# Part C T881 Transmitter

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 T881 General Information

This section provides a brief description of the T881 transmitter, along with detailed specifications and a list of types available.

The following topics are covered in this section.

# 1.1 Introduction

The T881 is a synthesised, microprocessor controlled FM base station transmitter designed for single or multichannel operation in the 800 to 960MHz frequency range[1] with a standard power output of 5W. The RF section of the transmitter comprises a frequency synthesiser which provides 100mW of frequency modulated RF drive to a 5W RF power module. A thermal shutdown feature is provided in the T881 in case operating temperatures exceed acceptable levels.

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 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 T881 is 60mm wide and occupies a single space in a Tait rack frame, which has the ability to accommodate up to seven standard modules.

1. Although capable of operating over the 800-960MHz frequency range, the T881 has 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 specification. 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)[1]

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 .. 1.8A
- Standby .. 160mA

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 10 minutes adjustable in 10 second steps |
| Tail Timer | .. | 0 to 5 seconds adjustable in 20ms steps |
| Transmit Key Time | .. | <30ms |
| Transmit Lockout Timer | .. | 0 to 1 minute adjustable in 10 second steps |

### 1.2.3 RF Section

| | | |
|---|---|---|
| Frequency Range | .. | 800-960MHz (refer to Section 1.4) |
| Modulation Type | .. | FM |
| Frequency Increment | .. | 5 or 6.25kHz |
| Switching Range | .. | 8MHz (i.e. ±4MHz from the centre frequency) |
| Load Impedance | .. | 50 ohms |
| Frequency Stability | .. | ±1ppm, -20°C to +60°C |
| (see also Section 1.4) | .. | ±1.5ppm, -30°C to +60°C |

Adjacent Channel Power (full deviation):

| | | |
|---|---|---|
| Wide Bandwidth (WB) (±25kHz/15kHz B/W) | .. | -75dBc |
| Narrow Bandwidth (NB) (±12.5kHz/7.5kHz B/W) | .. | -65dBc |

Transmitter Side Band Noise:
(no modulation, 15kHz bandwidth)

| | | |
|---|---|---|
| At ±25kHz | .. | -88dBc |
| At ±1MHz | .. | -100dBc |

| | |
|---|---|
| Intermodulation | .. -40dBc with interfering signal of -30dBc<br>.. -70dBc with 25dB isolation & interfering signal of -30dBc (PA with output isolator) |
| 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<br>-30dBm 1GHz to 3.2GHz |
| Standby | .. -57dBm to 1GHz<br>-47dBm 1GHz to 3.2GHz |
| Conducted Spurious Emissions: | |
| Transmit | .. -36dBm to 1GHz<br>-30dBm 1GHz to 3.2GHz |
| Standby | .. -57dBm to 1GHz<br>-47dBm 1GHz to 3.2GHz |
| Power Output: | |
| Rated Power | .. 5W |
| Range Of Adjustment | .. 1-5W |
| Duty Cycle | .. 100% @ 5W 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 | .. -48dB (300Hz to 3kHz [EIA]) typical |
| Narrow Bandwidth | .. -48dB (CEPT) typical |
| 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 |
| $V_{ds}$ max. | .. 5V |

## 1.2.6 Test Standards

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

### 1.2.6.1 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.

### 1.2.6.2 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 T880 Series II product code provide information about the model, type and options fitted, according to the conventions described below.

The following explanation of T880 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:

**T88X**-XX-XXXX
- T885 receiver
- T881 5W transmitter
- T889 70W 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:

T88X-**X**X-XXXX
- '1' for 800-870MHz
- '2' for 860-910MHz
- '3' for 890-960MHz

The second digit in the Type group indicates the channel spacing:

T88X-X**X**-XXXX
- '0' for wide bandwidth (25kHz)
- '5' for narrow bandwidth (12.5kHz)

## Options

T88X-XX-**XXXX**

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.

# 1.4 T881 Standard Product Range

The following table lists the range of standard T881 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) | | 800-870 | |
|---|---|---|---|
| Deviation (kHz) | | 2.5 | 5 |
| TCXO | ±1ppm -20°C to +60°C<br>±1.5ppm -30°C to +60°C | • | • |
| Transmitter Type: T881- | | 15-0000 | 10-0000 |

| Frequency Range (MHz) | | 860-910 | |
|---|---|---|---|
| Deviation (kHz) | | 2.5 | 5 |
| TCXO | ±1ppm -20°C to +60°C<br>±1.5ppm -30°C to +60°C | • | • |
| Transmitter Type: T881- | | 25-0000 | 20-0000 |

| Frequency Range (MHz) | | 890-960 | |
|---|---|---|---|
| Deviation (kHz) | | 2.5 | 5 |
| TXCO | ±1ppm -20° to +60°C<br>±1.5ppm -30°C to +60°C | • | • |
| Transmitter Type: T881- | | 35-0000 | 30-0000 |

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).

# 2 T881 Circuit Operation

This section provides a basic description of the circuit operation of the T881 transmitter.

***Note:*** Unless otherwise specified, the term "PGM800Win" used in this and following sections refers to version 3.00 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 following topics are covered in this section.

# 2.1 Introduction

The individual circuit blocks which make up the T881 are:

- synthesiser
- VCO
- audio processor
- power amplifier (RF power module)
- 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. Refer to the circuit diagrams in Section 6.2 for more detail.

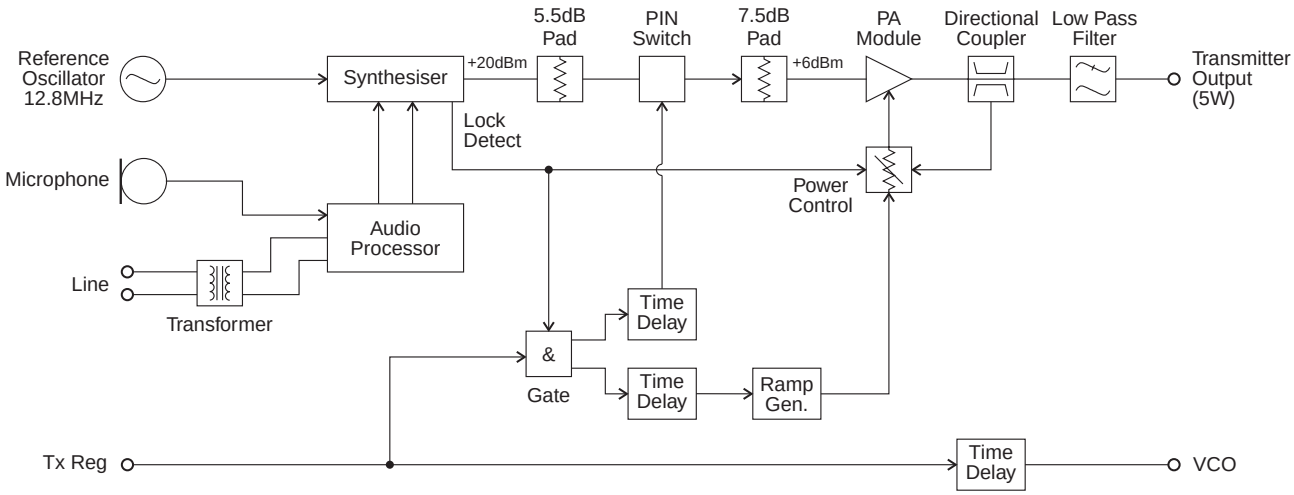



***Figure 2.1 T881 High Level Block Diagram***

# 2.2 Microcontroller

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

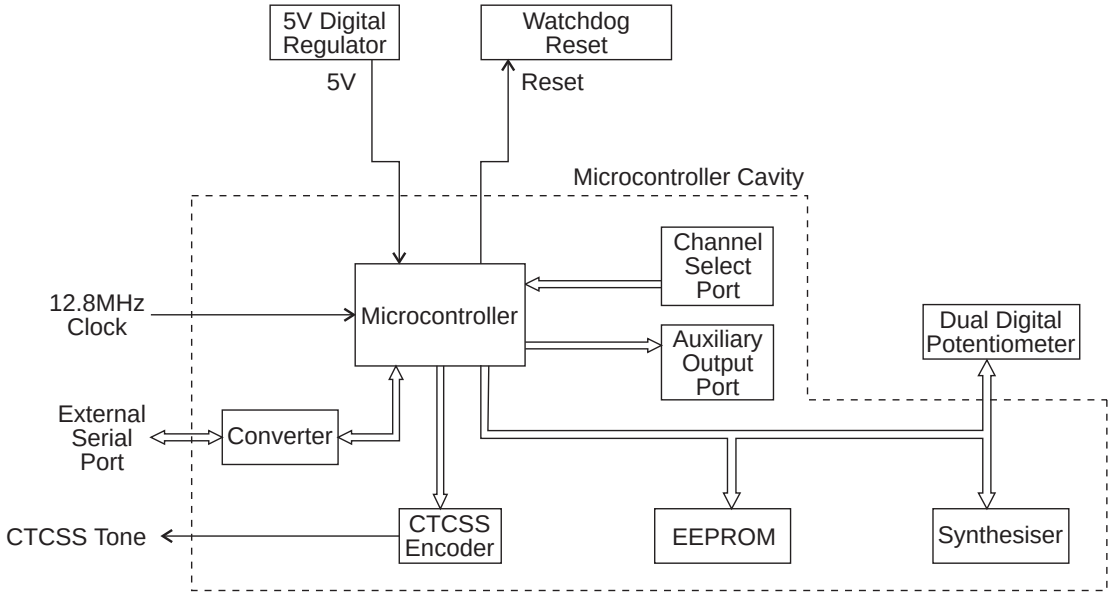



***Figure 2.2 T881 Microcontroller Block Diagram***

Overall system control of the T881 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) and the VCO circuit diagram (sheet 3) in Section 6.2.)

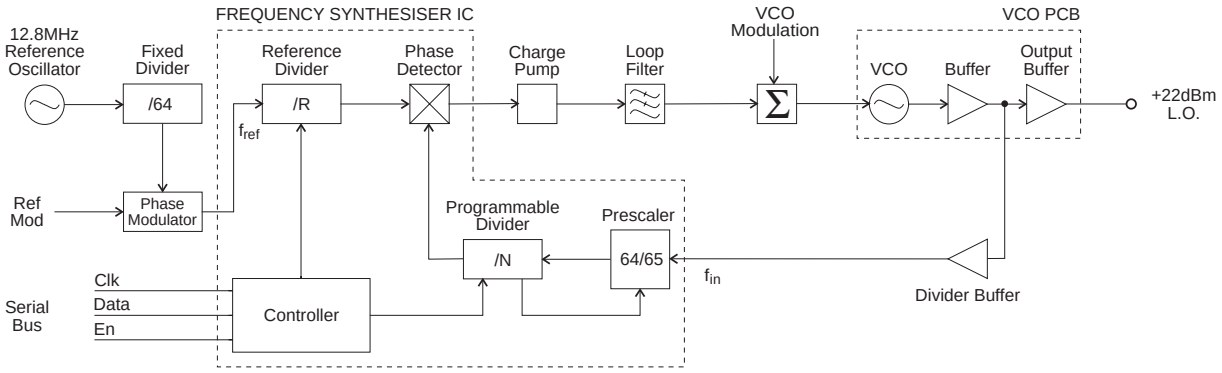



***Figure 2.3 T881 Synthesiser Block Diagram***

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 13 & 12, Q710, Q720). This produces a ramping waveform which is centred around a DC level determined by the incoming audio. IC720 pins 10 & 11 perform as a comparator, ultimately producing a phase-modulated 200kHz square wave. This is followed by another phase shifting stage (IC720 pins 8 & 9, 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, Q790) 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 2.4 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 2.4.

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 39Ω 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.

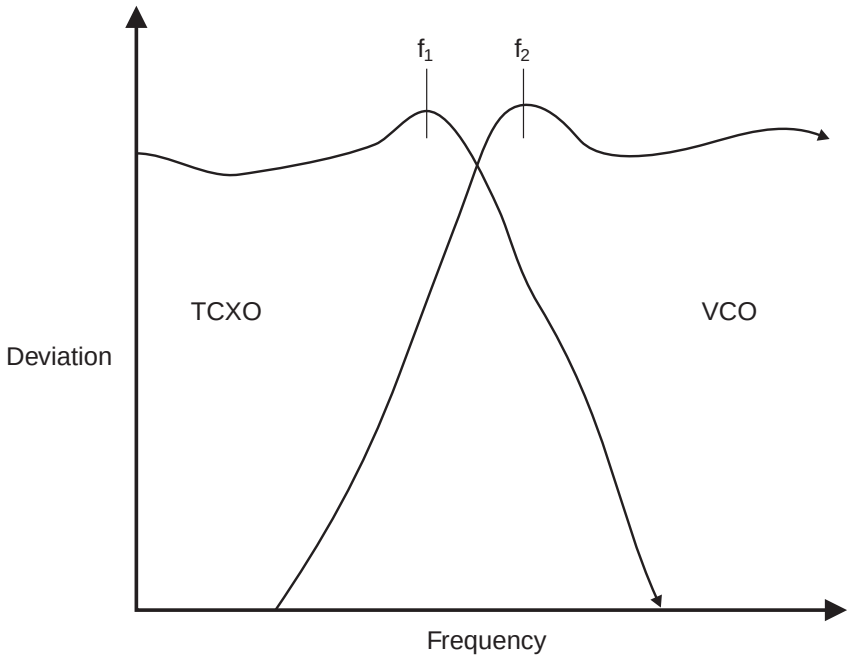



***Figure 2.4 T881 Two Point Modulation***

# 2.4 VCO

(Refer to the VCO circuit diagram (sheet 3) in Section 6.2.)

The VCO comprises the oscillator and three stages of buffer and gain to achieve the required power level and reverse isolation at the output of the VCO.

The oscillator transistor (Q309) operates in a common-base configuration, utilising a quarter-wave square ceramic resonator coupled between its collector and emitter to provide the feedback necessary for oscillation. The VCO control voltage from the loop filter (IC750) is applied to the varicaps (D300-D302) to facilitate tuning within an 8MHz band of frequencies. A high-Q sapphire trimcap (CV300) is used for coarse tuning of the VCO. The typical output power at the oscillator stage is 0dBm.

The output from the oscillator drives a cascode amplifier stage (Q302, Q303) which is designed to provide good reverse isolation from variable impedances of the following stages. The isolation of the circuit is typically 40dB, including 0-3dB of associated gain. An attenuated sample of the cascode output (Q302) is fed back to the synthesiser (IC640) through a divider buffer (Q795) for phase-locking.

Following the buffer is a broadband MMIC amplifier (Q308) which functions as a gain block to provide the drive to the final power stage (Q319). This stage typically provides approximately 10dB of gain.

The final stage of the VCO is a power amplification stage. The power transistor (Q319) and its associated circuitry increases the output power of the VCO to approximately +20dBm. The output power is then attenuated to +6dBm (approximately), which is the input level required to drive the RF power module.

***Note:*** This power stage (Q319) is retained in the T881 transmitter to keep the VCO architecture the same as the T885 receiver, which does require a +20dBm output.

The VCO is an on-channel design, i.e. there are no multiplier stages to obtain the on-channel frequency. It 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 and cascode amplifier are supplied from one +9V switched supply by Q321 via the C multiplier (Q316, C365).

The MMIC and final amplifier are supplied from the other +9V supply by Q314.

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 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.)

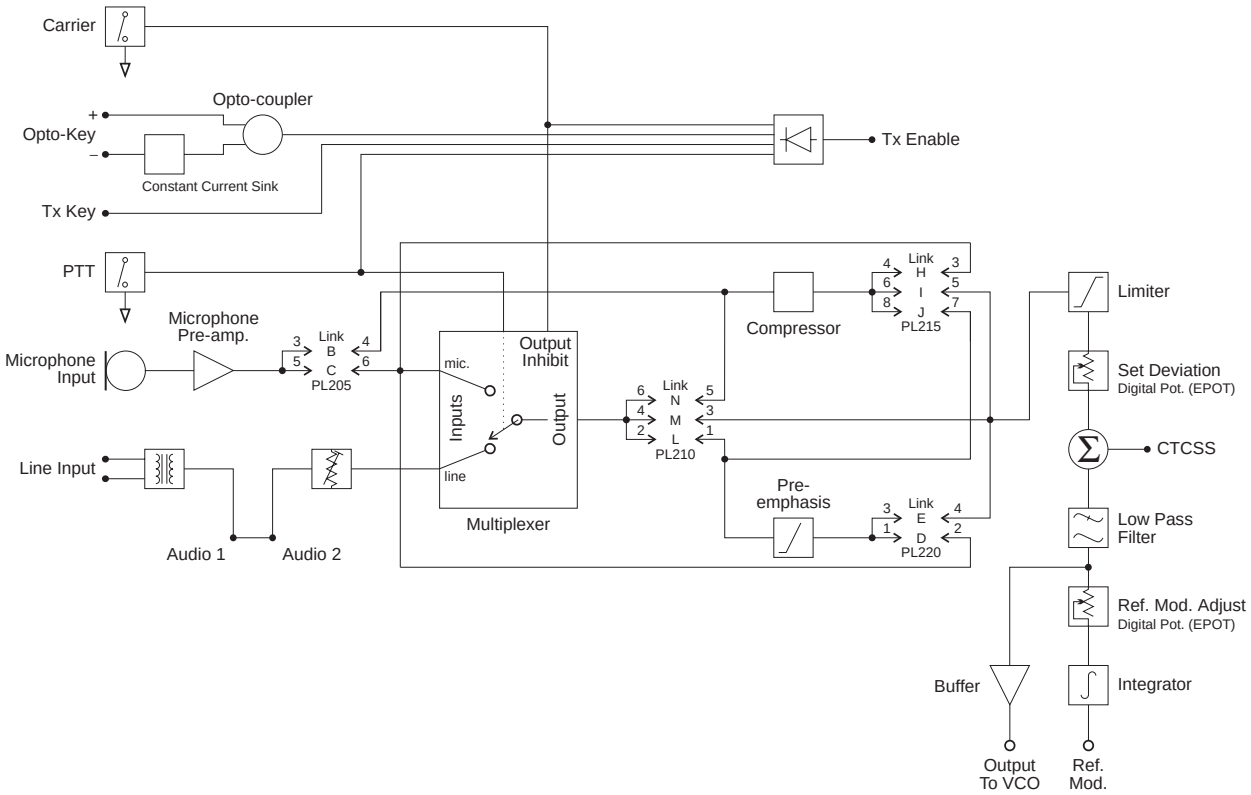



***Figure 2.5 T881 Audio Processor Block Diagram***

## 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 summed 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 39Ω 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.)

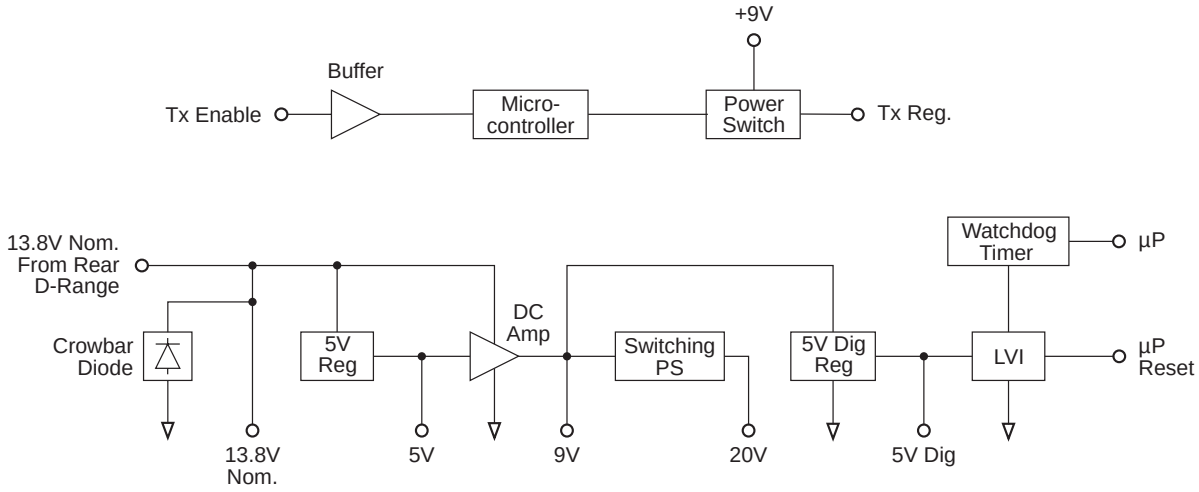



***Figure 2.6 T881 Power Supply & Regulators Block Diagram***

The T881 is 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. The T881 has a regulator (IC370) which produces 9V for use in the exciter and audio circuits.

