

3 T850 VCO PCB

This section contains the following information.

IPN	Section	Page
220-01145-00	Parts List	3.2
	Mechanical & Miscellaneous Parts	3.2
	PCB Layout - Bottom Side	3.3
	PCB Layout - Top Side	3.4
	Circuit Diagram	3.5
220-01145-02	Parts List	3.7
	Mechanical & Miscellaneous Parts	3.7
	PCB Layout - Bottom Side	3.9
	PCB Layout - Top Side	3.10
	Circuit Diagram	3.11

T850 VCO PCB Parts List (IPN 220-01145-00)

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. An entry in the variant column indicates that this is a variant component which is fitted only to the T825 (RX) or T826/827 (TX).

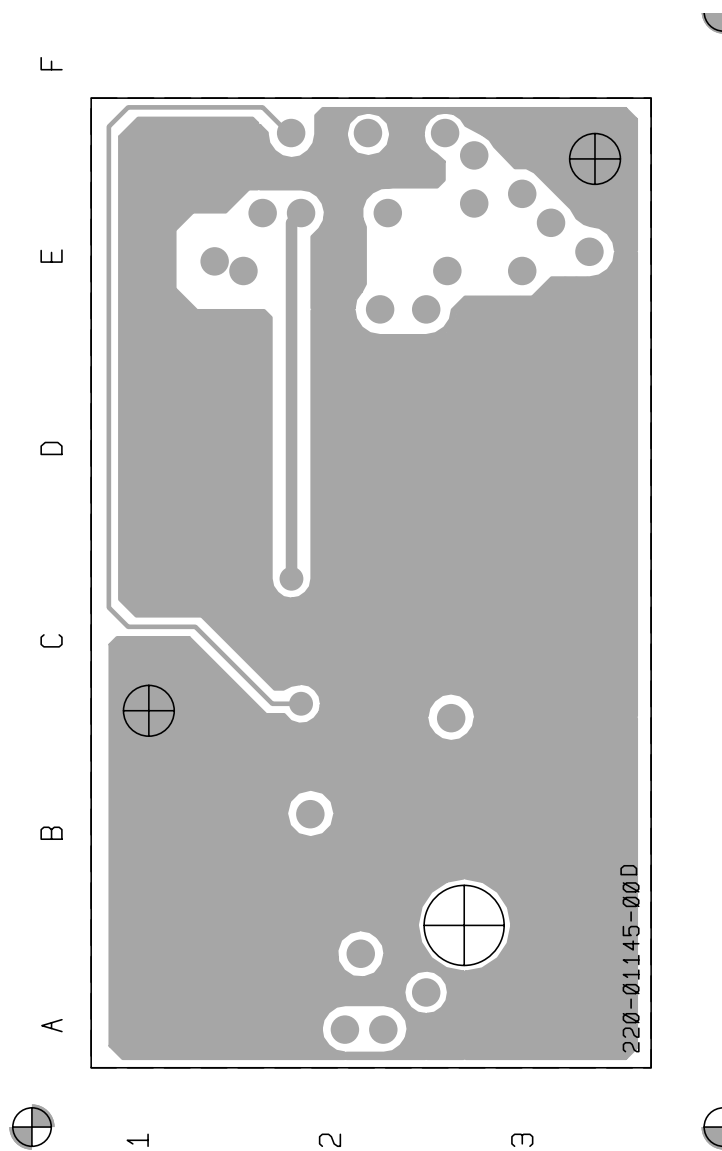
The miscellaneous and mechanical section lists the variant and common parts in IPN order.

