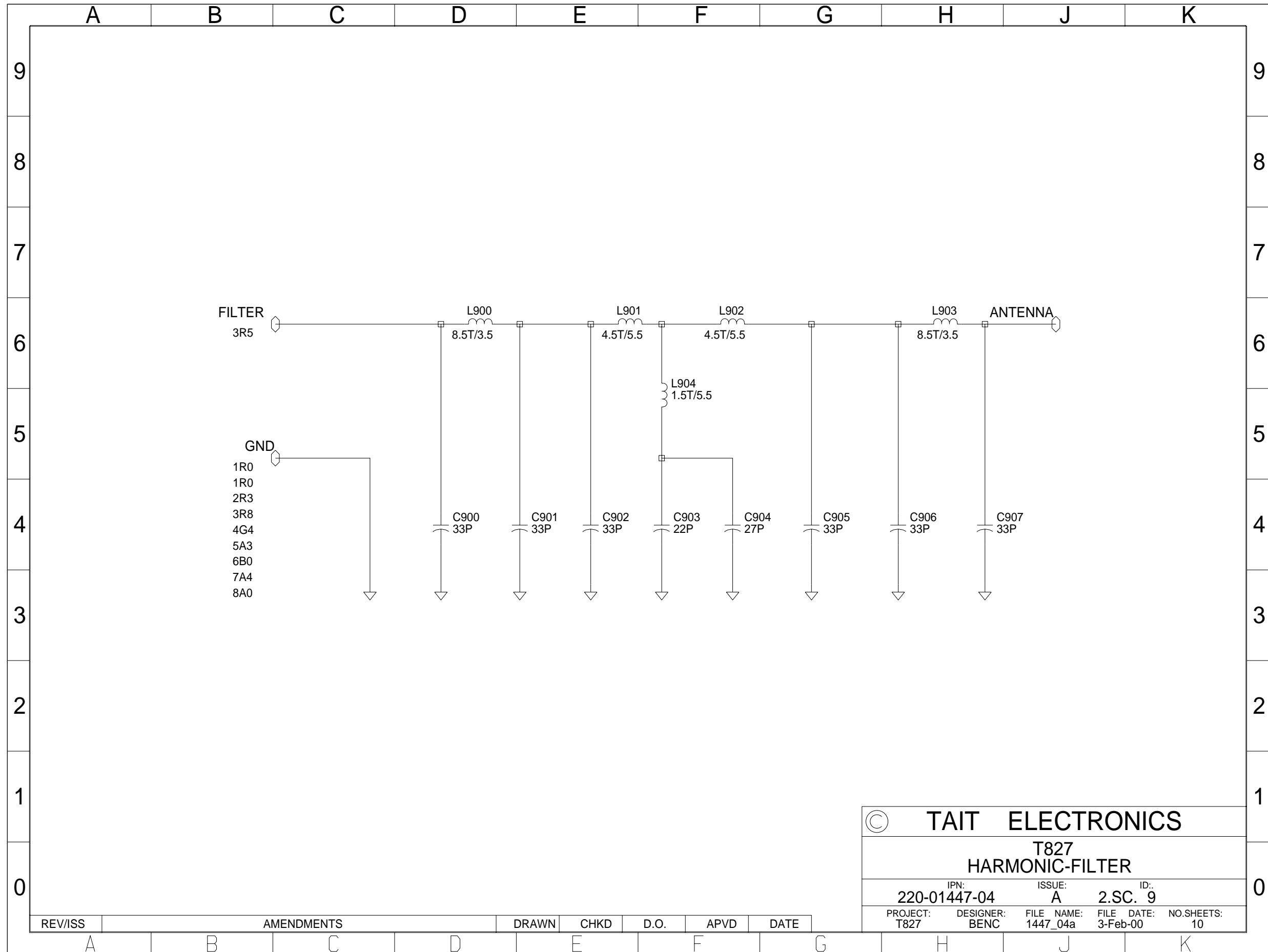




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T827 MICROPROCESSOR  
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PROJECT: T827 DESIGNER: BENC FILE NAME: 1447\_04a FILE DATE: 3-Feb-00 NO. SHEETS: 10

REV/ISS	AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE
A						





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T827 HARMONIC-FILTER				
IPN: 220-01447-04	ISSUE: A	ID: 2.SC. 9		
PROJECT: T827	DESIGNER: BENC	FILE NAME: 1447_04a	FILE DATE: 3-Feb-00	NO.SHEETS: 10

REV/ISS	AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE
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