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.

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 2.7):

| 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 20ms steps |
| 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. | 0-600 seconds 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 |

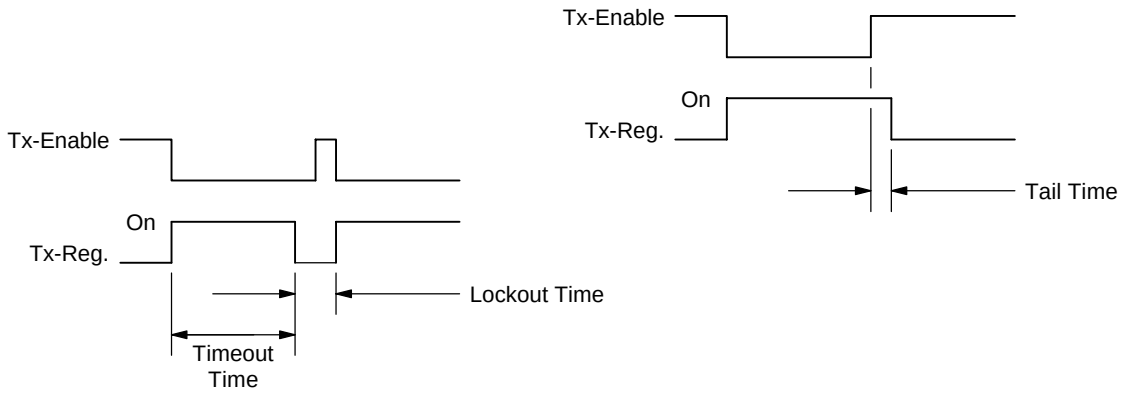



***Figure 2.7 T881 Transmit Timers***

# 2.8 Power Control Circuit & PA

(Refer to Figure 2.1 and the power control and PA circuit diagrams (sheets 5 & 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 bias pin of the RF power module (#IC400 pin 2). The forward and reverse RF power levels are sensed via a dual directional coupler and detector diodes (D400, D402 in the PA cavity). The detected DC signals are buffered (IC500 pins 3 & 5), summed with a very small bias current and then fed to the control integrator op-amp (IC510 pin 9). The purpose of the small bias current (provided by R559) is to raise the voltage potential slightly at the summed node. This is necessary to ensure the output voltage at IC510 pin 8 is zero when the transmitter is not keyed on.

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

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 RF power module. This is achieved by a PIN diode switch (D308). There is a 5.5dB (R370, R372, R383) and a 7.5dB (R390, R391, R392) pi-attenuator at the input and output of the PIN switch to attenuate the level of the VCO output and also provide good isolation between the VCO and RF power module. A level shifter is also implemented to enhance the transient performance by improving the dynamic range of the module bias voltage.

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

- Q505, Q508, IC510 — trapezoidal power ramping generator
- Q500, Q501 — Tx-Reg. and $\overline{\text{Lock-Detect}}$ gate
- Q502, Q506, Q510, Q512, Q513 — PIN switch drive plus delay
- Q507, Q511, Q515 — level shifter plus delay.

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

A temperature sensor (R450) is mounted on the input flange of the RF power module to monitor the flange operating temperature. When a pre-determined temperature threshold is exceeded, a protection circuit (IC510 pin 7, Q516) switches on to reduce the RF output power to a preset level. The purpose of the protection circuit is to prevent overheating, as the RF power module is rated for a maximum flange temperature of 100°C.

The RF power module is a 5W device which requires an input drive of approximately +6dBm. L402 and C430 are provided to match the impedance of the output low pass filter to the impedance of the module. A DC control signal is applied to the RF signal path via %L405 if cyclic keying is required with a Tait power amplifier.

# 3 T881 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.**

***Note:*** To ensure that the T881 will continue to meet its performance specifications, you must tighten the bottom cover screws to the correct torque, and in the correct order, as described in Section 2.4 in Part A.

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
- 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 3.00 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.

## 3.1 Introduction

When you receive your T881 transmitter it will be run up and working on a particular frequency (the "default channel")[1]. If you want to switch to a frequency that is within the 8MHz switching range (i.e. ±4MHz from the factory programmed frequency), you should only need to reprogram the transmitter 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 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's EEPROM memory (IC820) by using the PGM800Win software package and an IBM™ PC. You can also use PGM800Win to select the transmitter's current operating frequency (or "default channel").

If the transmitter 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 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 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)
- 30dB pad

} or RF test set (optional)

- T800-01-0010 calibration test unit (optional)

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

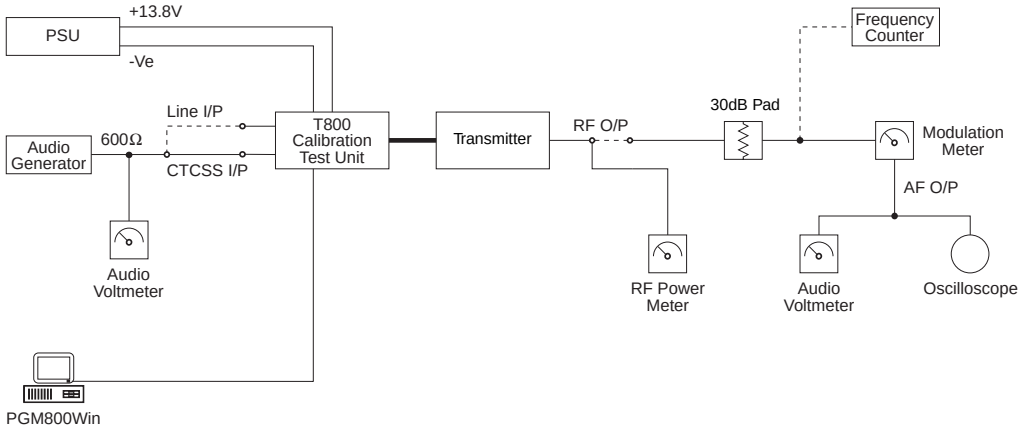



***Figure 3.1 T881 Test Equipment Set-up With T800-01-0010***

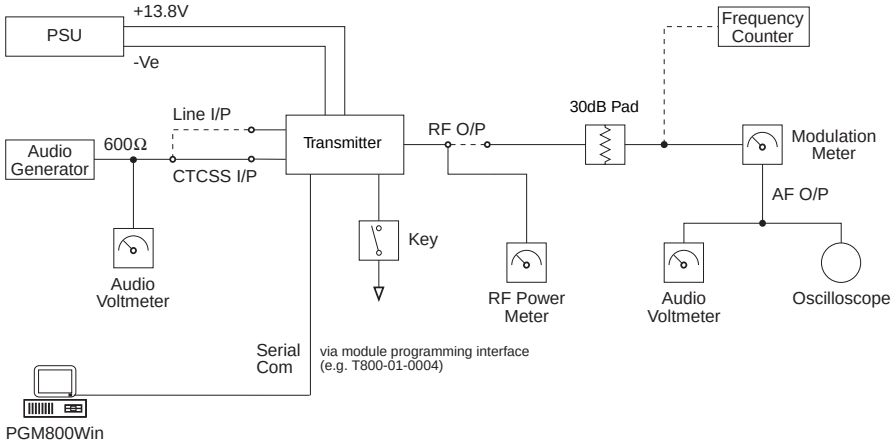



***Figure 3.2 T881 Test Equipment Set-up Without T800-01-0010***

# 3.4 Short Tuning Procedure

Use this procedure only if you want to reprogram the T881 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 TP300 (control voltage) in the VCO (this measures the synthesiser loop voltage).
- Key the transmitter by earthing the Tx-Key line.
- **Single Channel** Tune VCO trimmer CV300 for a synthesiser loop voltage of 10V.

  **Multichannel** Tune VCO trimmer CV300 for a synthesiser loop voltage of 10V on the middle channel.

  If there is no middle channel, tune CV300 so that the channels are symmetrically placed around a loop voltage of 10V.

  All channels should lie within the upper and lower limits of 16V and 3V 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

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

Adjust RV502 (power control) for the required output power (between 1 and 5W).

### 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 this value for all other channels[1].

***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 300Hz 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 ±3kHz [±1.5kHz] deviation at 300Hz.

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 ±3kHz [±1.5kHz] deviation.

4. Change the input frequency back to 300Hz.

   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 ±1dB relative to 150Hz from 67 to 260Hz.

1. Refer to the T800 Programming Application User's Manual for information on adjusting EPOTs with PGM800Win.

### 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 T881 with the front panel "Carrier" switch.

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

Set the maximum deviation as per Section 3.4.6.

### 3.4.6 FM Deviation (Limiter) Adjustment

***Note:*** If the T881 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.

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 ±4.7kHz [±2.3kHz].

Sweep the audio frequency from 100Hz to 4kHz and ensure that the maximum deviation does not exceed ±4.7kHz [±2.3kHz]. 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 ±3kHz [±1.5kHz] 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[a] | | 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 T881 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 TP300 (control voltage) in the VCO (this measures the synthesiser loop voltage).

- Key the transmitter by earthing the Tx-Key line.

  **Single Channel** Tune VCO trimmer CV300 for a synthesiser loop voltage of 10V.

  **Multichannel** Tune VCO trimmer CV300 for a synthesiser loop voltage of 10V on the middle channel.

  If there is no middle channel, tune CV300 so that the channels are symmetrically placed around a loop voltage of 10V.

  All channels should lie within the upper and lower limits of 16V and 3V respectively.

  Do not attempt to program channels with a greater frequency separation than the specified switching range (8MHz).

  Measure the transmitter output frequency and adjust the TCXO (=IC700) trimmer if required.

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

## 3.7 PA Alignment

Connect an RF power meter to the PA output (use an appropriate attenuator as necessary).

Key the transmitter by earthing the Tx-Key line.

Adjust RV502 (power control) to 5W.

## 3.8 Thermal Shutdown

Key the transmitter by earthing the Tx-Key line and set the output power to 5W as described in Section 3.7.

Short L450 to ground.

Set RV501 (shutdown power level) for an output power of 1W.

# 3.9 Audio Processor & CTCSS

## 3.9.1 Two Point Modulation

The T881 utilises 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. $\Delta F > \pm 4MHz$).

***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 this value for all other channels.[1]

***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 300Hz 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 ±3kHz [±1.5kHz] deviation at 300Hz.

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 ±3kHz [±1.5kHz].

1. Refer to the T800 Programming Application User's Manual for information on adjusting EPOTs with PGM800Win.

4. Change the input frequency back to 300Hz.

   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 ±1dB relative to 150Hz from 67 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 T881 with the front panel "Carrier" switch.

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

Set the maximum deviation as per Section 3.9.4.

### 3.9.4 Limiter Adjustment

***Note:*** If the T881 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.

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 ±4.7kHz [±2.3kHz].

Sweep the audio frequency from 100Hz to 4kHz and ensure that the maximum deviation does not exceed ±4.7kHz [±2.3kHz]. 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 ±3kHz [±1.5kHz] 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 ±3kHz deviation [±1.5kHz] is still available.

Slowly increase the audio input level until the demodulated waveform shows significant signs of clipping (approximately ±4.5kHz [±2.3kHz] deviation).

Adjust RV220 anticlockwise until the demodulated waveform is just clipping (approximately ±4kHz [±2kHz] 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 ±4.5kHz [±2.3kHz] deviation).

Adjust RV220 anticlockwise until the demodulated waveform is just clipping (approximately ±4kHz [±2kHz] 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 ±4kHz [±2kHz] deviation is produced. The modulated waveform should be basically sinusoidal.

Speak into the microphone, checking that the modulation peaks reach about ±5kHz [±2.5kHz] 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 T881 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.**

***Note:*** To ensure that the T881 will continue to meet its performance specifications, you must tighten the bottom cover screws to the correct torque, and in the correct order, as described in Section 2.4 in Part A.

This section provides the following information on the T881 transmitter:

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

# 6.1 Introduction

## Product Type Identification

You can identify the transmitter 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 T881-10-XXXX.

| PRODUCT TYPE | | | |
|---|---|---|---|
| ■ | -10 | ▮ ▮ | -15 |
| ▮ ▮ | -20 | ▮ ▮ | -25 |
| ▮ ▮ | -30 | ▮ ▮ | -35 |

***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.

## 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.

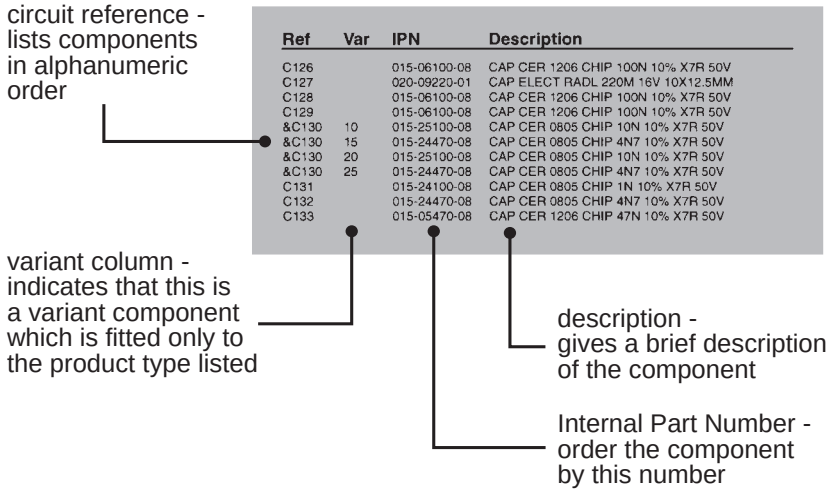
 

## Parts Lists

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).

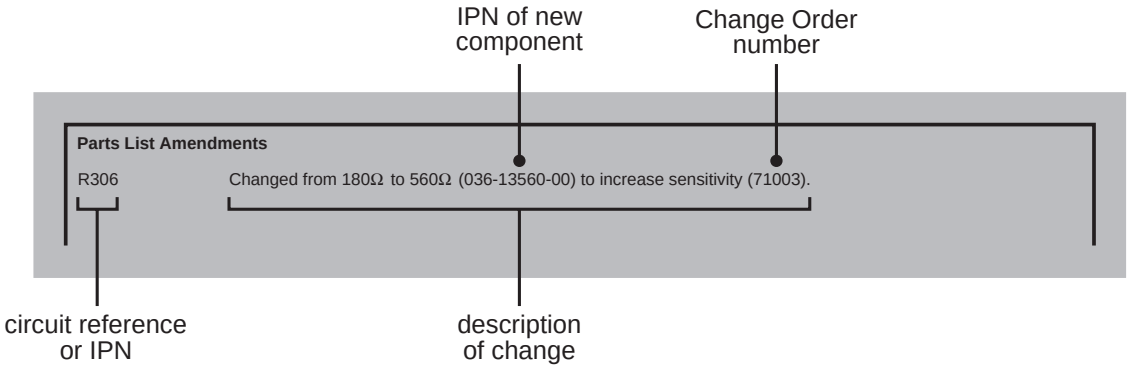
Those with a circuit reference are grouped in alphabetical order and then in numerical order within each group. Each component entry comprises three or four columns, as shown below:




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

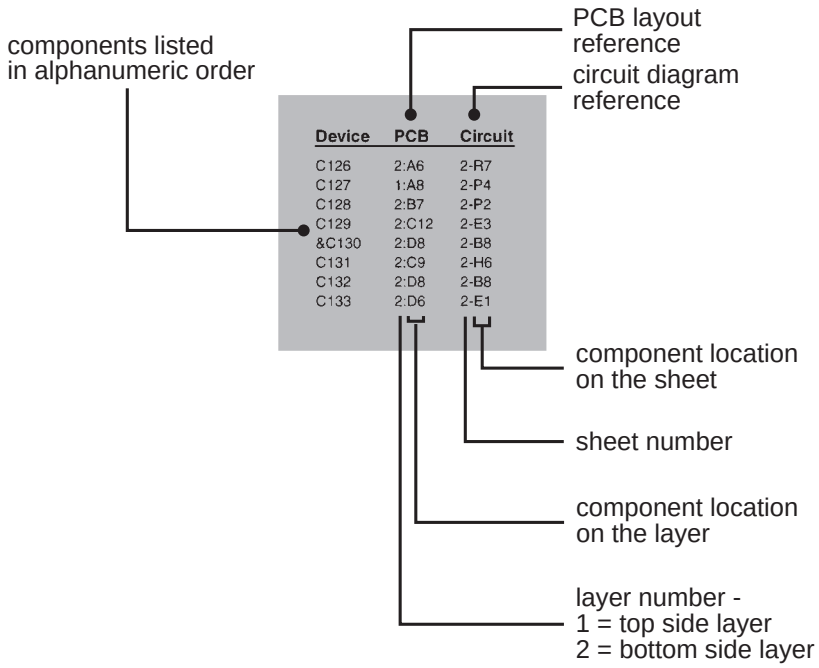
A variant component is one that has the same circuit reference but different value or specification in different product types. Where two products share the same PCB, the term "variant" is also used to describe components unplaced in one product. Variant components have a character prefix, such as "&", "=" 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<br>(where two products share the same PCB) |

## Grid Reference Index

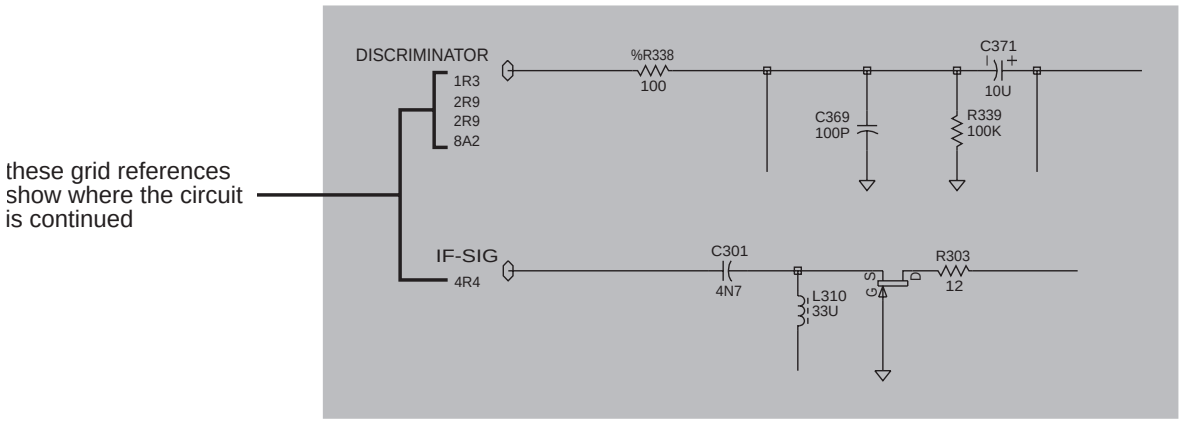
This section contains a component grid reference index to help you find components and labelled pads on the PCB layouts and circuit diagrams. This index lists the components and pads in alpha-numeric order, along with the appropriate alphanumeric grid references, as shown below:



## 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 T881 Transmitter PCB

This section contains the following information.