Parts List Amendments

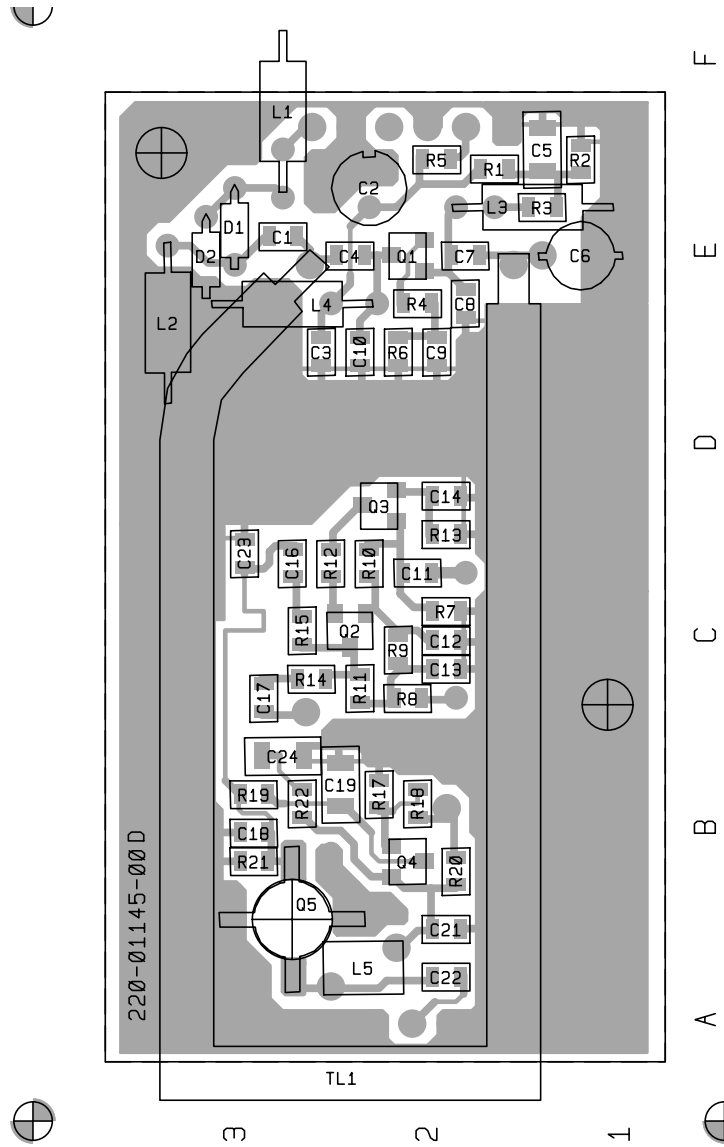
There were no amendments to the parts list at the time of publication.