# T881 Parts List (IPN 220-01575-02)

**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.

**Note:** %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).

| Ref | Var | IPN | Description |
|---|---|---|---|
| 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 4U7 SMD 'B'CASE 16V +-010% |
| C209 | | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C210 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C211 | | 015-26100-08 | CAP CER 0805 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 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C225 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C227 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C229 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C230 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C232 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C233 | | 016-08470-01 | CAP EL SMD 6*4 47UF 16V |
| 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% |
| C240 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C241 | | 015-26100-08 | CAP CER 0805 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 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C247 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| 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 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C261 | | 014-07470-00 | CAP 4U7 SMD 'B'CASE 16V +-010% |
| 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 | 015-21150-05 | CAP CER 0805 CHIP 1P5+0.1PF 2 |
| &C269 | 15 | 015-21470-05 | CAP CER 0805 4P7+-0.1PF 200V |
| &C269 | 20 | 015-21150-05 | CAP CER 0805 CHIP 1P5+0.1PF 2 |
| &C269 | 25 | 015-21470-05 | CAP CER 0805 4P7+-0.1PF 200V |
| &C269 | 30 | 015-21150-05 | CAP CER 0805 CHIP 1P5+0.1PF 2 |
| &C269 | 35 | 015-21470-05 | CAP CER 0805 4P7+-0.1PF 200V |
| &C271 | 10 | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| &C271 | 15 | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| &C271 | 20 | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| &C271 | 25 | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| &C271 | 30 | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| &C271 | 35 | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| C273 | | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C275 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C277 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C279 | | 015-23820-08 | CAP CER 0805 820P 10% X7R 50V |
| C281 | | 015-25220-08 | CAP CER 0805 22N 10% X7R 50V |
| C283 | | 015-21470-05 | CAP CER 0805 4P7+-0.1PF 200V |
| C285 | | 015-21470-05 | CAP CER 0805 4P7+-0.1PF 200V |
| C287 | | 016-09100-05 | CAP SMD ELECT 100U 25V 20% |
| &C289 | 10 | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| &C289 | 15 | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| &C289 | 20 | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| &C289 | 25 | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| &C289 | 30 | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| &C289 | 35 | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C291 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C293 | | 015-27100-10 | CAP CER 0805 1M+80-20% Y5V 16V |
| %C294 | | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| %C295 | | 013-06470-00 | CAP SMD POLYESTER 470N 63V 10% |
| C300 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C301 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C302 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C303 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C304 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C305 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C306 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C307 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| %C308 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C309 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| %C310 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C311 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C315 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C316 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C317 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C318 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C319 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C321 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C322 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C323 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C324 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C325 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C326 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C328 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C329 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C330 | | 015-22330-01 | CAP CER 0805 33P 5% NPO 50V |
| C331 | | 014-07470-01 | CAP 4U7 'B'CASE 25V +-10% 267 |
| C332 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C335 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C336 | | 015-25330-08 | CAP CER 0805 CHIP 33NF |
| C337 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C338 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C339 | | 015-25330-08 | CAP CER 0805 CHIP 33NF |
| C340 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C342 | | 015-23330-08 | CAP CER 0805 330P 10% X7R 50V |
| C343 | | 015-21180-05 | CAP CER 0805 1P8 +-0.1 200V |
| C345 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C346 | | 015-21100-05 | CAP CER 0805 1P0 +-0.1PF 200V |
| C347 | | 015-20075-05 | CAP CER 0805 CHIP OP75+-0.1PF |
| C349 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C350 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C351 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C352 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C353 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C356 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C357 | | 015-21150-05 | CAP CER 0805 CHIP 1P5+0.1PF 2 |
| C359 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C360 | | 014-07470-01 | CAP 4U7 'B'CASE 25V +-10% 267 |
| C361 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C363 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C364 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C365 | | 014-08100-00 | CAP TANT CHIP 10M 16VW +-20% |
| C366 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C367 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C368 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C370 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C371 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C372 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C373 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C374 | | 015-21470-05 | CAP CER 0805 4P7+-0.1PF 200V |
| C375 | | 015-21470-05 | CAP CER 0805 4P7+-0.1PF 200V |
| C377 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C378 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C379 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C380 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C381 | | 015-21330-05 | CAP CER 0805 3P3+-0.1PF 200V |
| C382 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C383 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C384 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C385 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C386 | | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V |
| C387 | | 015-22120-05 | CAP 0805 12P 1% 200V |
| C388 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C389 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C390 | | 015-21150-05 | CAP CER 0805 CHIP 1P5+0.1PF 2 |
| C391 | | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V |
| C392 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C393 | | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V |
| C394 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C395 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C396 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C397 | | 015-21330-05 | CAP CER 0805 3P3+-0.1PF 200V |
| C398 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C399 | | 015-21150-05 | CAP CER 0805 CHIP 1P5+0.1PF 2 |
| C400 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C401 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C402 | | 014-18220-02 | L)CAP TANT SMD 22U 20% 35V |
| C403 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C404 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C406 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C407 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C408 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C409 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C410 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C411 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C412 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C413 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C415 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C416 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C417 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C418 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C419 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C420 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C421 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C422 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C423 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C424 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C425 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C426 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C427 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C428 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C430 | | 015-02390-03 | CAP CER 39P 5% 500V HIQ GRH111 |
| C432 | | 015-22180-05 | CAP 0805 18P 1% 200V |

| Ref | Var | IPN | Description |
|---|---|---|---|
| C450 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C451 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C452 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C453 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C500 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C501 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C502 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C503 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C505 | | 015-25220-08 | CAP CER 0805 22N 10% X7R 50V |
| C506 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C507 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C508 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C510 | | 015-25330-08 | CAP CER 0805 CHIP 33NF |
| C511 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C512 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C513 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C515 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C516 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| %C517 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C518 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C519 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C520 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C521 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C523 | | 014-08100-00 | CAP TANT CHIP 10M 16VW +-20% |
| C525 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C526 | | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C527 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C530 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C531 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C532 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C535 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C537 | | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C538 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C541 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C542 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C543 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C545 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C546 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C547 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C548 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C551 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C559 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C605 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C607 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C608 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 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 |
| C623 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C625 | | 020-09470-07 | CAP ELEC RADL 470M 16V 20% 3.5 |
| C626 | | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V |
| C627 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C628 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C629 | | 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 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| 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 | | 015-24100-08 | CAP CER 0805 1N 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 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C690 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C693 | | 014-08100-00 | CAP TANT CHIP 10M 16VW +-20% |
| C700 | | 015-26100-08 | CAP CER 0805 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 4U7 SMD 'B'CASE 16V +-010% |
| C709 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C710 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C711 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C712 | | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| C714 | | 014-07470-00 | CAP 4U7 SMD 'B'CASE 16V +-010% |
| C719 | | 014-07470-00 | CAP 4U7 SMD 'B'CASE 16V +-010% |
| C720 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C722 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C724 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C725 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C726 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C727 | | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| C729 | | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| %C733 | | 015-23470-08 | CAP CER 0805 470P 10% X7R 50V |
| C735 | | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| C736 | | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| C740A | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C740B | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C741A | | 014-07470-00 | CAP 4U7 SMD 'B'CASE 16V +-010% |
| C741B | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C742A | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C742B | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C743 | | 015-22470-01 | CAP CER 0805 47P 5% NPO 50V |
| C745 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C750 | | 014-08100-03 | CAP TANT SMD 10U 35V 20% |
| C757 | | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C759 | | 015-25680-08 | CAP CER 0805 68N 10% X7R 50V |
| C761 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C762 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C764 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C765 | | 014-07470-00 | CAP 4U7 SMD 'B'CASE 16V +-010% |
| C767 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C769 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C770 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C772 | | 014-08220-01 | (L)CAP TANT 22UF10V276MSER |
| C774 | | 013-06100-10 | CAP SMD PPS 100N 100V 10% |
| C776 | | 015-24470-08 | CAP CER 0805 4N7 10% X7R 50V |
| C782 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C784 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C785 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C786 | | 015-26100-08 | CAP CER 0805 100N 10% X7R 50V |
| C788 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C790 | | 015-21330-05 | CAP CER 0805 3P3+-0.1PF 200V |
| C792 | | 015-21560-05 | CAP CER 0805 CHIP 5P6+0.1PF 2 |
| C810 | | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C812 | | 015-23100-01 | CAP CER 0805 100P 5% NPO 50V |
| C813 | | 015-24100-08 | CAP CER 0805 1N 10% X7R 50V |
| C822 | | 014-07470-00 | CAP 4U7 SMD 'B'CASE 16V +-010% |
| C823 | | 015-25220-08 | CAP CER 0805 22N 10% X7R 50V |
| C824 | | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C826 | | 015-23220-01 | CAP CER 0805 220P 5% NPO 50V |
| C827 | | 015-22330-01 | CAP CER 0805 33P 5% NPO 50V |
| C828 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C830 | | 015-25470-08 | CAP CER 0805 47N 10% X7R 50V |
| C838 | | 014-09100-00 | CAP TANT SMD 100U 16V 20% |
| C841 | | 014-09100-00 | CAP TANT SMD 100U 16V 20% |
| C844 | | 015-25100-08 | CAP CER 0805 10N 10% X7R 50V |
| C880 | | 015-22180-05 | CAP 0805 18P 1% 200V |
| C910 | | 015-01270-06 | CAP CER 1210 2P7 NPO200V GRM42 |
| C920 | | 015-01560-02 | CAP CERHIQ1210 5P65%NPO200V |
| C930 | | 015-01560-02 | CAP CERHIQ1210 5P65%NPO200V |
| C940 | | 015-01270-06 | CAP CER 1210 2P7 NPO200V GRM42 |
| CV300 | | 028-11500-00 | CAP TRIM 0.6/4.5 P SAPPHIRE |
| %D111A | | 001-10015-50 | DIODE SMD ZENER 1.5SMC22AT3 |
| D211 | | 008-00014-80 | S)LED 3MM GREEN WITH WIRE |
| D212 | | 008-00014-79 | S)LED 3MM RED WITH WIRE |
| D220 | | 001-10000-99 | S) DIODE SMD BAV99 D-SW SOT23 |
| D230 | | 001-10010-40 | DIODE SMD ZENER 33V BZG03-C33 |
| D240 | | 001-10000-56 | S) DIODE SMD BAW56 D-SW SOT23 |
| D250 | | 001-10000-56 | S) DIODE SMD BAW56 D-SW SOT23 |
| D260 | | 001-10000-56 | S) DIODE SMD BAW56 D-SW SOT23 |
| D270 | | 001-10000-99 | S) DIODE SMD BAV99 D-SW SOT23 |
| D300 | | 001-10005-35 | S) DIODE SMD VCAP BB535 SOD323 |
| D301 | | 001-10005-35 | S) DIODE SMD VCAP BB535 SOD323 |
| D305 | | 001-10005-35 | S) DIODE SMD VCAP BB535 SOD323 |
| D307 | | 001-10005-35 | S) DIODE SMD VCAP BB535 SOD323 |
| D308 | | 001-10063-05 | DIODE SMD BAR63-05W SOT323 |
| D400 | | 001-10066-00 | DIODE SCHOTTKY HSMS2815 |
| D401 | | 001-10066-00 | DIODE SCHOTTKY HSMS2815 |
| D610 | | 001-10000-99 | S) DIODE SMD BAV99 D-SW SOT23 |
| D620 | | 001-10000-70 | S) DIODE SMD BAV70 D-SW SOT23 |
| D630 | | 001-10000-70 | S) DIODE SMD BAV70 D-SW SOT23 |
| D635A | | 001-10165-00 | DIODE BAT165 SCHOTTKY SOD-323 |
| D640 | | 001-10000-70 | S) DIODE SMD BAV70 D-SW SOT23 |
| D645 | | 001-10010-40 | DIODE SMD ZENER 33V BZG03-C33 |
| D710 | | 001-10000-99 | S) DIODE SMD BAV99 D-SW SOT23 |
| D720 | | 001-10000-99 | S) DIODE SMD BAV99 D-SW SOT23 |
| D730 | | 001-10165-00 | DIODE BAT165 SCHOTTKY SOD-323 |
| D732 | | 001-10165-00 | DIODE BAT165 SCHOTTKY SOD-323 |
| D810 | | 001-10165-00 | DIODE BAT165 SCHOTTKY SOD-323 |
| IC210 | | 002-10003-24 | S) IC SMD 324 4X O-AMP SO14 |
| IC220 | | 002-10126-70 | S) IC SMD DS1267S10K 2XDIG POT |
| IC230 | | 002-10003-24 | S) IC SMD 324 4X O-AMP SO14 |
| IC240 | | 002-10040-53 | S)MC14053B SMD BREAK B4 MAKE |
| IC250 | | 002-10020-50 | IC SMD 4N25A OPTOCOUPLER |
| IC260 | | 002-10003-24 | S) IC SMD 324 4X O-AMP SO14 |
| #IC400 | 10 | 004-68701-00 | MODULE M68701 806-870MHZ 6W |
| #IC400 | 15 | 004-68701-00 | MODULE M68701 806-870MHZ 6W |
| #IC400 | 20 | 004-68701-01 | MODULE M68701M 860-910MHZ 6W |
| #IC400 | 25 | 004-68701-01 | MODULE M68701M 860-910MHZ 6W |
| #IC400 | 30 | 004-68701-02 | MODULE M68701H 890-960MHZ 6W |
| #IC400 | 35 | 004-68701-02 | MODULE M68701H 890-960MHZ 6W |
| IC500 | | 002-10003-58 | S) IC SMD LM358 DUAL O-AMP |
| IC510 | | 002-10006-60 | S) IC SMD LMC660CM O-AMP 4X |
| IC610 | | 002-10078-05 | S) IC SMD 78L05 5V REG |
| IC630 | | 002-12523-17 | (S)IC LM317L REG TO-252 0.5A |
| IC640 | | 002-10003-58 | S) IC SMD LM358 DUAL O-AMP |
| IC650 | | 002-10012-32 | SMD DS1232LPS-2 LP RESET&W-DOG |
| =IC700 | | 539-00010-55 | TCXO 12.8M 1PPM-20+70/2PPM -30 |
| IC710 | | 002-74904-00 | IC SMD 74HC04A 6X INV BUFFD |
| IC720 | | 002-74910-04 | S) IC SMD 74HCU04 6X INV |
| IC730 | | 002-10045-20 | S) IC SMD 74HC4520T 2XCTR 4BIT |
| IC740 | | 002-14519-10 | S) IC MC145191F SMD SYNTH |
| IC750 | | 002-10330-78 | S) IC MC33078D 2X AMP LO NOISE |
| IC820 | | 002-12416-00 | S)IC SMD AT24C16N-10SC EEPROM |
| IC830 | | 002-10003-24 | S) IC SMD 324 4X O-AMP SO14 |

| Ref | Var | IPN | Description |
|---|---|---|---|
| L300 | | 056-14150-02 | (L) IND SMD 1.5UH SIMID02 |
| L301 | | 065-10004-20 | BEAD FE SMD CBD 4.6/3/3-4S2 |
| L302 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L303 | | 056-10082-02 | (L) IND SMD 82NH SIMID02 |
| L304 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L305 | | 065-10004-20 | BEAD FE SMD CBD 4.6/3/3-4S2 |
| L307 | | 056-10015-03 | IND SMD 0805 15NH 20% |
| L308 | | 056-10006-83 | (LSH) IND SMD 0805 6.8NH 20% |
| L309 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L310 | | 065-10004-20 | BEAD FE SMD CBD 4.6/3/3-4S2 |
| L311 | | 057-10120-03 | IND 0805 EMI SUP 120E@100M 0.2 |
| L312 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L314 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L315 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L316 | | 059-14820-10 | IND FXD 1008CT 8.2NH 5% |
| L317 | | 059-14820-10 | IND FXD 1008CT 8.2NH 5% |
| L318 | | 059-14820-10 | IND FXD 1008CT 8.2NH 5% |
| L401 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L403 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L404 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L406 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L407 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L408 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L450 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L451 | | 056-10100-02 | (L) IND SMD 100NH SIMID02 |
| L601 | | 057-10120-03 | IND 0805 EMI SUP 120E@100M 0.2 |
| L602 | | 057-10120-03 | IND 0805 EMI SUP 120E@100M 0.2 |
| PL201 | | 240-00021-03 | LIM) HEADER 2X7 WAY SMD |
| PL202 | | 240-00021-03 | LIM) HEADER 2X7 WAY SMD |
| Q210 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q220 | | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 |
| Q230 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q240 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q250 | | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 |
| Q260 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q270 | | 000-10004-10 | S) XSTR SMD MJD41C NPN SW DPAK |
| Q300 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q301 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q302 | | 000-10009-41 | S) XSTR SMD BR941L SOT23 |
| Q303 | | 000-10009-41 | S) XSTR SMD BR941L SOT23 |
| Q304 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q305 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q307 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q308 | | 002-10003-18 | IC BGA318 MMIC AMPLIFIER |
| Q309 | | 000-10009-30 | XSTR SMD BFR93A NPN SOT23 |
| Q310 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q311 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q312 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q313 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q314 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q316 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q317 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q318 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q319 | | 000-10080-00 | XSTR SMD BLT80 UHF PWR SOT223 |
| Q321 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q322 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q500 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q501 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q502 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q503 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q505 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q506 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q507 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q508 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q510 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q511 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q512 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q513 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q515 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q516 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q517 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q610 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q620 | | 000-00033-12 | XSTR BD242 TO-220 PNP ISOLTD |
| Q630 | | 000-10003-00 | S) XSTR BSR30 PNP AF SOT-89 |
| Q660 | | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 |
| Q670 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q710 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q720 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q730 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q740 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q750 | | 000-10008-07 | S) XSTR SMD BC807 PNP SOT23 AF |
| Q760 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q770 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q775 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q780 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q785 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q790 | | 000-10003-12 | S) XSTR SMD BFR31 N JFET SOT23 |
| Q795 | | 000-10009-30 | XSTR SMD BFR93A NPN SOT23 |
| Q810 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q820 | | 000-10008-17 | S) XSTR SMD BC817-25 NPN SOT23 |
| Q830 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q840 | | 000-10008-57 | S) XSTR SMD BCW70 PNP SOT23 SS |
| Q850 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| Q860 | | 000-10008-48 | S) XSTR SMD BCW60 NPN SOT23 SS |
| R160 | | 036-12100-00 | RES M/F 0805 10E 5% |

| Ref | Var | IPN | Description |
|---|---|---|---|
| R201 | | 036-13560-00 | RES M/F 0805 560E 5% |
| R202 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R204 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R205 | | 036-13220-10 | RES 0805 220E 1% |
| R206 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R207 | | 036-14390-10 | RES M/F 0805 3K9 1% |
| R208 | | 036-13560-00 | RES M/F 0805 560E 5% |
| R209 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R210 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R211 | | 036-13470-00 | RES M/F 0805 470E 5% |
| R212 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R213 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R214 | | 036-14820-10 | RES M/F 0805 8K2 1% |
| R215 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R216 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R217 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R218 | | 036-16150-00 | RES M/F 0805 150K 5% |
| R219 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R220 | | 036-13470-00 | RES M/F 0805 470E 5% |
| R221 | | 036-14150-10 | RES M/F 0805 1K5 1% |
| R223 | | 036-17100-10 | RES M/F 0805 1M 1% |
| R224 | | 036-14680-10 | RES M/F 0805 6K8 1% |
| R225 | | 036-17100-10 | RES M/F 0805 1M 1% |
| R226 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R227 | | 036-14180-00 | RES M/F 0805 1K8 5% |
| R228 | | 036-13120-00 | RES M/F 0805 120E 5% |
| R229 | | 036-16470-00 | RES M/F 0805 470K 5% |
| R230 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R231 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R232 | | 036-16330-00 | RES M/F 0805 330K 5% |
| R233 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R235 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R237 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R238 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R239 | | 036-14150-10 | RES M/F 0805 1K5 1% |
| R241 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R242 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R244 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R245 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R247 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R248 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R249 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R251 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R253 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R254 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R255 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R256 | | 036-15560-10 | RES MF 0805 56K 1% |
| R257 | | 036-16560-00 | RES M/F 0805 560K 5% |
| R258 | | 036-16150-00 | RES M/F 0805 150K 5% |
| R259 | | 036-15220-00 | RES M/F 0805 22K 5% |
| R260 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R262 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R263 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| &R264 | 10 | 036-15220-00 | RES M/F 0805 22K 5% |
| &R264 | 15 | 036-15270-10 | RES M/F 0805 27K 1% |
| &R264 | 20 | 036-15220-00 | RES M/F 0805 22K 5% |
| &R264 | 25 | 036-15270-10 | RES M/F 0805 27K 1% |
| &R264 | 30 | 036-15220-00 | RES M/F 0805 22K 5% |
| &R264 | 35 | 036-15270-10 | RES M/F 0805 27K 1% |
| &R265 | 10 | 036-15150-00 | RES M/F 0805 15K 5% |
| &R265 | 15 | 036-15180-00 | RES M/F 0805 18K 5% |
| &R265 | 20 | 036-15150-00 | RES M/F 0805 15K 5% |
| &R265 | 25 | 036-15180-00 | RES M/F 0805 18K 5% |
| &R265 | 30 | 036-15150-00 | RES M/F 0805 15K 5% |
| &R265 | 35 | 036-15180-00 | RES M/F 0805 18K 5% |
| &R266 | 10 | 036-15470-10 | RES M/F 0805 47K 1% |
| &R266 | 15 | 036-15560-10 | RES MF 0805 56K 1% |
| &R266 | 20 | 036-15470-10 | RES M/F 0805 47K 1% |
| &R266 | 25 | 036-15560-10 | RES MF 0805 56K 1% |
| &R266 | 30 | 036-15470-10 | RES M/F 0805 47K 1% |
| &R266 | 35 | 036-15560-10 | RES MF 0805 56K 1% |
| R267 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R268 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R269 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R270 | | 036-14120-00 | RES M/F 0805 1K2 5% |
| R271 | | 036-17100-10 | RES M/F 0805 1M 1% |
| R272 | | 036-13560-00 | RES M/F 0805 560E 5% |
| R273 | | 036-15180-00 | RES M/F 0805 18K 5% |
| R274 | | 036-15180-00 | RES M/F 0805 18K 5% |
| R275 | | 036-14270-10 | RES M/F 0805 2K7 1% |
| R277 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R278 | | 036-16120-00 | RES M/F 0805 120K 5% |
| R279 | | 036-17100-10 | RES M/F 0805 1M 1% |
| R280 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R282 | | 036-15560-10 | RES MF 0805 56K 1% |
| R283 | | 036-15560-10 | RES MF 0805 56K 1% |
| R284 | | 036-17100-10 | RES M/F 0805 1M 1% |
| R285 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R286 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R287 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R288 | | 036-15180-00 | RES M/F 0805 18K 5% |
| R289 | | 036-16100-00 | RES M/F 0805 100K 5% |
| &R290 | 10 | 036-13560-00 | RES M/F 0805 560E 5% |
| &R290 | 15 | 036-13560-00 | RES M/F 0805 560E 5% |
| &R290 | 20 | 036-13560-00 | RES M/F 0805 560E 5% |
| &R290 | 25 | 036-13560-00 | RES M/F 0805 560E 5% |
| &R290 | 30 | 036-13560-00 | RES M/F 0805 560E 5% |
| &R290 | 35 | 036-13560-00 | RES M/F 0805 560E 5% |