Ref	Var	IPN	Description	Ref	Var	IPN	Description
C1	A	015-21150-01	CAP CER 0805 CHIP 1P5 +/-0.25P NPO 50V	R6	C	036-12820-00	RES M/F 0805 CHIP 82E 5%
C1	B	015-21180-01	CAP CER 0805 CHIP 1P8 +/-0.25 NPO 50V	R6	D	036-13120-00	RES M/F 0805 CHIP 120E 5%
C1	C	015-21220-01	CAP CER 0805 CHIP 2P2 +/-0.25P NPO 50V	R7		036-14100-00	RES M/F 0805 CHIP 1K 5%
C1	D	015-21220-01	CAP CER 0805 CHIP 2P2 +/-0.25P NPO 50V	R8		036-12220-00	RES M/F 0805 CHIP 22E 5%
C2		025-08100-02	CAP TANT BEAD 10M 10% 16V	R9		036-14270-00	RES M/F 0805 CHIP 2K7 5%
C3		015-24100-08	CAP CER 0805 CHIP 1N 10% X7R 50V	R10		036-14120-00	RES M/F 0805 CHIP 1K2 5%
C4		015-21100-01	CAP CER 0805 CHIP 1P0 +/-0.25P NPO 50V	R11		036-13150-00	RES M/F 0805 CHIP 150E 5%
C5		015-06100-08	CAP CER 1206 CHIP 100N 10% X7R 50V	R12		036-12100-00	RES M/F 0805 CHIP 10E 5%
C6		028-02100-08	CAP TRIM 2/10P CER 5MM TOP ADJ	R13		036-12560-00	RES M/F 0805 CHIP 56E 5%
C7	A	015-21680-01	CAP CER 0805 CHIP 6P8 +/-0.25P NPO 50V	R14		036-13330-00	RES M/F 0805 CHIP 330E 5%
C7	B	015-21470-01	CAP CER 0805 CHIP 4P7 +/-0.25P NPO 50V	R15		036-12100-00	RES M/F 0805 CHIP 10E 5%
C7	C	015-21680-01	CAP CER 0805 CHIP 6P8 +/-0.25P NPO 50V	R17		036-14680-00	RES M/F 0805 CHIP 6K8 5%
C7	D	015-21820-01	CAP CER 0805 CHIP 8P2 +/-0.25P NPO 50V	R18		036-14180-00	RES M/F 0805 CHIP 1K8 5%
C8	A	015-22270-01	CAP CER 0805 CHIP 27P 5% NPO 50V	R19		036-14100-00	RES M/F 0805 CHIP 1K 5%
C8	B	015-22270-01	CAP CER 0805 CHIP 27P 5% NPO 50V	R20		036-12180-00	RES M/F 0805 CHIP 18E 5%
C8	C	015-22330-01	CAP CER 0805 CHIP 33P 5% NPO 50V	R21		036-13330-00	RES M/F 0805 CHIP 330E 5%
C8	D	015-22330-01	CAP CER 0805 CHIP 33P 5% NPO 50V	R22		036-12100-00	RES M/F 0805 CHIP 10E 5%
C9		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V				
C10		015-21180-01	CAP CER 0805 CHIP 1P8 +/-0.25 NPO 50V	TL1	A	051-00005-43	RESNTR TAIT NO 543 480-520MHZ T855/7
C11		015-21330-01	CAP CER 0805 CHIP 3P3 +/-0.25P NPO 50V	TL1	B	051-00005-42	RESNTR TAIT NO 542 435-480MHZ T855/7
C12		015-24100-08	CAP CER 0805 CHIP 1N 10% X7R 50V	TL1	C	051-00005-41	RESNTR TAIT NO 541 395-440MHZ T855/7
C13		015-24100-08	CAP CER 0805 CHIP 1N 10% X7R 50V	TL1	D	051-00005-40	RESNTR TAIT NO 540 355-395MHZ T855/7
C14		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V				
C16		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V				
C17		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V			065-00010-13	BEAD FERRITE 7D 1.9*0.9*3.8MM STACK POLE Place On Lead Of L4, Secure With Loctite 454-16 Gel
C18		015-22220-01	CAP CER 0805 CHIP 22P 5% NPO 50V				
C19		015-05470-08	CAP CER 1206 CHIP 47N 10% X7R 50V				
C21		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V			220-01145-00	PCB T855/856/857 VCO
C22		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V				
C23		015-21820-01	CAP CER 0805 CHIP 8P2 +/-0.25P NPO 50V			240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN
C24		015-05470-08	CAP CER 1206 CHIP 47N 10% X7R 50V				
						345-00040-10	SCREW M3*6MM PAN POZI ST BZ
D1		001-00012-63	(S) DIODE VARICAP BB809				
D2		001-00012-63	(S) DIODE VARICAP BB809			350-00016-42	SPACER 5MM HI 8MM X M3 STUD 2.5MM X M3
L1		056-00021-60	IND FXD 330NH 6.6X2.7MM AXIAL NON MAGNET				
L2		056-00021-60	IND FXD 330NH 6.6X2.7MM AXIAL NON MAGNET			353-00010-10	WASHER M3 FLAT 7MM*0.6MM ST BZ
L3		056-00021-60	IND FXD 330NH 6.6X2.7MM AXIAL NON MAGNET				
L4		056-00021-60	IND FXD 330NH 6.6X2.7MM AXIAL NON MAGNET			353-00010-13	WASHER M3 SHAKEPROOF INT BZ
L5		052-08135-35	COIL A/W 3.5T/3.5MM HOR 0.8MM WIRE				
PL2		240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN				
PL3		240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN				
PL4		240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN				
PL5		240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN				
Q1		000-10057-10	(S) XSTR SMD MMBR571 NPN SOT-23 UHF LO PW				
Q2		000-10057-10	(S) XSTR SMD MMBR571 NPN SOT-23 UHF LO PW				
Q3		000-10057-10	(S) XSTR SMD MMBR571 NPN SOT-23 UHF LO PW				
Q4		000-10008-57	(S) XSTR SMD BCW70/BC857-215 PNP SOT23AF				
Q5		000-00032-47	(S) XSTR MRF559 NPN XPACK UHF PWR 0.5W				
R1		036-14390-00	RES M/F 0805 CHIP 3K9 5%				
R2		036-14100-00	RES M/F 0805 CHIP 1K 5%				
R3		036-13100-00	RES M/F 0805 CHIP 100E 5%				
R4		036-12220-00	RES M/F 0805 CHIP 22E 5%				
R5		036-12270-00	RES M/F 0805 CHIP 27E 5%				
R6	A	036-12820-00	RES M/F 0805 CHIP 82E 5%				
R6	B	036-12820-00	RES M/F 0805 CHIP 82E 5%				

Variant Code	Description	T855 (MHz)	T856/857 (MHz)
A	Tx High	-	480-520
B	Tx Mid/Rx High	480-530	440-480
C	Tx Low/Rx Mid	440-480	400-440
D	Rx Low	400-440	-