| Ref | Var | IPN | Description |
|---|---|---|---|
| R291 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R292 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R293 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R294 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R295 | | 036-14270-10 | RES M/F 0805 2K7 1% |
| R296 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R297 | | 036-14560-00 | RES M/F 0805 5K6 5% |
| %R298 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R299 | | 036-14270-10 | RES M/F 0805 2K7 1% |
| R300 | | 036-12680-00 | RES M/F 0805 68E 5% |
| %R301 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R302 | | 036-15390-00 | RES M/F 0805 39K 5% |
| R303 | | 036-12330-00 | RES M/F 0805 33E 5% |
| R304 | | 036-11470-00 | RES M/F 0805 4E7 10% |
| R305 | | 036-11470-00 | RES M/F 0805 4E7 10% |
| R307 | | 036-14180-00 | RES M/F 0805 1K8 5% |
| R308 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R309 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R310 | | 036-12270-00 | RES M/F 0805 27E 5% |
| R311 | | 036-13330-00 | RES M/F 0805 330E 5% |
| R312 | | 036-12680-00 | RES M/F 0805 68E 5% |
| R314 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R315 | | 036-12120-00 | RES M/F 0805 12E 5% |
| R316 | | 036-12560-00 | RES M/F 0805 56E 5% |
| R318 | | 036-13220-10 | RES 0805 220E 1% |
| R321 | | 036-13120-00 | RES M/F 0805 120E 5% |
| R322 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R323 | | 036-13820-00 | RES M/F 0805 820E 5% |
| R324 | | 036-12470-00 | RES M/F 0805 47E 5% |
| R326 | | 036-12470-00 | RES M/F 0805 47E 5% |
| R328 | | 036-11470-00 | RES M/F 0805 4E7 10% |
| R329 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R330 | | 036-14180-00 | RES M/F 0805 1K8 5% |
| R331 | | 036-11470-00 | RES M/F 0805 4E7 10% |
| R332 | | 036-16120-00 | RES M/F 0805 120K 5% |
| R333 | | 036-14330-10 | RES M/F 0805 3K3 1% |
| R335 | | 036-15150-00 | RES M/F 0805 15K 5% |
| R336 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R337 | | 036-15330-00 | RES M/F 0805 33K 5% |
| R338 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R339 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R340 | | 036-12470-00 | RES M/F 0805 47E 5% |
| R342 | | 036-16180-00 | RES M/F 0805 180K 5% |
| R343 | | 036-15150-00 | RES M/F 0805 15K 5% |
| R344 | | 036-12330-00 | RES M/F 0805 33E 5% |
| R346 | | 036-11470-00 | RES M/F 0805 4E7 10% |
| R347 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R349 | | 036-13270-00 | RES M/F 0805 270E 5% |
| R350 | | 036-12180-00 | RES M/F 0805 18E 5% |
| R351 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R352 | | 036-13270-00 | RES M/F 0805 270E 5% |
| R353 | | 036-14150-10 | RES M/F 0805 1K5 1% |
| R354 | | 036-14680-10 | RES M/F 0805 6K8 1% |
| R356 | | 036-15220-00 | RES M/F 0805 22K 5% |
| R357 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R358 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| %R359 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R363 | | 036-12270-00 | RES M/F 0805 27E 5% |
| R364 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R365 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R367 | | 036-13470-00 | RES M/F 0805 470E 5% |
| R368 | | 036-15150-00 | RES M/F 0805 15K 5% |
| R370 | | 036-13180-00 | RES M/F 0805 180E 5% |
| R371 | | 036-12120-00 | RES M/F 0805 12E 5% |
| R372 | | 036-12330-00 | RES M/F 0805 33E 5% |
| R373 | | 036-13180-00 | RES M/F 0805 180E 5% |
| R374 | | 036-13680-00 | RES M/F 0805 680E 5% |
| R375 | | 036-13330-00 | RES M/F 0805 330E 5% |
| R376 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R377 | | 036-13820-00 | RES M/F 0805 820E 5% |
| R378 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R379 | | 036-12470-00 | RES M/F 0805 47E 5% |
| R380 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R381 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R390 | | 036-13120-00 | RES M/F 0805 120E 5% |
| R391 | | 036-12470-00 | RES M/F 0805 47E 5% |
| R392 | | 036-13120-00 | RES M/F 0805 120E 5% |
| R399 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R400 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R401 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R410 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R450 | | 045-05100-02 | RES NTC 10K 2% Metal tagged |
| R500 | | 036-15150-00 | RES M/F 0805 15K 5% |
| R501 | | 036-15150-00 | RES M/F 0805 15K 5% |
| R502 | | 036-15150-00 | RES M/F 0805 15K 5% |
| R503 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R505 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R506 | | 036-16120-00 | RES M/F 0805 120K 5% |
| R510 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R511 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R512 | | 036-15220-00 | RES M/F 0805 22K 5% |
| R515 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R516 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R517 | | 036-16120-00 | RES M/F 0805 120K 5% |
| R518 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R520 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R521 | | 036-15220-00 | RES M/F 0805 22K 5% |
| R522 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R523 | | 036-14820-10 | RES M/F 0805 8K2 1% |
| R525 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R526 | | 036-14120-00 | RES M/F 0805 1K2 5% |
| R527 | | 036-15150-00 | RES M/F 0805 15K 5% |
| R528 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R530 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R531 | | 036-14820-10 | RES M/F 0805 8K2 1% |
| R532 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R533 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R535 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R536 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R537 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R538 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R540 | | 036-15220-00 | RES M/F 0805 22K 5% |
| R541 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R542 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R543 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R544 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R546 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R547 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R548 | | 036-14820-10 | RES M/F 0805 8K2 1% |
| R550 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R551 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R552 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R553 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R555 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R556 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R558 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R559 | | 036-16220-00 | RES M/F 0805 220K 5% |
| R560 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R565 | | 036-13220-10 | RES 0805 220E 1% |
| R566 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R567 | | 036-15220-00 | RES M/F 0805 22K 5% |
| R568 | | 036-15330-00 | RES M/F 0805 33K 5% |
| R569 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R570 | | 036-15560-10 | RES MF 0805 56K 1% |
| R571 | | 036-15390-00 | RES M/F 0805 39K 5% |
| R572 | | 036-14220-00 | RES M/F 0805 2K2 5% |
| R573 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R575 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R576 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R609 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R613 | | 036-13560-00 | RES M/F 0805 560E 5% |
| R615 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R617 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R619 | | 036-01100-10 | RES 1 OHM 1 WATT 2512 CHIP |
| R621 | | 036-01100-10 | RES 1 OHM 1 WATT 2512 CHIP |
| R625 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R629 | | 036-03270-10 | RES 270 OHM 1 WATT 2512 CHIP |
| R633 | | 036-14680-10 | RES M/F 0805 6K8 1% |
| R637 | | 036-12220-00 | RES M/F 0805 22E 5% |
| R638 | | 036-12220-00 | RES M/F 0805 22E 5% |
| R640 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R641 | | 036-14150-10 | RES M/F 0805 1K5 1% |
| R645 | | 036-13470-00 | RES M/F 0805 470E 5% |
| R649 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R651 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R652 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| R653 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R657 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R661 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R665 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R669 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R673 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R677 | | 036-15470-10 | RES M/F 0805 47K 1% |
| R681 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R685 | | 036-15150-00 | RES M/F 0805 15K 5% |
| R689 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R693 | | 036-16100-00 | RES M/F 0805 100K 5% |
| R696 | | 036-15560-10 | RES MF 0805 56K 1% |
| R701 | | 036-12220-00 | RES M/F 0805 22E 5% |
| R702 | | 036-17100-10 | RES M/F 0805 1M 1% |
| R703 | | 036-17100-10 | RES M/F 0805 1M 1% |
| R706 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R707 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R708 | | 036-17100-10 | RES M/F 0805 1M 1% |
| R709 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R710 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R711 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R712 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R713 | | 036-10000-00 | RES M/F 0805 ZERO OHM |
| %R715 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R717 | | 036-14270-10 | RES M/F 0805 2K7 1% |
| R718 | | 036-15270-10 | RES M/F 0805 27K 1% |
| R719 | | 036-15270-10 | RES M/F 0805 27K 1% |
| R720 | | 036-15390-00 | RES M/F 0805 39K 5% |
| R721 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R722 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R723 | | 036-14270-10 | RES M/F 0805 2K7 1% |
| R725 | | 036-15390-00 | RES M/F 0805 39K 5% |
| %R726 | | 036-13100-10 | RES M/F 0805 100E 1% |
| R727 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R728 | | 036-15100-10 | RES M/F 0805 10K 1% |
| R730 | | 036-13470-00 | RES M/F 0805 470E 5% |
| R731 | | 036-13470-00 | RES M/F 0805 470E 5% |
| R732 | | 036-13470-00 | RES M/F 0805 470E 5% |
| R742 | | 036-13150-10 | RES M/F 0805 150E 1% |
| R743 | | 036-13150-10 | RES M/F 0805 150E 1% |

| Ref | Var | IPN | Description |
|---|---|---|---|
| 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 | | 036-15180-00 | RES M/F 0805 18K 5% |
| R780 | | 036-12680-00 | RES M/F 0805 68E 5% |
| R782 | | 036-12180-00 | RES M/F 0805 18E 5% |
| R784 | | 036-13120-00 | RES M/F 0805 120E 5% |
| R785 | | 036-14330-10 | RES M/F 0805 3K3 1% |
| R786 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R787 | | 036-12100-00 | RES M/F 0805 10E 5% |
| R790 | | 036-13390-10 | RES M/F 0805 390E 1% |
| R791 | | 036-14100-10 | RES M/F 0805 1K 1% |
| R801 | | 036-16150-00 | RES M/F 0805 150K 5% |
| R802 | | 036-15470-10 | RES M/F 0805 47K 1% |
| 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% |
| 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% |
| R880 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R881 | | 036-14470-10 | RES M/F 0805 4K7 1% |
| R882 | | 036-13470-00 | RES M/F 0805 470E 5% |
| RV210 | | 040-05100-23 | POT 10K LOG PCB 15MM SLOT SFT |
| RV220 | | 042-05500-05 | RES PRESET SMD 50K CER 4MM SQ |
| RV501 | | 042-05200-05 | RES PRESET SMD 20K CER 4MM SQ |
| RV502 | | 042-05100-05 | RES PRESET SMD 10K CER 4MM SQ |
| RV805 | | 042-05200-05 | RES PRESET SMD 20K CER 4MM SQ |
| 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 |

| Ref | Var | IPN | Description |
|---|---|---|---|
| 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 |
| #TL300 | 10 | 051-11000-00 | COAX RES 1000MHZ 6X6 SMD |
| #TL300 | 15 | 051-11000-00 | COAX RES 1000MHZ 6X6 SMD |
| #TL300 | 20 | 051-11050-00 | COAX RES 1050MHz 6x6 SMD |
| #TL300 | 25 | 051-11050-00 | COAX RES 1050MHz 6x6 SMD |
| #TL300 | 30 | 051-11100-00 | COAX RES 1100MHZ 6X6 SMD |
| #TL300 | 35 | 051-11100-00 | COAX RES 1100MHZ 6X6 SMD |

# T881 Mechanical & Miscellaneous Parts (220-01575-02)

| IPN | Legend | Description |
|---|---|---|
| 070-01001-00 | | D-RANGE 15 WAY COMPL T800 |
| 220-01575-02 | | PCB T881 SERIES II 800-960M TX |
| 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 |
| 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 |
| 308-13133-01 | | HEATSINK T881 MODULE |
| 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 |
| 319-40015-00 | | STRAP EARTHING T881 |
| 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 |
| 352-00010-04 | | NUT M2.5 MACH HEX ST BZ |
| 352-00010-29 | | NUT M4 NYLOC HEX |
| 353-00010-10 | | WSHR M3 FLAT 7MM*0.6MM ST BZ |
| 353-00010-24 | | WSHR M4x8mm Flat |
| 362-00010-33 | | GROMMET LED MTG 3MM |
| 399-00010-51 | | BAG PLASTIC 75*100MM |

| IPN | Legend | Description |
|---|---|---|

# T881 Grid Reference Index (IPN 220-01575-02)

**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-B3 | C304 | 1:E4 | 3-B4 | C375 | 1:E5 | 3-K3 | C502 | 1:G6 | 5-D6 |
| C202 | 1:C1 | 2-C3 | C305 | 1:E4 | 3-B4 | C377 | 1:E5 | 3-K4 | C503 | 1:H5 | 5-D6 |
| C204 | 1:B3 | 2-F3 | C306 | 1:F5 | 3-M1 | C378 | 1:F4 | 3-L1 | C505 | 1:H5 | 5-E6 |
| C205 | 1:A3 | 2-E3 | C307 | 1:E4 | 3-B2 | C379 | 1:F4 | 3-L2 | C506 | 1:G5 | 5-E5 |
| C207 | 1:C7 | 2-G0 | %C308 | 1:F3 | 3-C9 | C380 | 1:E6 | 3-K5 | C507 | 1:K5 | 5-L1 |
| C209 | 1:C6 | 2-T0 | C309 | 1:E4 | 3-C4 | C381 | 1:F7 | 3-P3 | C508 | 1:J6 | 5-L3 |
| C210 | 1:C7 | 2-J0 | %C310 | 1:F3 | 3-C9 | C382 | 1:F4 | 3-L1 | C510 | 1:K5 | 5-M1 |
| C211 | 1:B7 | 2-H3 | C311 | 1:F3 | 3-D9 | C383 | 1:F5 | 3-M1 | C511 | 1:H6 | 5-F6 |
| C213 | 1:A6 | 2-C5 | %C312 | 1:E4 | 3-D2 | C384 | 1:F4 | 3-M0 | C512 | 1:H6 | 5-N3 |
| C215 | 1:A6 | 2-D5 | %C314 | 1:E4 | 3-D2 | C385 | 1:E4 | 3-M0 | C513 | 1:G5 | 5-G6 |
| C217 | 1:B6 | 2-C5 | C315 | 1:E4 | 3-D1 | C386 | 1:E4 | 3-M0 | C515 | 1:K5 | 5-O1 |
| C219 | 1:B6 | 2-C5 | C316 | 1:F4 | 3-D8 | C387 | 1:E6 | 3-L3 | C516 | 1:K6 | 5-O0 |
| C221 | 1:C5 | 2-L8 | C317 | 1:E4 | 3-D4 | C388 | 1:F3 | 3-N7 | %C517 | 1:J6 | 5-O2 |
| C223 | 1:D4 | 2-J6 | C318 | 1:E4 | 3-D1 | C389 | 1:E6 | 3-L4 | C518 | 1:G5 | 5-H6 |
| C225 | 1:B3 | 2-N7 | C319 | 1:E4 | 3-D1 | C390 | 1:F7 | 3-Q3 | C519 | 1:K6 | 5-E4 |
| C227 | 1:B4 | 2-O6 | C321 | 1:F4 | 3-E8 | C391 | 1:E4 | 3-N0 | C520 | 1:G6 | 5-I6 |
| C229 | 1:B4 | 2-O6 | C322 | 1:E4 | 3-E7 | C392 | 1:F3 | 3-N7 | C521 | 1:K6 | 5-P1 |
| C230 | 1:B4 | 2-J0 | C323 | 1:E4 | 3-E1 | C393 | 1:F3 | 3-P8 | C523 | 1:J5 | 5-N4 |
| C232 | 1:B4 | 2-P6 | C324 | 1:F3 | 3-E8 | C394 | 1:E6 | 3-M3 | C525 | 1:J5 | 5-N4 |
| C233 | 1:B3 | 2-P7 | C325 | 1:F4 | 3-E7 | C395 | 1:F6 | 3-N4 | C526 | 1:J5 | 5-P4 |
| C235 | 1:B5 | 2-N5 | C326 | 1:E4 | 3-E7 | C396 | 1:F6 | 3-N3 | C527 | 1:J5 | 5-N4 |
| C237 | 1:B4 | 2-N5 | C328 | 1:E4 | 3-F7 | C397 | 1:F7 | 3-R3 | %C528 | 1:J5 | 5-O2 |
| C239 | 1:B4 | 2-O4 | C329 | 1:E3 | 3-F7 | C398 | 1:F7 | 3-P4 | C530 | 1:H6 | 5-O6 |
| C240 | 1:D2 | 2-T6 | C330 | 1:E3 | 3-F7 | C399 | 1:F7 | 3-Q3 | C531 | 1:H6 | 5-O5 |
| C241 | 1:B4 | 2-P5 | C331 | 1:F5 | 3-F5 | C400 | 1:N7 | 4-D3 | C532 | 1:J5 | 5-P4 |
| C242 | 1:B4 | 2-P5 | C332 | 1:E5 | 3-F3 | C401 | 1:G8 | 4-E4 | C535 | 1:K5 | 5-P5 |
| C243 | 1:B4 | 2-R5 | %C333 | 1:E3 | 3-G8 | C402 | 1:J9 | 4-E3 | C537 | 1:K5 | 5-R5 |
| C245 | 1:C5 | 2-B5 | C335 | 1:E3 | 3-G7 | C403 | 1:K9 | 4-E4 | C538 | 1:K5 | 5-Q5 |
| C247 | 1:C5 | 2-B5 | C336 | 1:F6 | 3-G0 | C404 | 1:J9 | 4-D3 | C541 | 1:K6 | 5-S5 |
| C249 | 1:D4 | 2-E6 | C337 | 1:F5 | 3-F5 | C406 | 1:K7 | 4-D6 | C542 | 1:H6 | 5-U0 |
| C251 | 1:C4 | 2-C9 | C338 | 1:E5 | 3-F4 | C407 | 1:G7 | 4-C4 | C543 | 1:J6 | 5-U5 |
| C253 | 1:D3 | 2-E8 | C339 | 1:F6 | 3-G1 | C408 | 1:G7 | 4-D4 | C545 | 1:J6 | 5-U5 |
| C255 | 1:D3 | 2-E8 | C340 | 1:E3 | 3-G8 | C409 | 1:J9 | 4-D4 | C546 | 1:J5 | 5-V0 |
| C257 | 1:D4 | 2-C8 | C342 | 1:E4 | 3-G6 | C410 | 1:J7 | 4-C3 | C547 | 1:K5 | 5-R6 |
| C259 | 1:C7 | 2-J2 | C343 | 1:E3 | 3-G7 | C411 | 1:N7 | 4-C3 | C548 | 1:G6 | 5-V5 |
| C260 | 1:C8 | 2-I0 | C345 | 1:F5 | 3-G5 | C412 | 1:G8 | 4-D3 | C551 | 1:G6 | 5-V5 |
| C261 | 1:C7 | 2-K2 | C346 | 1:E3 | 3-H7 | C413 | 1:L7 | 4-F3 | C559 | 1:J6 | 5-U5 |
| C263 | 1:D6 | 2-M2 | C347 | 1:E3 | 3-H7 | C415 | 1:L8 | 4-F3 | C605 | 1:L6 | 6-C8 |
| C265 | 1:D8 | 2-M1 | C349 | 1:E5 | 3-G5 | C416 | 1:M9 | 4-H3 | C607 | 1:L6 | 6-D8 |
| C267 | 1:C8 | 2-O2 | C350 | 1:E4 | 3-H7 | C417 | 1:M8 | 4-H3 | C608 | 1:L6 | 6-D8 |
| &C269 | 1:C8 | 2-O2 | C351 | 1:E5 | 3-H3 | C418 | 1:N7 | 4-J5 | C610A | 1:M5 | 6-F8 |
| &C271 | 1:C8 | 2-P2 | C352 | 1:F5 | 3-H1 | C419 | 1:N7 | 4-K5 | C610B | 1:L5 | 6-F8 |
| C273 | 1:C8 | 2-P2 | C353 | 1:E5 | 3-H4 | C420 | 1:N8 | 4-K5 | C611A | 1:M6 | 6-H8 |
| C275 | 1:C3 | 2-E7 | C356 | 1:E5 | 3-H4 | C421 | 1:G8 | 4-L5 | C611B | 1:M5 | 6-H8 |
| C277 | 1:B4 | 2-I4 | C357 | 1:E3 | 3-J7 | C422 | 1:L9 | 4-L5 | C623 | 1:N6 | 6-P7 |
| C279 | 1:B5 | 2-I4 | C359 | 1:F4 | 3-J2 | C423 | 1:G7 | 4-M5 | C625 | 1:M6 | 6-Q6 |
| C281 | 1:B5 | 2-I3 | C360 | 1:F6 | 3-H5 | C424 | 1:G7 | 4-M5 | C626 | 1:M6 | 6-Q6 |
| C283 | 1:B5 | 2-J2 | C361 | 1:F4 | 3-K2 | C425 | 1:G8 | 4-J3 | C627 | 1:M6 | 6-R6 |
| C285 | 1:C7 | 2-K2 | C363 | 1:F5 | 3-K0 | C426 | 1:L9 | 4-J3 | C628 | 1:M6 | 6-Q6 |
| C287 | 1:C6 | 2-L3 | C364 | 1:F5 | 3-J5 | C427 | 1:G7 | 4-K3 | C629 | 1:M6 | 6-R6 |
| &C289 | 1:C8 | 2-Q2 | C365 | 1:F5 | 3-K1 | C428 | 1:G7 | 4-K3 | C630 | 1:M5 | 6-J5 |
| C291 | 1:C7 | 2-T2 | C366 | 1:F5 | 3-K0 | C430 | 2:M8 | 4-G5 | C631A | 1:N5 | 6-L6 |
| C293 | 1:D7 | 2-T2 | C367 | 1:F4 | 3-K1 | C432 | 1:M7 | 4-G6 | C634 | 1:N5 | 6-L5 |
| %C294 | 1:C7 | 2-U2 | C368 | 1:F5 | 3-K0 | C450 | 1:H8 | 4-N8 | C636 | 1:M5 | 6-M5 |
| %C295 | 1:C7 | 2-U2 | C370 | 1:E5 | 3-J3 | C451 | 1:H8 | 4-P8 | C638 | 1:M5 | 6-N5 |
| C300 | 1:F3 | 3-B9 | C371 | 1:F5 | 3-K0 | C452 | 1:H7 | 4-P8 | C640 | 1:M5 | 6-R4 |
| C301 | 1:E4 | 3-B5 | C372 | 1:E6 | 3-J5 | C453 | 1:G7 | 4-P8 | C655 | 1:M4 | 6-C1 |
| C302 | 1:E4 | 3-B4 | C373 | 1:E6 | 3-J4 | C500 | 1:H5 | 5-C6 | C660 | 1:L5 | 6-Q1 |
| C303 | 1:E4 | 3-B2 | C374 | 1:E5 | 3-J3 | C501 | 1:H5 | 5-C5 | C665 | 1:L5 | 6-P1 |

| Device | PCB | Circuit | Device | PCB | Circuit | Device | PCB | Circuit | Device | PCB | Circuit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C670 | 1:L5 | 6-N1 | CV300 | 1:E3 | 3-J7 | IC610 | 1:L5 | 6-G8 | P217 | 1:D4 | 2-A7 |
| C673 | 1:L5 | 6-K2 | | | | IC630 | 1:N5 | 6-K5 | P219 | 1:D2 | 2-A8 |
| C677 | 1:L6 | 6-K1 | %D111 | 1:P5 | 1-M0 | IC640 | 1:M5 | 6-M5 | P225 | 1:D2 | 2-A7 |
| C681 | 1:L6 | 6-J2 | %D111A | 1:P5 | 1-R1 | IC640 | 1:M5 | 6-Q4 | P230 | 1:B5 | 2-M9 |
| C684 | 1:L6 | 6-H2 | %D205 | 1:B2 | 2-D3 | IC640 | 1:M5 | 6-E1 | P231 | 1:D7 | 2-M9 |
| C687 | 1:L6 | 6-J1 | %D210 | 1:B2 | 2-D3 | IC650 | 1:L5 | 6-C4 | P233 | 1:C1 | 2-F3 |
| C690 | 1:L6 | 6-J1 | D220 | 1:B4 | 2-R7 | =IC700 | 1:K3 | 7-A8 | P235 | 1:C1 | 2-F3 |
| C693 | 1:L6 | 6-H1 | D220 | 1:B4 | 2-R5 | IC710 | 1:J2 | 7-C6 | P237 | 1:B7 | 2-G3 |
| C700 | 1:K4 | 7-A8 | D230 | 1:B7 | 2-U5 | IC710 | 1:J2 | 7-D8 | P239 | 1:B6 | 2-M9 |
| C703 | 1:J3 | 7-B7 | D240 | 1:D4 | 2-E7 | IC710 | 1:J2 | 7-D5 | P240 | 1:B7 | 2-M9 |
| C706 | 1:J2 | 7-B5 | D240 | 1:D4 | 2-E7 | IC710 | 1:J2 | 7-D7 | P245 | 1:B8 | 2-S5 |
| %C707 | 1:K4 | 7-B8 | D250 | 1:D3 | 2-E8 | IC710 | 1:J2 | 7-D6 | P249 | 1:B7 | 2-V5 |
| C708 | 1:J2 | 7-D9 | D250 | 1:D3 | 2-E8 | IC710 | 1:J2 | 7-C5 | P251 | 1:B7 | 2-V5 |
| C709 | 1:K4 | 7-D9 | D260 | 1:C2 | 2-B8 | IC710 | 1:J2 | 7-C6 | P255 | 1:C4 | 2-L1 |
| C710 | 1:J3 | 7-D8 | D260 | 1:C2 | 2-C8 | IC720 | 1:H3 | 7-L7 | P257 | 1:C2 | 2-L1 |
| C711 | 1:J3 | 7-B6 | D270 | 1:C2 | 2-C7 | IC720 | 1:H3 | 7-H0 | P259 | 1:B8 | 2-L0 |
| C712 | 1:H2 | 7-D7 | D270 | 1:C2 | 2-B7 | IC720 | 1:H3 | 7-K7 | P261 | 1:B8 | 2-L0 |
| %C713 | 1:H2 | 7-E6 | D300 | 1:E3 | 3-L8 | IC720 | 1:H3 | 7-E8 | P263 | 1:B1 | 2-L0 |
| C714 | 1:J2 | 7-E8 | D301 | 1:E3 | 3-L7 | IC720 | 1:H3 | 7-M7 | P267 | 1:C9 | 2-Q2 |
| C719 | 1:J4 | 7-F8 | %D302 | 1:E3 | 3-L7 | IC720 | 1:H3 | 7-N6 | P269 | 1:C9 | 2-S3 |
| C720 | 1:J4 | 7-F8 | %D303 | 1:E3 | 3-L7 | IC720 | 1:H3 | 7-J0 | P271 | 1:C9 | 2-R2 |
| C722 | 1:J4 | 7-G8 | D305 | 1:E3 | 3-M7 | IC730 | 1:J4 | 7-H8 | P273 | 1:C9 | 2-S3 |
| C724 | 1:J4 | 7-H6 | D307 | 1:E3 | 3-M7 | IC730 | 1:J4 | 7-G7 | P275 | 1:C7 | 2-U2 |
| C725 | 1:J3 | 7-J6 | D308 | 1:E6 | 3-N3 | IC740 | 1:H2 | 7-D1 | P290 | 1:D5 | 2-R1 |
| C726 | 1:J4 | 7-J6 | D308 | 1:E6 | 3-P3 | IC750 | 1:H4 | 7-M3 | P291 | 1:D5 | 2-S1 |
| C727 | 1:J3 | 7-K8 | D400 | 1:M8 | 4-H4 | IC750 | 1:H4 | 7-G5 | P805 | 1:M2 | 8-A2 |
| C729 | 1:J3 | 7-M8 | D401 | 1:N8 | 4-J5 | IC750 | 1:H4 | 7-K0 | P810 | 1:L3 | 8-B6 |
| %C733 | 1:H2 | 7-E3 | D610 | 1:N6 | 6-N7 | IC820 | 1:L4 | 8-K5 | P820 | 1:L4 | 8-J8 |
| C735 | 1:J2 | 7-A1 | D610 | 1:N6 | 6-N7 | IC830 | 1:N3 | 8-L0 | P825 | 1:L4 | 8-J8 |
| C736 | 1:J2 | 7-B1 | D620 | 1:N4 | 6-B1 | IC830 | 1:N3 | 8-H0 | P830 | 1:L4 | 8-J8 |
| C740A | 1:H2 | 7-B4 | D620 | 1:N4 | 6-B1 | IC830 | 1:N3 | 8-L0 | P835 | 1:L4 | 8-J7 |
| C740B | 1:H2 | 7-B3 | D630 | 1:M5 | 6-E2 | IC830 | 1:N3 | 8-L1 | P840 | 1:L4 | 8-J7 |
| C741A | 1:H2 | 7-C4 | D630 | 1:M5 | 6-E2 | IC830 | 1:N3 | 8-Q0 | | | |
| C741B | 1:G2 | 7-C3 | D635A | 1:M5 | 6-F2 | | | | PL100 | 1:P3 | 1-F0 |
| C742A | 1:H2 | 7-D4 | D640 | 1:L5 | 6-N1 | L300 | 1:F6 | 3-F0 | PL201 | 1:C4 | 2-K5 |
| C742B | 1:H3 | 7-D3 | D640 | 1:L5 | 6-N1 | L301 | 1:E3 | 3-H8 | PL202 | 1:C3 | 2-K4 |
| C743 | 1:H2 | 7-B1 | D645 | 1:M5 | 6-R4 | L302 | 1:E3 | 3-H8 | | | |
| C745 | 1:G3 | 7-D1 | D710 | 1:J3 | 7-L8 | L303 | 1:E5 | 3-H4 | Q210 | 1:B6 | 2-D5 |
| C750 | 1:G4 | 7-K0 | D710 | 1:J3 | 7-L8 | L304 | 1:F3 | 3-K7 | Q220 | 1:B4 | 2-O6 |
| C757 | 1:G4 | 7-F4 | D720 | 1:J3 | 7-N8 | L305 | 1:F3 | 3-K7 | Q230 | 1:B4 | 2-P7 |
| C759 | 1:G4 | 7-F5 | D720 | 1:J3 | 7-N8 | L307 | 1:E5 | 3-J3 | Q240 | 1:B7 | 2-U6 |
| C761 | 1:G3 | 7-K4 | D730 | 1:H3 | 7-J1 | L308 | 1:E6 | 3-K4 | Q250 | 1:B7 | 2-U5 |
| C762 | 1:G3 | 7-K4 | D732 | 1:H3 | 7-K2 | L309 | 1:F3 | 3-M7 | Q260 | 1:C4 | 2-C9 |
| C764 | 1:H3 | 7-K2 | D810 | 1:M2 | 8-B2 | L310 | 1:F3 | 3-N7 | Q270 | 1:D2 | 2-D7 |
| C765 | 1:G3 | 7-K2 | D811 | 1:B7 | 2-U6 | L311 | 1:E4 | 3-N0 | Q300 | 1:F4 | 3-C7 |
| C767 | 1:H3 | 7-L3 | D812 | 1:B7 | 2-T5 | L312 | 1:E6 | 3-N3 | Q301 | 1:F4 | 3-C7 |
| C769 | 1:H4 | 7-M4 | | | | L314 | 1:F6 | 3-N4 | Q302 | 1:E4 | 3-C3 |
| C770 | 1:H4 | 7-N4 | IC210 | 1:C7 | 2-J0 | L315 | 1:F7 | 3-P4 | Q303 | 1:E4 | 3-C2 |
| C772 | 1:G4 | 7-M2 | IC210 | 1:C7 | 2-U2 | L316 | 1:E7 | 3-P3 | Q304 | 1:F4 | 3-D8 |
| C774 | 1:H4 | 7-N2 | IC210 | 1:C7 | 2-G0 | L317 | 1:E7 | 3-Q3 | Q305 | 1:F4 | 3-E8 |
| C776 | 1:H4 | 7-N2 | IC210 | 1:C7 | 2-K1 | L318 | 1:E7 | 3-Q3 | Q307 | 1:F5 | 3-F4 |
| C782 | 1:G2 | 7-P1 | IC210 | 1:C7 | 2-K2 | L401 | 1:J8 | 4-E4 | Q308 | 1:E5 | 3-F3 |
| C784 | 1:G2 | 7-Q1 | IC220 | 1:C6 | 2-T2 | L403 | 1:M8 | 4-H4 | Q309 | 1:E3 | 3-H7 |
| C785 | 1:G3 | 7-P1 | IC220 | 1:C6 | 2-L3 | L404 | 1:N7 | 4-J6 | Q310 | 1:F5 | 3-H1 |
| C786 | 1:G2 | 7-R1 | IC220 | 1:C6 | 2-T0 | %L405 | 1:M7 | 4-G5 | Q311 | 1:E5 | 3-G4 |
| C788 | 1:G3 | 7-P0 | IC230 | 1:B4 | 2-O5 | L406 | 1:G7 | 4-C4 | Q312 | 1:F5 | 3-J0 |
| C790 | 1:G3 | 7-Q0 | IC230 | 1:B4 | 2-I0 | L407 | 1:G7 | 4-M6 | Q313 | 1:E6 | 3-J4 |
| C792 | 1:G4 | 7-R0 | IC230 | 1:B4 | 2-Q5 | L408 | 1:G7 | 4-K4 | Q314 | 1:F5 | 3-K0 |
| C810 | 1:L3 | 8-H8 | IC230 | 1:B4 | 2-I2 | L450 | 1:H8 | 4-N8 | Q316 | 1:F4 | 3-L1 |
| C812 | 1:L2 | 8-D5 | IC230 | 1:B4 | 2-I4 | L451 | 1:G7 | 4-P8 | Q317 | 1:F4 | 3-L2 |
| C813 | 1:K2 | 8-G5 | IC240 | 1:C4 | 2-J5 | L601 | 1:L6 | 6-D8 | Q318 | 1:E6 | 3-K4 |
| C822 | 1:N2 | 8-Q1 | IC250 | 1:D3 | 2-D7 | L602 | 1:M6 | 6-R6 | Q319 | 1:E6 | 3-K3 |
| C823 | 1:M3 | 8-Q1 | IC260 | 1:C8 | 2-T3 | L910 | 1:P8 | 9-E6 | Q321 | 1:F4 | 3-M0 |
| C824 | 1:M2 | 8-Q1 | IC260 | 1:C8 | 2-H0 | L920 | 1:P7 | 9-E6 | Q322 | 1:F4 | 3-L1 |
| C826 | 1:N3 | 8-P0 | IC260 | 1:C8 | 2-S2 | L930 | 1:P6 | 9-F6 | Q500 | 1:H5 | 5-C5 |
| C827 | 1:N3 | 8-P1 | IC260 | 1:C8 | 2-P2 | | | | Q501 | 1:H5 | 5-D6 |
| C828 | 1:N3 | 8-P0 | IC260 | 1:C8 | 2-N2 | LINK1 | 2:B2 | 2-E3 | Q502 | 1:H6 | 5-E6 |
| C830 | 1:N3 | 8-J0 | #IC400 | 2:K8 | 4-E4 | LINK2 | 2:A2 | 2-E3 | Q503 | 1:G5 | 5-E5 |
| C838 | 1:N4 | 8-N0 | IC500 | 1:H6 | 5-O6 | | | | Q505 | 1:H6 | 5-M2 |
| C841 | 1:N2 | 8-K2 | IC500 | 1:H6 | 5-U0 | P100 | 1:Q6 | 1-R8 | Q506 | 1:G6 | 5-G6 |
| C844 | 1:M2 | 8-K2 | IC500 | 1:H6 | 5-O5 | P150 | 1:P2 | 1-Q4 | Q507 | 1:K5 | 5-N1 |
| C880 | 1:M2 | 8-K3 | IC510 | 1:J5 | 5-V0 | P160 | 1:P2 | 1-Q4 | Q508 | 1:J6 | 5-N2 |
| C910 | 1:P8 | 9-D5 | IC510 | 1:J5 | 5-O3 | P170 | 1:P2 | 1-Q3 | Q510 | 1:G5 | 5-H5 |
| C920 | 1:P7 | 9-E5 | IC510 | 1:J5 | 5-N4 | P204 | 1:D1 | 2-A3 | Q511 | 1:K6 | 5-O1 |
| C930 | 1:P7 | 9-F5 | IC510 | 1:J5 | 5-Q5 | P208 | 1:D1 | 2-A3 | Q512 | 1:G5 | 5-I5 |
| C940 | 1:P6 | 9-G5 | IC510 | 1:J5 | 5-T5 | P215 | 1:D4 | 2-A7 | Q513 | 1:G6 | 5-I5 |

| Device | PCB | Circuit |
|---|---|---|
| Q515 | 1:K6 | 5-Q0 |
| Q516 | 1:J5 | 5-Q4 |
| Q517 | 1:J6 | 5-U5 |
| Q610 | 1:L6 | 6-D8 |
| Q620 | 1:N6 | 6-P6 |
| Q630 | 1:M6 | 6-N5 |
| Q660 | 1:L5 | 6-M1 |
| Q670 | 1:L6 | 6-K1 |
| Q710 | 1:J3 | 7-K8 |
| Q720 | 1:J4 | 7-K8 |
| Q730 | 1:J3 | 7-M8 |
| Q740 | 1:J3 | 7-M8 |
| Q750 | 1:G4 | 7-F4 |
| Q760 | 1:H3 | 7-J3 |
| Q770 | 1:H3 | 7-J1 |
| Q775 | 1:H3 | 7-K3 |
| Q780 | 1:H3 | 7-K3 |
| Q785 | 1:H3 | 7-K2 |
| Q790 | 1:H3 | 7-M3 |
| Q795 | 1:G3 | 7-P0 |
| Q810 | 1:M2 | 8-C3 |
| Q820 | 1:L2 | 8-C5 |
| Q830 | 1:L2 | 8-C6 |
| Q840 | 1:L2 | 8-E5 |
| Q850 | 1:M2 | 8-E5 |
| Q860 | 1:L4 | 8-B3 |
| | | |
| %R150 | 1:P2 | 1-R4 |
| R160 | 1:P2 | 1-R3 |
| %R200 | 1:B2 | 2-C3 |
| R201 | 1:B3 | 2-E3 |
| R202 | 1:C1 | 2-F3 |
| %R203 | 1:B3 | 2-C2 |
| R204 | 1:C7 | 2-F0 |
| R205 | 1:C7 | 2-H0 |
| R206 | 1:B6 | 2-D6 |
| R207 | 1:B6 | 2-D5 |
| R208 | 1:B6 | 2-C5 |
| R209 | 1:B6 | 2-C5 |
| R210 | 1:B6 | 2-D5 |
| R211 | 1:B2 | 2-E3 |
| R212 | 1:C4 | 2-I6 |
| R213 | 1:D4 | 2-L8 |
| R214 | 1:D4 | 2-L8 |
| R215 | 1:C4 | 2-J6 |
| R216 | 1:B4 | 2-N7 |
| R217 | 1:B4 | 2-P7 |
| R218 | 1:B3 | 2-P7 |
| R219 | 1:B3 | 2-Q7 |
| R220 | 1:B2 | 2-E3 |
| R221 | 1:B7 | 2-U6 |
| R223 | 1:B4 | 2-N5 |
| R224 | 1:B4 | 2-N5 |
| R225 | 1:B4 | 2-O5 |
| R226 | 1:B4 | 2-O4 |
| R227 | 1:B4 | 2-O4 |
| R228 | 1:A2 | 2-E3 |
| R229 | 1:A4 | 2-P6 |
| R230 | 1:B4 | 2-P6 |
| R231 | 1:B4 | 2-P5 |
| R232 | 1:B4 | 2-P5 |
| R233 | 1:B4 | 2-P5 |
| R235 | 1:B4 | 2-Q5 |
| R237 | 1:B7 | 2-U6 |
| R238 | 1:B7 | 2-U6 |
| R239 | 1:B8 | 2-T5 |
| R241 | 1:B8 | 2-T5 |
| R242 | 1:B7 | 2-T5 |
| R244 | 1:C6 | 2-B5 |
| R245 | 1:D4 | 2-J6 |
| R247 | 1:C3 | 2-B9 |
| R248 | 1:C3 | 2-C9 |
| R249 | 1:D4 | 2-C9 |
| R251 | 1:C4 | 2-K6 |
| R253 | 1:C7 | 2-K2 |
| R254 | 1:C6 | 2-K2 |

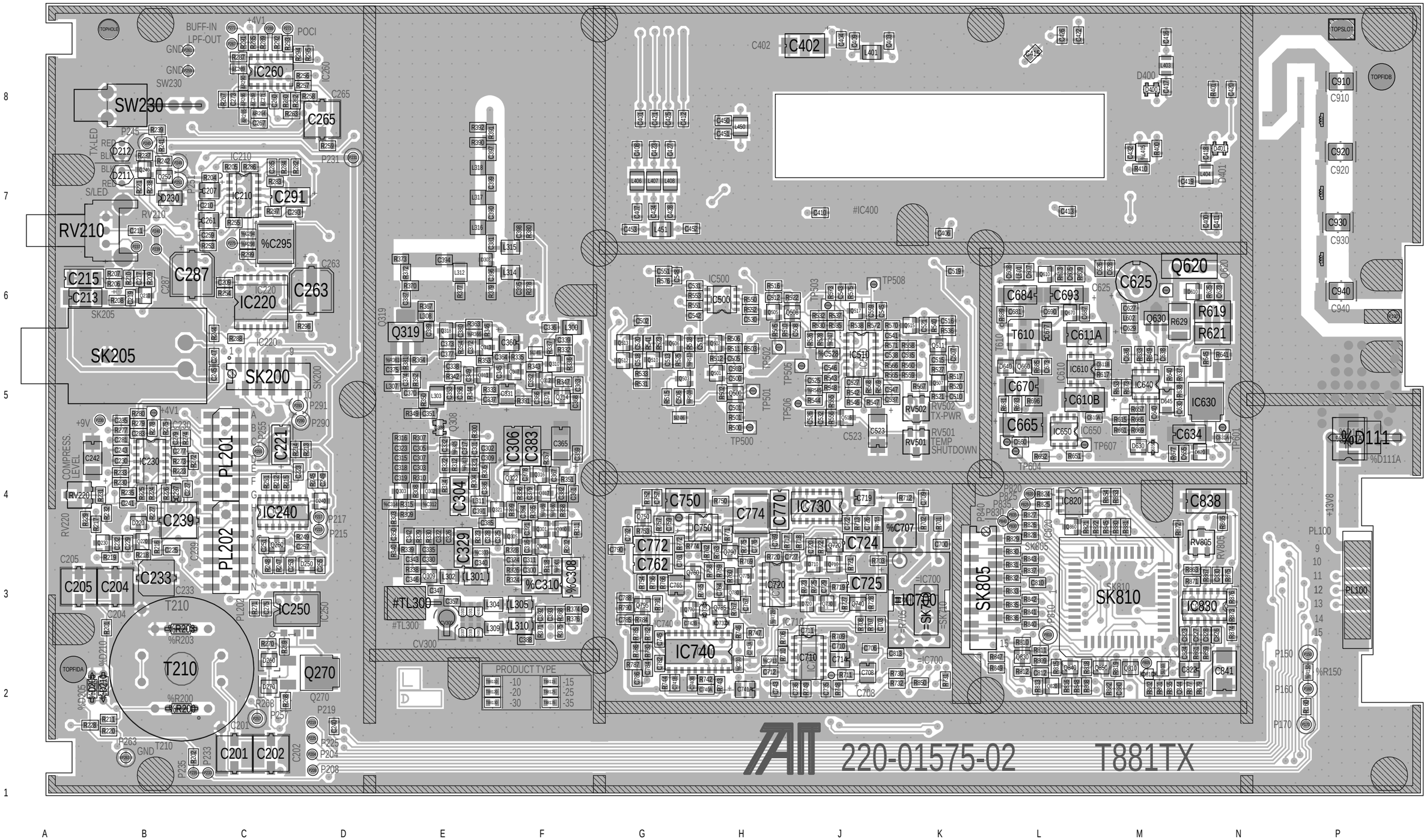
| Device | PCB | Circuit |
|---|---|---|
| R255 | 1:C7 | 2-L1 |
| R256 | 1:D8 | 2-M2 |
| R257 | 1:D8 | 2-M1 |
| R258 | 1:D8 | 2-M1 |
| R259 | 1:D8 | 2-M1 |
| R260 | 1:C8 | 2-M2 |
| R262 | 1:D8 | 2-N2 |
| R263 | 1:D8 | 2-N2 |
| &R264 | 1:C8 | 2-O2 |
| &R265 | 1:C8 | 2-O2 |
| &R266 | 1:C8 | 2-P2 |
| R267 | 1:C8 | 2-Q2 |
| R268 | 1:C2 | 2-C7 |
| R269 | 1:C2 | 2-C8 |
| R270 | 1:C3 | 2-D8 |
| R271 | 1:C3 | 2-D7 |
| R272 | 1:C4 | 2-I4 |
| R273 | 1:B4 | 2-I5 |
| R274 | 1:B5 | 2-I4 |
| R275 | 1:B5 | 2-J5 |
| R277 | 1:B5 | 2-I3 |
| R278 | 1:B5 | 2-I2 |
| R279 | 1:B5 | 2-J2 |
| R280 | 1:B5 | 2-J2 |
| R282 | 1:D7 | 2-J3 |
| R283 | 1:C7 | 2-J3 |
| R284 | 1:C7 | 2-K2 |
| R285 | 1:C9 | 2-R2 |
| R286 | 1:C7 | 2-K3 |
| R287 | 1:C8 | 2-S2 |
| R288 | 1:C6 | 2-L3 |
| R289 | 1:C9 | 2-R2 |
| &R290 | 1:C8 | 2-Q2 |
| R291 | 1:C9 | 2-R2 |
| R292 | 1:C9 | 2-S3 |
| R293 | 1:C9 | 2-S3 |
| R294 | 1:D8 | 2-T3 |
| R295 | 1:D8 | 2-U3 |
| R296 | 1:D6 | 2-T2 |
| R297 | 1:C7 | 2-T2 |
| %R298 | 1:C7 | 2-U2 |
| R299 | 1:C6 | 2-V2 |
| R300 | 1:E5 | 3-B5 |
| %R301 | 1:F3 | 3-B9 |
| R302 | 1:F4 | 3-C8 |
| R303 | 1:E4 | 3-B2 |
| R304 | 1:E4 | 3-C5 |
| R305 | 1:E4 | 3-C4 |
| R307 | 1:E5 | 3-C4 |
| R308 | 1:E4 | 3-C2 |
| R309 | 1:E4 | 3-C1 |
| R310 | 1:E4 | 3-C3 |
| R311 | 1:F4 | 3-C7 |
| R312 | 1:E4 | 3-C4 |
| R314 | 1:E4 | 3-C3 |
| R315 | 1:E4 | 3-C2 |
| R316 | 1:E5 | 3-C1 |
| %R317 | 1:E4 | 3-D4 |
| R318 | 1:F3 | 3-D9 |
| R321 | 1:E4 | 3-D4 |
| R322 | 1:E4 | 3-E3 |
| R323 | 1:E4 | 3-E7 |
| R324 | 1:F3 | 3-E9 |
| %R325 | 1:E4 | 3-E4 |
| R326 | 1:F3 | 3-E9 |
| R328 | 1:F3 | 3-F8 |
| R329 | 1:E4 | 3-F7 |
| R330 | 1:E4 | 3-E7 |
| R331 | 1:F5 | 3-F6 |
| R332 | 1:F5 | 3-G1 |
| R333 | 1:F5 | 3-F5 |
| R335 | 1:F5 | 3-F4 |
| R336 | 1:F5 | 3-G1 |
| R337 | 1:F6 | 3-G0 |
| R338 | 1:E3 | 3-H7 |
| R339 | 1:E3 | 3-H7 |

| Device | PCB | Circuit |
|---|---|---|
| R340 | 1:E3 | 3-H6 |
| R342 | 1:E5 | 3-G4 |
| R343 | 1:F5 | 3-H1 |
| R344 | 1:E5 | 3-G5 |
| R346 | 1:E6 | 3-H6 |
| R347 | 1:F5 | 3-J0 |
| R349 | 1:E5 | 3-H3 |
| R350 | 1:E5 | 3-J3 |
| R351 | 1:F4 | 3-K2 |
| R352 | 1:E5 | 3-J3 |
| R353 | 1:E5 | 3-J5 |
| R354 | 1:E6 | 3-J4 |
| R356 | 1:F4 | 3-L2 |
| R357 | 1:F4 | 3-L1 |
| R358 | 1:F4 | 3-L0 |
| %R359 | 1:F4 | 3-L0 |
| %R360 | 1:F4 | 3-L0 |
| %R361 | 1:E5 | 3-K3 |
| R363 | 1:E6 | 3-K5 |
| R364 | 1:E5 | 3-K4 |
| R365 | 1:F4 | 3-M1 |
| %R366 | 1:E6 | 3-K5 |
| R367 | 1:E6 | 3-L4 |
| R368 | 1:F3 | 3-N8 |
| R370 | 1:E6 | 3-M3 |
| R371 | 1:F3 | 3-N7 |
| R372 | 1:E6 | 3-M3 |
| R373 | 1:E6 | 3-M3 |
| R374 | 1:F3 | 3-P7 |
| R375 | 1:F3 | 3-P8 |
| R376 | 1:F3 | 3-Q7 |
| R377 | 1:E6 | 3-N3 |
| R378 | 1:F6 | 3-N4 |
| R379 | 1:F6 | 3-N2 |
| R380 | 1:F7 | 3-P4 |
| R381 | 1:E5 | 3-K3 |
| R390 | 1:E8 | 3-R3 |
| R391 | 1:F8 | 3-R3 |
| R392 | 1:E8 | 3-R3 |
| R399 | 1:F4 | 3-M1 |
| R400 | 1:M8 | 4-H5 |
| R401 | 1:N8 | 4-J4 |
| R410 | 1:M7 | 4-F6 |
| R450 | 2:J7 | 4-N8 |
| R500 | 1:H5 | 5-B5 |
| R501 | 1:H5 | 5-B5 |
| R502 | 1:H5 | 5-C6 |
| R503 | 1:H5 | 5-D5 |
| R505 | 1:H6 | 5-K2 |
| R506 | 1:H6 | 5-E6 |
| %R508 | 1:H5 | 5-E5 |
| R510 | 1:H6 | 5-L3 |
| R511 | 1:H5 | 5-E6 |
| R512 | 1:H5 | 5-E6 |
| %R513 | 1:H5 | 5-E5 |
| R515 | 1:G5 | 5-E5 |
| R516 | 1:H6 | 5-M2 |
| R517 | 1:K5 | 5-M1 |
| R518 | 1:H6 | 5-F6 |
| R520 | 1:K5 | 5-M1 |
| R521 | 1:K5 | 5-M1 |
| R522 | 1:J6 | 5-M3 |
| R523 | 1:G6 | 5-G5 |
| R525 | 1:G5 | 5-G5 |
| R526 | 1:J6 | 5-N2 |
| R527 | 1:K5 | 5-N1 |
| R528 | 1:J6 | 5-N2 |
| R530 | 1:J6 | 5-N3 |
| R531 | 1:G5 | 5-H5 |
| R532 | 1:J6 | 5-O3 |
| R533 | 1:G5 | 5-H5 |
| R535 | 1:J6 | 5-O3 |
| R536 | 1:K6 | 5-O0 |
| R537 | 1:J6 | 5-P3 |
| R538 | 1:J6 | 5-P2 |
| R540 | 1:K6 | 5-P0 |

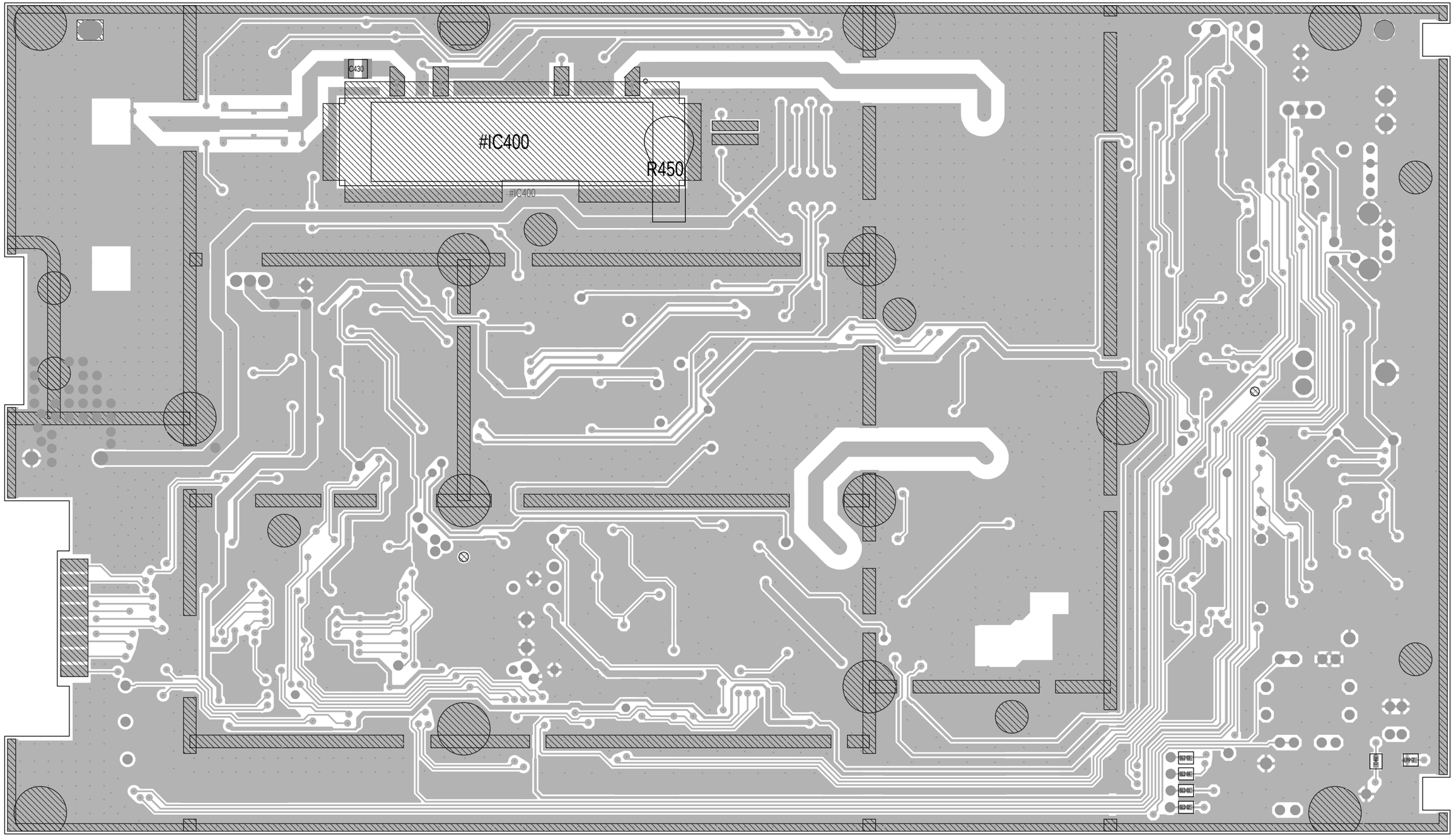
| Device | PCB | Circuit |
|---|---|---|
| R541 | 1:G6 | 5-I5 |
| R542 | 1:J5 | 5-L5 |
| R543 | 1:J5 | 5-M5 |
| R544 | 1:J5 | 5-M4 |
| %R545 | 1:J5 | 5-M4 |
| R546 | 1:J5 | 5-L4 |
| R547 | 1:J5 | 5-N5 |
| R548 | 1:J5 | 5-N4 |
| R550 | 1:H6 | 5-N6 |
| R551 | 1:H6 | 5-N5 |
| R552 | 1:H6 | 5-N6 |
| R553 | 1:H6 | 5-N5 |
| R555 | 1:J5 | 5-O4 |
| R556 | 1:J5 | 5-P4 |
| R558 | 1:K6 | 5-P6 |
| R559 | 1:K5 | 5-P6 |
| R560 | 1:K5 | 5-P5 |
| R565 | 1:K5 | 5-Q5 |
| R566 | 1:K5 | 5-Q5 |
| R567 | 1:K5 | 5-P2 |
| R568 | 1:J5 | 5-S5 |
| R569 | 1:J5 | 5-R5 |
| R570 | 1:K6 | 5-S5 |
| R571 | 1:K6 | 5-S5 |
| R572 | 1:J6 | 5-T5 |
| R573 | 1:J6 | 5-U5 |
| R575 | 1:J6 | 5-U5 |
| R576 | 1:G6 | 5-V5 |
| R609 | 1:L6 | 6-B8 |
| R613 | 1:L6 | 6-C8 |
| R615 | 1:M5 | 6-F9 |
| R617 | 1:M5 | 6-H8 |
| R619 | 1:N6 | 6-P7 |
| R621 | 1:N6 | 6-P7 |
| R625 | 1:N6 | 6-P7 |
| R629 | 1:M6 | 6-N6 |
| R633 | 1:M5 | 6-P5 |
| R637 | 1:M5 | 6-J6 |
| R638 | 1:M5 | 6-J6 |
| R640 | 1:M5 | 6-Q4 |
| R641 | 1:N5 | 6-K5 |
| R645 | 1:N5 | 6-L5 |
| R649 | 1:M5 | 6-M5 |
| R651 | 1:L4 | 6-B4 |
| R652 | 1:L4 | 6-B4 |
| R653 | 1:M5 | 6-P5 |
| R657 | 1:M5 | 6-C1 |
| R661 | 1:M5 | 6-D2 |
| R665 | 1:M5 | 6-D1 |
| R669 | 1:M5 | 6-D2 |
| R673 | 1:M5 | 6-D0 |
| R677 | 1:M4 | 6-F2 |
| R681 | 1:L5 | 6-P1 |
| R685 | 1:L5 | 6-L2 |
| R689 | 1:L6 | 6-J3 |
| R693 | 1:L5 | 6-N1 |
| R696 | 1:L5 | 6-N0 |
| R701 | 1:K4 | 7-A9 |
| R702 | 1:K4 | 7-B9 |
| R703 | 1:J3 | 7-B8 |
| =R705 | 1:K3 | 7-A7 |
| R706 | 1:H3 | 7-B6 |
| R707 | 1:J3 | 7-B6 |
| R708 | 1:J3 | 7-B6 |
| R709 | 1:J3 | 7-D9 |
| R710 | 1:H2 | 7-D7 |
| R711 | 1:J2 | 7-C5 |
| R712 | 1:K4 | 7-E9 |
| R713 | 1:J4 | 7-F8 |
| %R715 | 1:J4 | 7-H6 |
| R717 | 1:H4 | 7-H7 |
| R718 | 1:J4 | 7-H7 |
| R719 | 1:J3 | 7-J6 |
| R720 | 1:H3 | 7-K7 |
| R721 | 1:J3 | 7-K9 |
| R722 | 1:J4 | 7-K8 |

| Device | PCB | Circuit |
|---|---|---|
| R723 | 1:J3 | 7-L7 |
| R725 | 1:J3 | 7-M7 |
| %R726 | 1:H3 | 7-M6 |
| R727 | 1:J3 | 7-M9 |
| R728 | 1:J3 | 7-M8 |
| R730 | 1:K2 | 7-A2 |
| R731 | 1:K2 | 7-A2 |
| R732 | 1:K2 | 7-A2 |
| R742 | 1:H2 | 7-C4 |
| R743 | 1:H2 | 7-C4 |
| R744 | 1:G2 | 7-D4 |
| R746 | 1:H3 | 7-D4 |
| R747 | 1:H3 | 7-D4 |
| R748 | 1:J2 | 7-A1 |
| R749 | 1:J2 | 7-B1 |
| R750 | 1:H4 | 7-K0 |
| R752 | 1:G4 | 7-F4 |
| R753 | 1:G4 | 7-F4 |
| R754 | 1:G3 | 7-F4 |
| R756 | 1:G3 | 7-F5 |
| R757 | 1:G4 | 7-F5 |
| R758 | 1:H3 | 7-J4 |
| R759 | 1:H3 | 7-J4 |
| R760 | 1:H3 | 7-K4 |
| R762 | 1:H3 | 7-L4 |
| R763 | 1:H3 | 7-L4 |
| R765 | 1:H3 | 7-J2 |
| R766 | 1:G3 | 7-K3 |
| R767 | 1:H3 | 7-K2 |
| R769 | 1:H3 | 7-L3 |
| R771 | 1:H4 | 7-M3 |
| R772 | 1:G4 | 7-M2 |
| R774 | 1:H4 | 7-M3 |
| R775 | 1:H4 | 7-N2 |
| R780 | 1:G2 | 7-P1 |
| R782 | 1:G3 | 7-P1 |
| R784 | 1:G3 | 7-P1 |
| R785 | 1:G3 | 7-Q1 |
| R786 | 1:G2 | 7-Q1 |
| R787 | 1:G2 | 7-R2 |
| R790 | 1:G3 | 7-P0 |
| R791 | 1:G3 | 7-Q0 |
| R801 | 1:M2 | 8-C3 |
| R802 | 1:M2 | 8-C2 |
| R808 | 1:M2 | 8-B5 |
| R809 | 1:L2 | 8-C6 |
| R810 | 1:L3 | 8-C6 |
| R811 | 1:L2 | 8-D6 |
| R812 | 1:L2 | 8-C5 |
| R813 | 1:L2 | 8-C5 |
| R815 | 1:L2 | 8-D5 |
| R816 | 1:L2 | 8-D5 |
| R818 | 1:M2 | 8-E5 |
| R819 | 1:M2 | 8-E4 |
| R821 | 1:L4 | 8-B3 |
| R822 | 1:M4 | 8-C3 |
| R824 | 1:L4 | 8-J8 |
| R825 | 1:L4 | 8-J8 |
| R826 | 1:L4 | 8-J8 |
| R827 | 1:L4 | 8-J7 |
| R828 | 1:L4 | 8-J7 |
| R829 | 1:L4 | 8-Q9 |
| R830 | 1:L3 | 8-Q9 |
| R831 | 1:L3 | 8-Q9 |
| R832 | 1:L3 | 8-Q8 |
| R833 | 1:L3 | 8-Q8 |
| R835 | 1:L3 | 8-Q8 |
| R836 | 1:L3 | 8-Q8 |
| R837 | 1:L3 | 8-Q7 |
| R840 | 1:L3 | 8-Q7 |
| R841 | 1:L3 | 8-Q7 |
| R842 | 1:L3 | 8-Q6 |
| R843 | 1:L3 | 8-Q6 |
| R845 | 1:M4 | 8-R4 |
| R847 | 1:L2 | 8-R3 |
| R848 | 1:L2 | 8-K3 |
| R849 | 1:L2 | 8-R3 |
| R850 | 1:K2 | 8-R3 |
| R853 | 1:M4 | 8-L6 |
| R854 | 1:M4 | 8-L6 |
| R855 | 1:M2 | 8-Q0 |
| R859 | 1:N2 | 8-P1 |
| R861 | 1:N2 | 8-P1 |
| R863 | 1:N3 | 8-N1 |
| R865 | 1:N4 | 8-N0 |
| R867 | 1:N3 | 8-N1 |
| R871 | 1:N3 | 8-M2 |
| R872 | 1:M4 | 8-L1 |
| R873 | 1:N3 | 8-M1 |
| R874 | 1:N3 | 8-L0 |
| R875 | 1:N3 | 8-M0 |
| R876 | 1:N3 | 8-L0 |
| R877 | 1:N2 | 8-K2 |
| R879 | 1:N2 | 8-K2 |
| R880 | 1:M4 | 8-J6 |
| R881 | 1:M4 | 8-L6 |
| R882 | 1:M2 | 8-K3 |
| RV210 | 1:B7 | 2-G3 |
| RV220 | 1:A4 | 2-P6 |
| RV501 | 1:K5 | 5-Q4 |
| RV502 | 1:K5 | 5-Q2 |
| RV805 | 1:N4 | 8-N1 |
| SK200 | 1:C5 | 2-R1 |
| SK205 | 1:B5 | 2-A5 |
| =SK710 | 1:K3 | 7-A7 |
| SK805 | 1:K3 | 8-Q9 |
| SK805 | 1:K3 | 8-Q7 |
| SK805 | 1:K3 | 8-Q5 |
| SK805 | 1:K3 | 8-Q7 |
| SK805 | 1:K3 | 8-Q8 |
| SK805 | 1:K3 | 8-Q7 |
| SK805 | 1:K3 | 8-Q8 |
| SK805 | 1:K3 | 8-Q6 |
| SK805 | 1:K3 | 8-Q8 |
| SK805 | 1:K3 | 8-Q6 |
| SK805 | 1:K3 | 8-Q6 |
| SK805 | 1:K3 | 8-Q9 |
| SK805 | 1:K3 | 8-Q6 |
| SK805 | 1:K3 | 8-Q9 |
| SK805 | 1:K3 | 8-Q7 |
| SK805 | 1:K3 | 8-Q8 |
| SK810 | 1:M3 | 8-G5 |
| SL201 | 2:D1 | 2-B3 |
| SL202 | 2:D1 | 2-B3 |
| SL203 | 2:D2 | 2-B8 |
| SL204 | 2:D2 | 2-B7 |
| SL345 | 1:F5 | 3-J1 |
| SL506 | 1:G5 | 5-E5 |
| SL810 | 1:M2 | 8-B3 |
| SW230 | 1:B8 | 2-B9 |
| T210 | 1:B2 | 2-C3 |
| T610 | 1:L6 | 6-M2 |
| #TL300 | 1:E3 | 3-H7 |
| TP206 | 1:B5 | 2-M8 |
| TP300 | 1:F3 | 3-R8 |
| TP500 | 1:H5 | 5-B5 |
| TP501 | 1:H5 | 5-B6 |
| TP502 | 1:H6 | 5-C6 |
| TP503 | 1:J6 | 5-P3 |
| TP505 | 1:J5 | 5-M4 |
| TP506 | 1:J5 | 5-O4 |
| TP508 | 1:J6 | 5-V5 |
| TP601 | 1:N5 | 6-J6 |
| TP602 | 1:M6 | 6-Q6 |
| TP603 | 1:L5 | 6-Q1 |
| TP604 | 1:L4 | 6-L6 |
| TP607 | 1:L5 | 6-J9 |
| TP710 | 1:G4 | 7-G5 |
| TP715 | 1:J2 | 7-C5 |

| Device | PCB | Circuit |
|---|---|---|




*T881 PCB Layout - Top Side*
*220-01575-02*

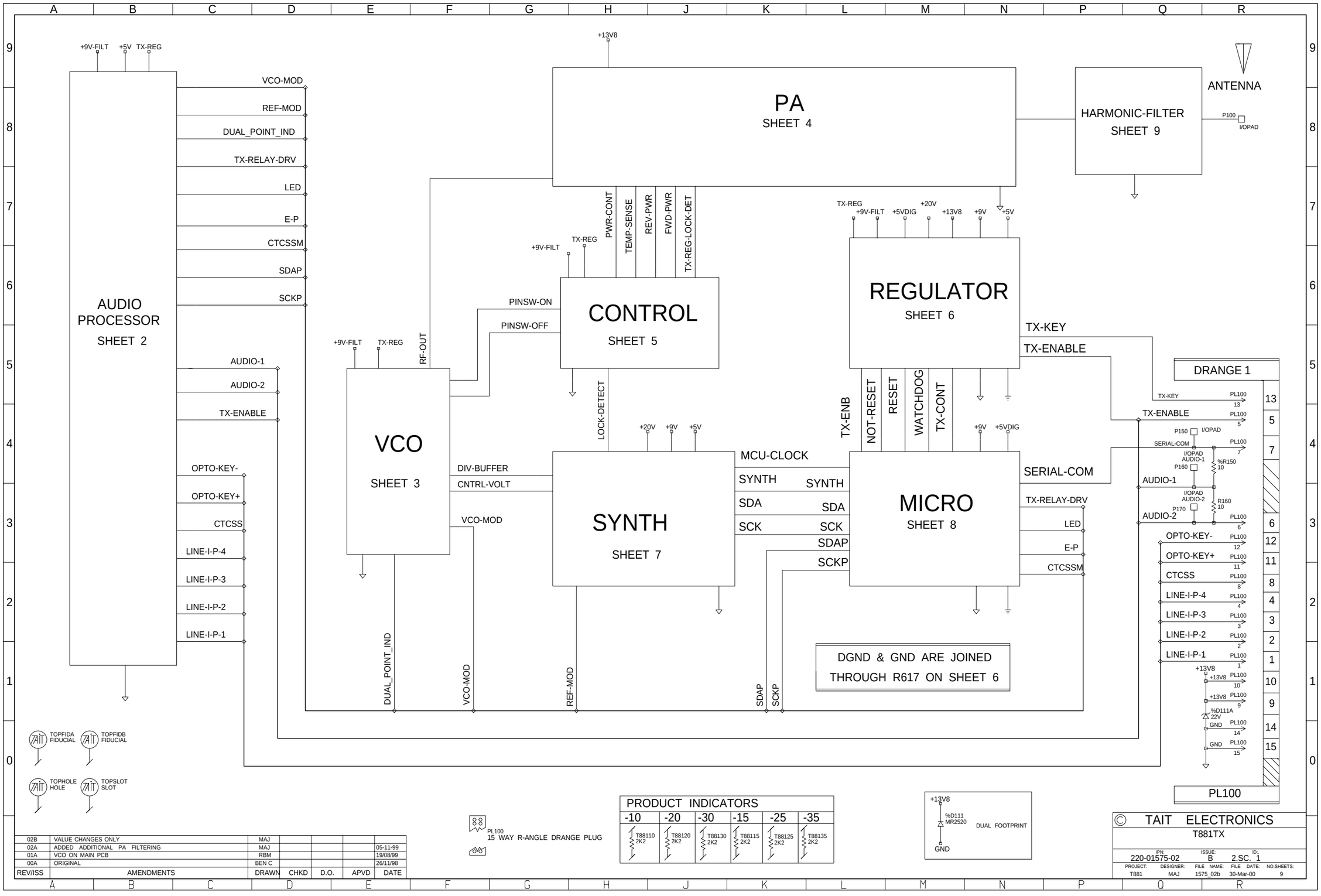



8 7 6 5 4 3 2 1

P N M L K J H G F E D C B A

***T881 PCB Layout - Bottom Side***
***220-01575-02***

29/09/00




| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
|---|---|---|---|---|---|---|
| 02B | VALUE CHANGES ONLY | MAJ | | | | |
| 02A | ADDED ADDITIONAL PA FILTERING | MAJ | | | | 05-11-99 |
| 01A | VCO ON MAIN PCB | RBM | | | | 19/08/99 |
| 00A | ORIGINAL | BEN C | | | | 26/11/98 |

***Sheet 1 - T881 Transmitter Overview***
***220-01575-02***

CARRIER SWITCH
SW230
SPDT
+9V-FILT
R247 10K
R248 100K
C251 1N0
Q260 BC857
R249 100K
C257 47P
C253 1N0
D250 BAW56
OPTO-KEY
OPTO-KEY+
OPTO-KEY-
SL203
SL204
D260 BAW56
D270 BAV99
R269 10K
R270 1K2
R271 1M
C275 18P
IC250 4N25A
Q270 MJD41
R268 100E
C255 1N0
+9V
0V6
TX-on
TX-ENABLE
1R4
6B1
TX-ENB-OPT
I/OPAD P215
I/OPAD P217
2R1
D240 BAW56
C249 1N0
MICROPHONE PREAMPLIFIER
R206 1K0
C215 22U TANT
R207
MIC/PRESSEL
STEREO SKT SK206
R244 10K
C245 18P
C247 18P
C217 2N2
R209 10K
C219 1N0
R210 2K2
R208 560
C213 10U TANT
Q210 BC848
3V6
0V6
+4V1
R251 100K
R245 100K
R212 100K
R215 100K
C223 100N
IC240 4053BD
VREF
INH
A
B
C
X0
X1
Y0
Y1
Z0
Z1
GND
PL201 14 WAY PLUG
PL202 14 WAY PLUG
PRE-EMPHASIS
R273 18K
IC230 LM324D
C277 10N
C279 820P
R274 18K
R272 560
R275 2K7
LINE_SENSITIVITY
LINE-I-P-4
LINE-I-P-3
LINE-I-P-2
LINE-I-P-1
T4030
T210
%R200
%R203
SL201
SL202
C201 4U7BP
C202 4U7BP
%D205 1N4531
%D210 1N4531
LINK1
LINK2
R211 470
R220 470
R228 120
C205 4U7BP
C204 4U7BP
R202 1K0
R201 560
AUDIO-1
AUDIO-2
R233
R235
C211 100N
RV210 10K LOG
LINE-LIMITER:OPTIONAL
%D205
%D210
LIMITER-1
LIMITER-2
7V2pp IN LIMITING
IC210 LM324D
R283 56K
R282 56K
R278 120K
R277 100K
C281 22N
C283 4P7
R279 1M
R280 10K
C285 4P7
R284 1M
R286 2K2
C287 100U
R288 18K
DEVIATION EPOT
IC220 DS1267
+5VFILT
2V7
R254 100K
R253 100K
C259 47N
C261 4U7 TANT
R255 10K
CTCSSM
CTCSS
8R1
R257 330K
R258 150K
C265 4U7BP
R259 22K
CTCSS P255
CTCSS P257
SUMMING AMPLIFIER
IC260 LM324D
R260 47K
R262 47K
R263 4K7
&R264 22K
&R265 15K
&R266 47K
C267 1P5 &C269
&C271 47P
C273 47N
R267 2K2
&R290 560
&C289 47N
R291 0
R285 0
LOW PASS FILTER
1KHZ IN LIMITING
P267 I/OPAD
LPF-OUT
BAT-IN P271
I/OPAD
+4V1
R289 100K
IC260 LM324D
R296 1K0
R287 10K
MAX
MIN
WIPER
REFERENCE-MODULATION-INTEGRATOR
REFERENCE MOD-EPOT
%R294 47P
%R295 470N
%R298 100K
REF-MOD
R299 2K7
7B7
BUFFER
SK200 SKT 2X5WAY TOP ENT
DUAL_POINT_IND
TX-ENB-OPT
P290
P291
I/OPAD
MICRO MATCH TO PAGING BRD CON
E-P
SDAP
SCKP
8R3
AUTOMATIC LEVEL CONTROL(COMPRESSON)
Q220 BC817
Q230 BC848
R217 1K0
R218 150K
C233 2K2 47U
R219 2K2
C225 100N
R216 100K
C227 100N
C229 18P
C232 18P
D220 BAV99
COMPRESSON-LEVEL
RV220 3CW 50K
R229 470K
R230 100K
C242 10U TANT
R231 10K
R235 4K7
C243 1N0
IC230 LM324D
R223 1M
R223 100K
C235 1N0
C241 100N
R224 6K8
R225 1M
R232 330K
C237 1U0 TANT
R226 10K
C239 4U7BP
R227 1K8
0.2Vpp WITH ALC
ALC PULSES
3V5
4V1
SUPPLY LED
R221 1K5
D211 GREEN
LED
8R3
R238 47K
C240 18P
R237 47K
Q240 BC848
TX-REG
I/OPAD P245
TX-REG
3B0
5B6
TX LED
R241 4K7
R239 1K5
D212 RED
R242 2K2
Q250 BC817
D230 33V
8Q6
TX-RELAY-DRV
RELAY I/OPAD P249
RELAY I/OPAD P251
VCO-MOD ATTENUATOR
I/OPAD +4V1 P269
R292 4K7
IC260 LM324D
VCO-MOD
3R8
R295 2K7
I/OPAD POCI P273
R293 47K
R294 4K7
DIGITAL-POTENTIOMETER
IC220 DS1267
SCLK
SDAT
VB
NC
C209 47N
+5V
6B7
7C0
R204 2K2
C207 4U7 TANT
R205 220
C260 100N
C230 100N
C210 100N
GND
6B0
I/OPAD P259
I/OPAD P261
I/OPAD P263

| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
|---|---|---|---|---|---|---|
| 02B | VALUE CHANGES ONLY | MAJ | | | | |
| 02A | ADDED ADDITIONAL PA FILTERING | MAJ | | | | 05-11-99 |
| 01A | VCO ON MAIN PCB | RBM | | | | 19/08/99 |
| 00A | ORIGINAL | BEN C | | | | 26/11/98 |

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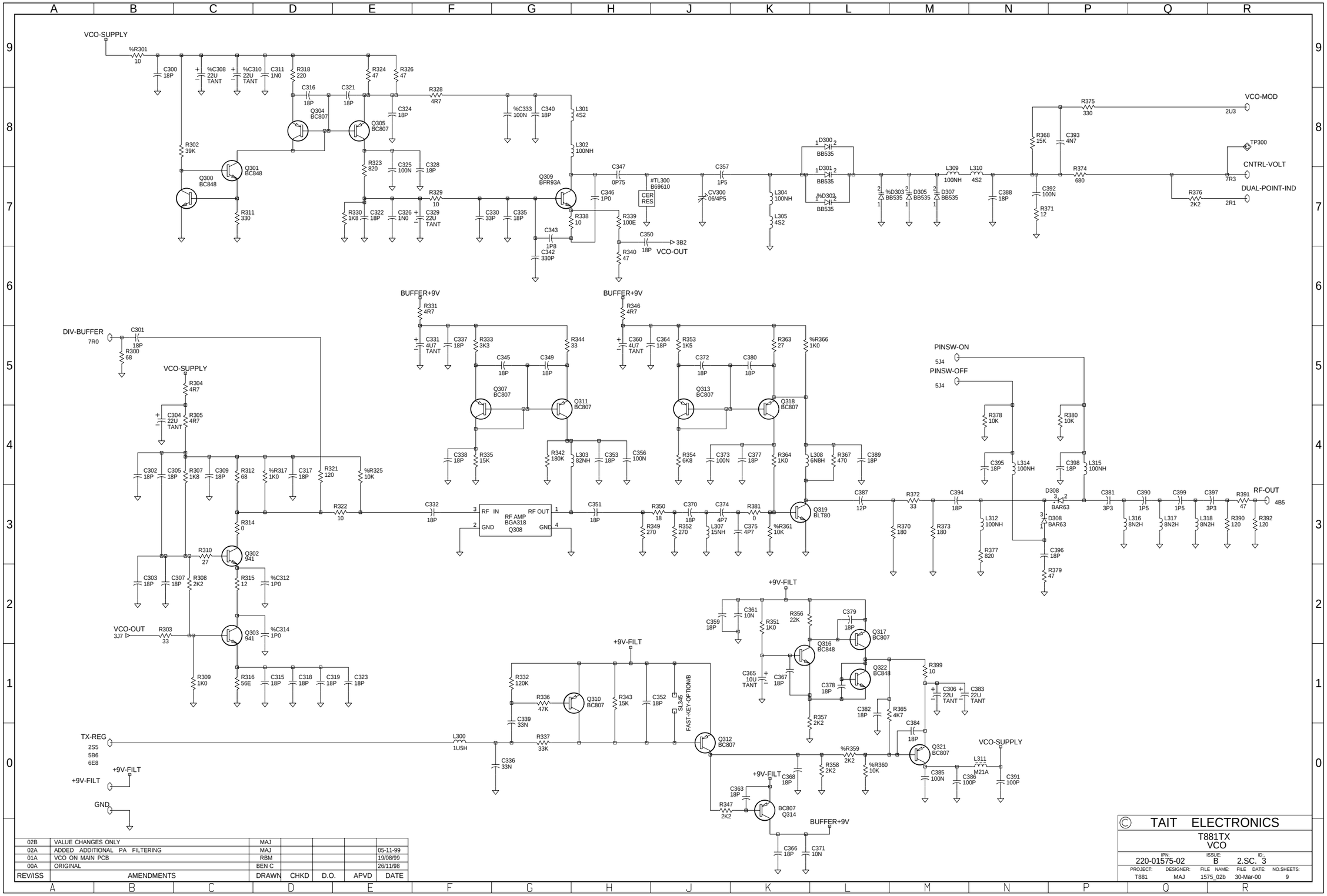
AUDIO PROCESSOR
DRG. 220-01575-02 ISSUE: B SC. 2
PROJECT: T881 DESIGNER: MAJ FILE NAME: 1575_02b FILE DATE: 30-Mar-00 NO.SHEETS: 9

***Sheet 2 - T881 Audio Processor***
***220-01575-02***

29/09/00




| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
|---|---|---|---|---|---|---|
| 02B | VALUE CHANGES ONLY | MAJ | | | | |
| 02A | ADDED ADDITIONAL PA FILTERING | MAJ | | | | 05-11-99 |
| 01A | VCO ON MAIN PCB | RBM | | | | 19/08/99 |
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VCO

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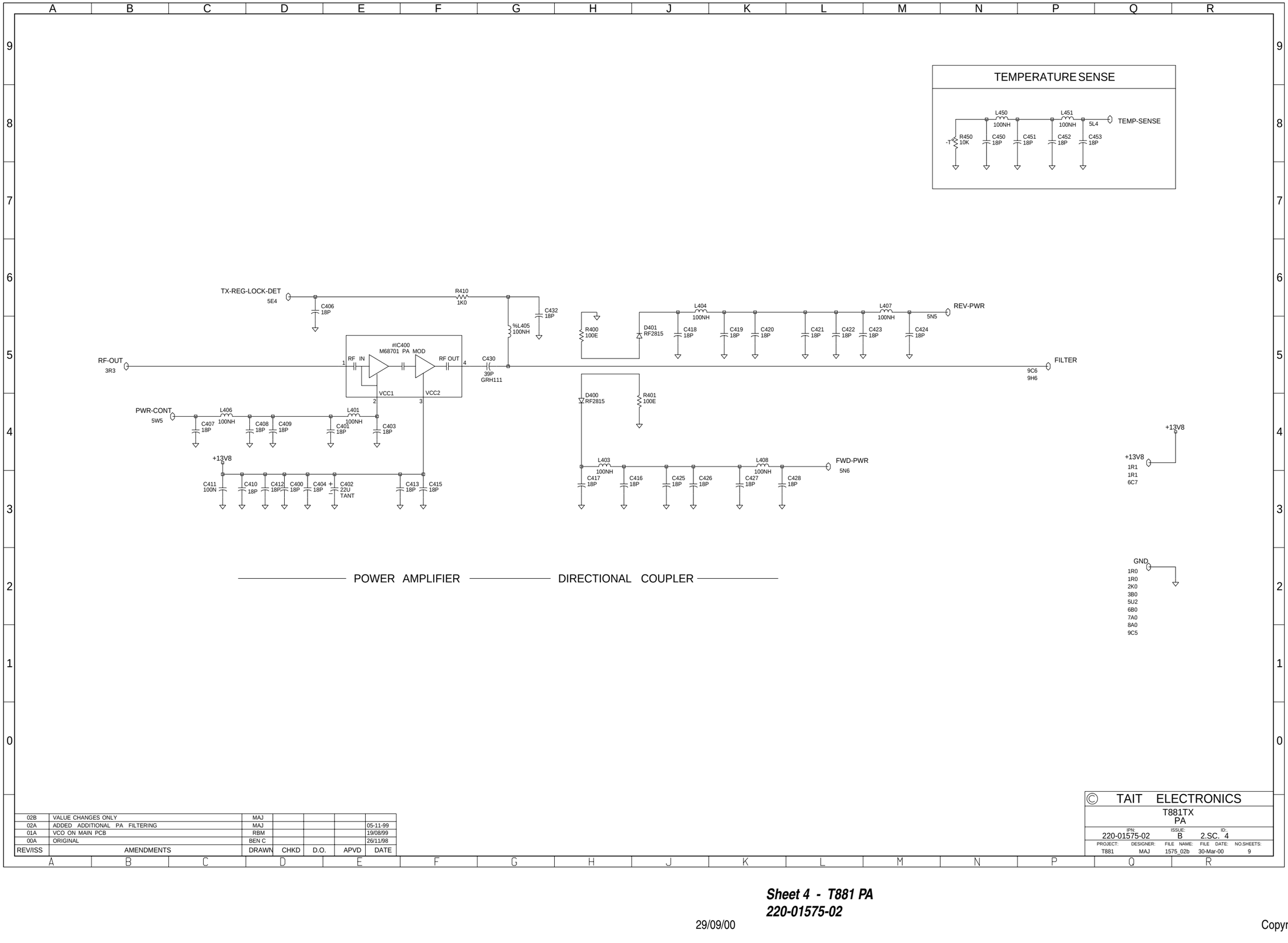
| PROJECT: | DESIGNER: | FILE NAME: | FILE DATE: | NO.SHEETS: |
|---|---|---|---|---|
| T881 | MAJ | 1575_02b | 30-Mar-00 | 9 |

***Sheet 3 - T881 VCO***
***220-01575-02***




| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
|---|---|---|---|---|---|---|
| 02B | VALUE CHANGES ONLY | MAJ | | | | |
| 02A | ADDED ADDITIONAL PA FILTERING | MAJ | | | | 05-11-99 |
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PA

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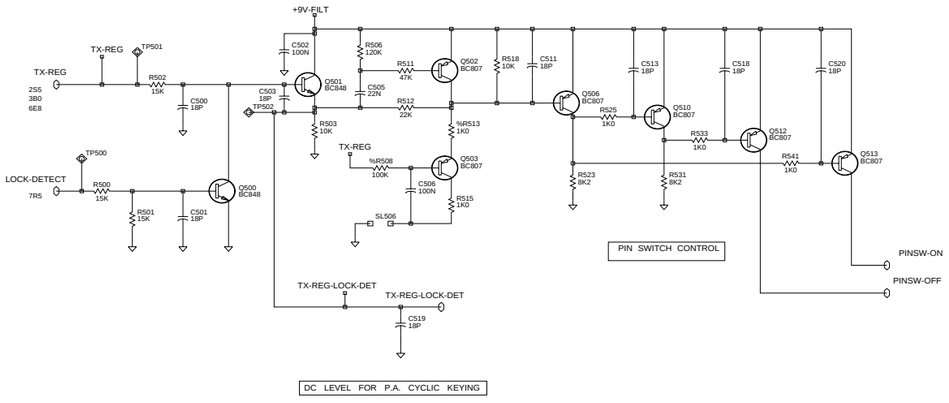
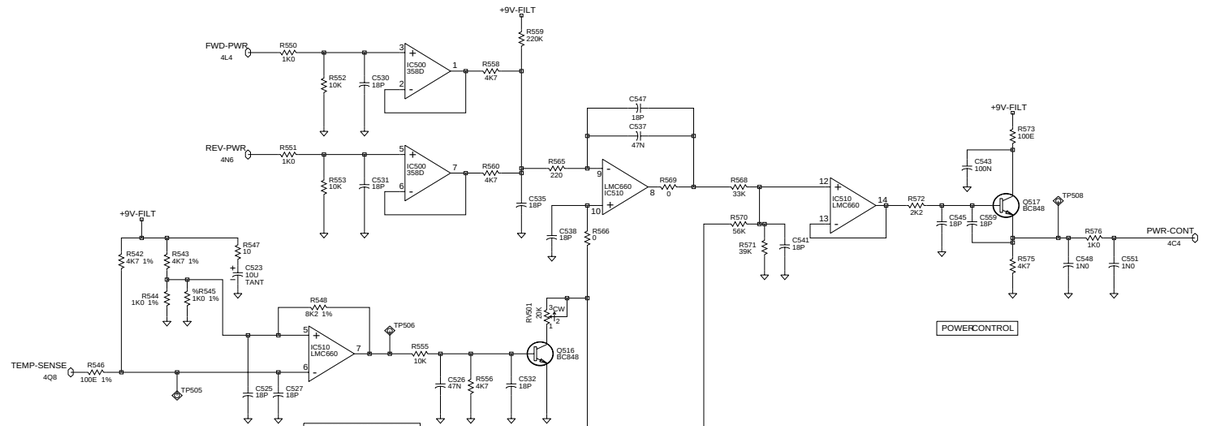
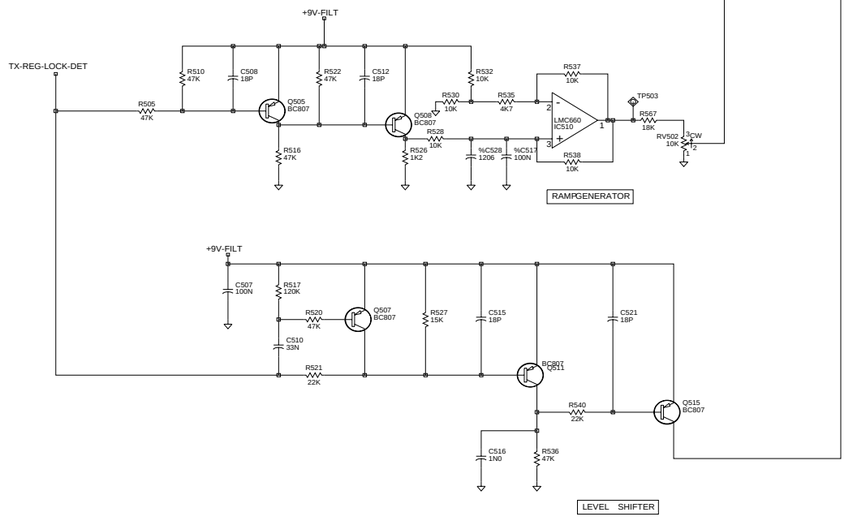
| 220-01575-02 | B | 2.SC. 4 |

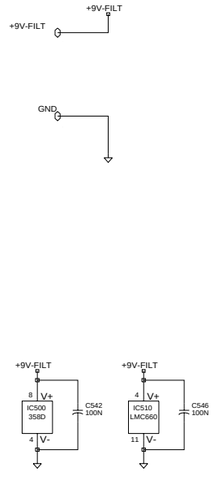
| PROJECT: | DESIGNER: | FILE NAME: | FILE DATE: | NO.SHEETS: |
|---|---|---|---|---|
| T881 | MAJ | 1575_02b | 30-Mar-00 | 9 |

***Sheet 4 - T881 PA***
***220-01575-02***




| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
|---|---|---|---|---|---|---|
| 02B | VALUE CHANGES ONLY | MAJ | | | | |
| 02A | ADDED ADDITIONAL PA FILTERING | MAJ | | | | 05-11-99 |
| 01A | VCO ON MAIN PCB | RBM | | | | 19/08/99 |
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T881TX CONTROL

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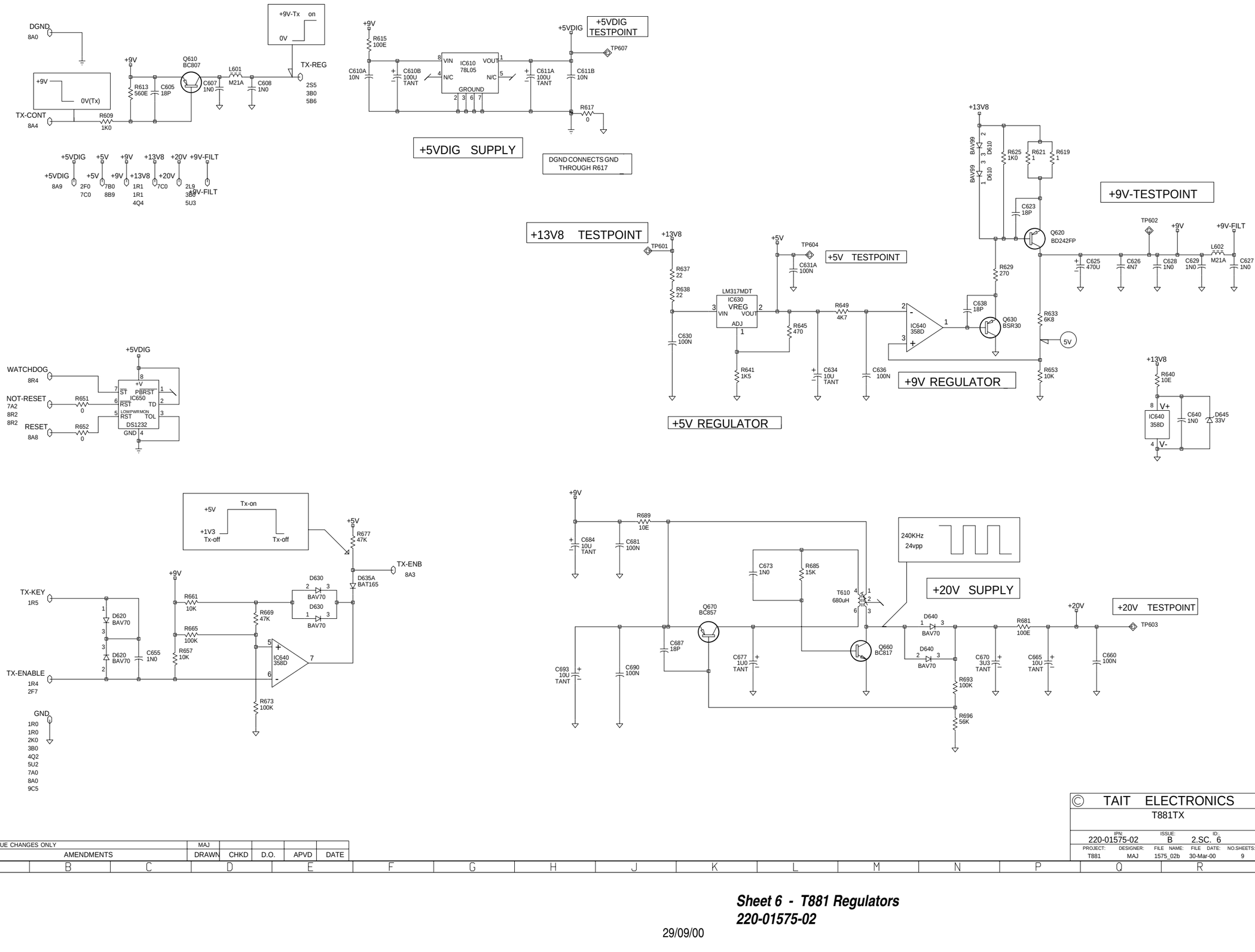
|---|---|---|---|---|
| T881 | MAJ | 1575_02b | 30-Mar-00 | 9 |

IPN: 220-01575-02 ISSUE: B SC. 5 ID:

***Sheet 5 - T881 Control Section***
***220-01575-02***




| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
|---|---|---|---|---|---|---|
| 02B | VALUE CHANGES ONLY | MAJ | | | | |

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| PROJECT: | DESIGNER: | FILE NAME: | FILE DATE: | NO.SHEETS: |
|---|---|---|---|---|
| T881 | MAJ | 1575_02b | 30-Mar-00 | 9 |

***Sheet 6 - T881 Regulators***
***220-01575-02***

PHASE-MODULATOR

LOCK-DETECT TESTPOINT

CHARGE-PUMP

LOOP-FILTER

DIVIDER BUFFER

12.8MHz TESTPOINT

SPARE GATES

| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
|---|---|---|---|---|---|---|
| 02B | VALUE CHANGES ONLY | MAJ | | | | |
| 02A | ADDED ADDITIONAL PA FILTERING | MAJ | | | | 05-11-99 |
| 01A | VCO ON MAIN PCB | RBM | | | | 19/08/99 |
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SYNTHESISER

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| PROJECT: | DESIGNER: | FILE NAME: | FILE DATE: | NO.SHEETS: |
|---|---|---|---|---|
| T881 | MAJ | 1575_02b | 30-Mar-00 | 9 |

***Sheet 7 - T881 Synthesiser***
***220-01575-02***

# CHANNEL SELECT TO MICRO BUS

## MICROMATCH TO D-RANGE2 CONNECTIONS

| MICROMATCH PIN | D-RANGE2 PIN |
|---|---|
| 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 |

| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
|---|---|---|---|---|---|---|
| 02B | VALUE CHANGES ONLY | MAJ | | | | |
| 02A | ADDED ADDITIONAL PA FILTERING | MAJ | | | | 05-11-99 |
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MICROPROCESSOR

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|---|---|---|
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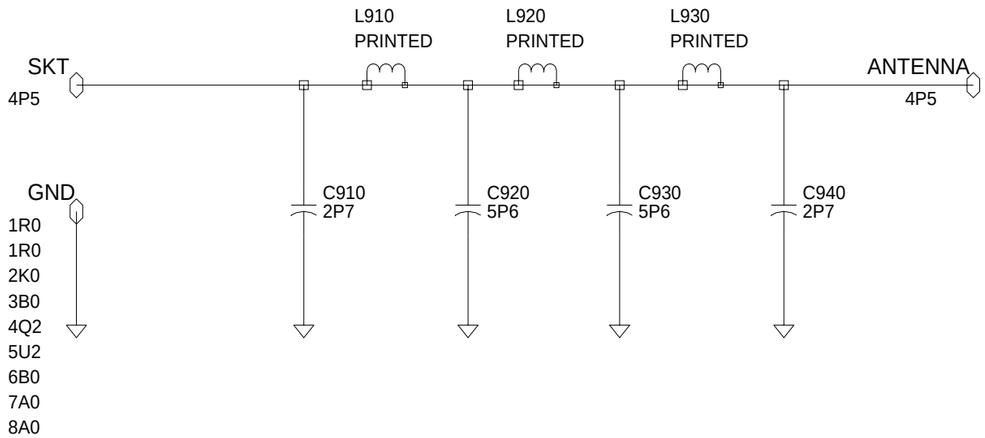
| PROJECT: | DESIGNER: | FILE NAME: | FILE DATE: | NO.SHEETS: |
|---|---|---|---|---|
| T881 | MAJ | 1575_02b | 30-Mar-00 | 9 |

***Sheet 8 - T881 Microcontroller***
***220-01575-02***




| REV/ISS | AMENDMENTS | DRAWN | CHKD | D.O. | APVD | DATE |
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| 02B | VALUE CHANGES ONLY | MAJ | | | | |
| 02A | ADDED ADDITIONAL PA FILTERING | MAJ | | | | 05-11-99 |
| 01A | VCO ON MAIN PCB | RBM | | | | 19/08/99 |
| 00A | ORIGINAL | BEN C | | | | 26/11/98 |

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HARMONIC FILTER

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|---|---|---|
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|---|---|---|---|---|
| T881 | MAJ | 1575_02b | 30-Mar-00 | 9 |

***Sheet 9 - T881 Harmonic Filter***
***220-01575-02***