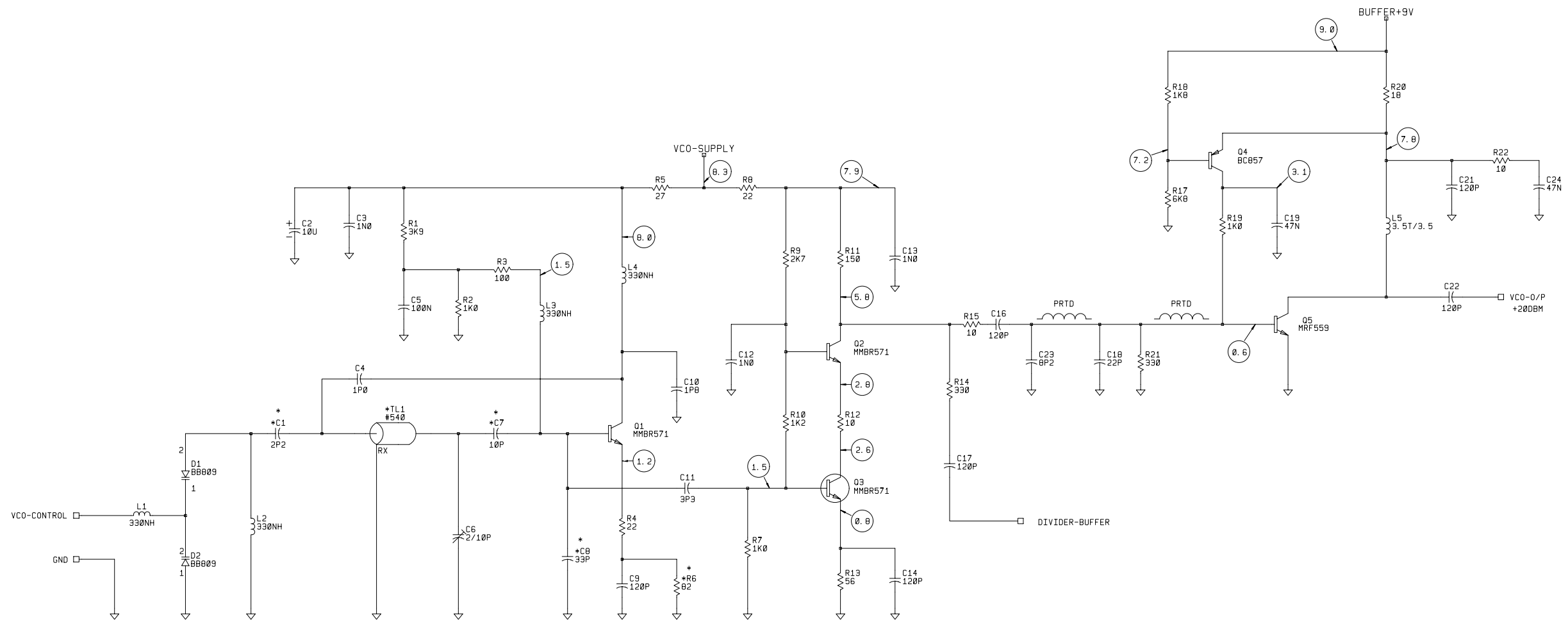


T850 VCO PCB (IPN 220-01145-00) - Bottom Side



T850 VCO PCB (IPN 220-01145-00) - Top Side

*FREQ	*TL1	*C1	*C7	*C8	*R6
480-520	543	1P5F	6P8F	27PF	82R
435-480	542	1P8F	4P7F	27PF	82R
395-440	541	2P2F	6P8F	33PF	100R
355-395	540	2P2F	10PF	33PF	100R



*-VALUE CHANGES FOR DIFFERENT OPTIONS

○ = D.C. CONDITIONS (VOLTS)
(USE HIGH IMPEDENCE PROBE)

OPTION	F MHZ	TL1 IPN NO.	TL1 LENGTH (MM)	C1	C7	C8	R6
TX HIGH	480-520	051-00005-43	100	1P5F	6P8F	27PF	82R
TX MID / RX HIGH	435-480	051-00005-42	120	1P8F	4P7F	27PF	82R
TX LOW / RX MID	395-440	051-00005-41	130	2P2F	6P8F	33PF	100R
RX LOW	355-395	051-00005-40	145	2P2F	10PF	33PF	100R

LAYOUT FOR RX LOW

QC	CAD-WANG COMPARISON.	MC					
B	C/N 89/05-218	J. F.					17/5/89
A		RH					
T99		RH					
PROT1		RH					
REV/ISS	AMENDMENTS	DRAWN	CHKD	D. O.	APVD	DATE	

© TAIT ELECTRONICS			
T855/T857			
BIPOLAR VCO			
IPN:	220-01145-00	ISSUE:	2 SC. 1
PROJECT:	DESIGNER:	FILE NAME:	FILE DATE:
		B55VCL0C	22/06/93
			NO. SHEETS: 1

T850 VCO Parts List (IPN 220-01145-02)

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 by component type in numerical order. Each component entry comprises three or four columns: the circuit reference, variant number (if applicable), IPN and description. A number in the variant column indicates that this component is fitted only to that variant.

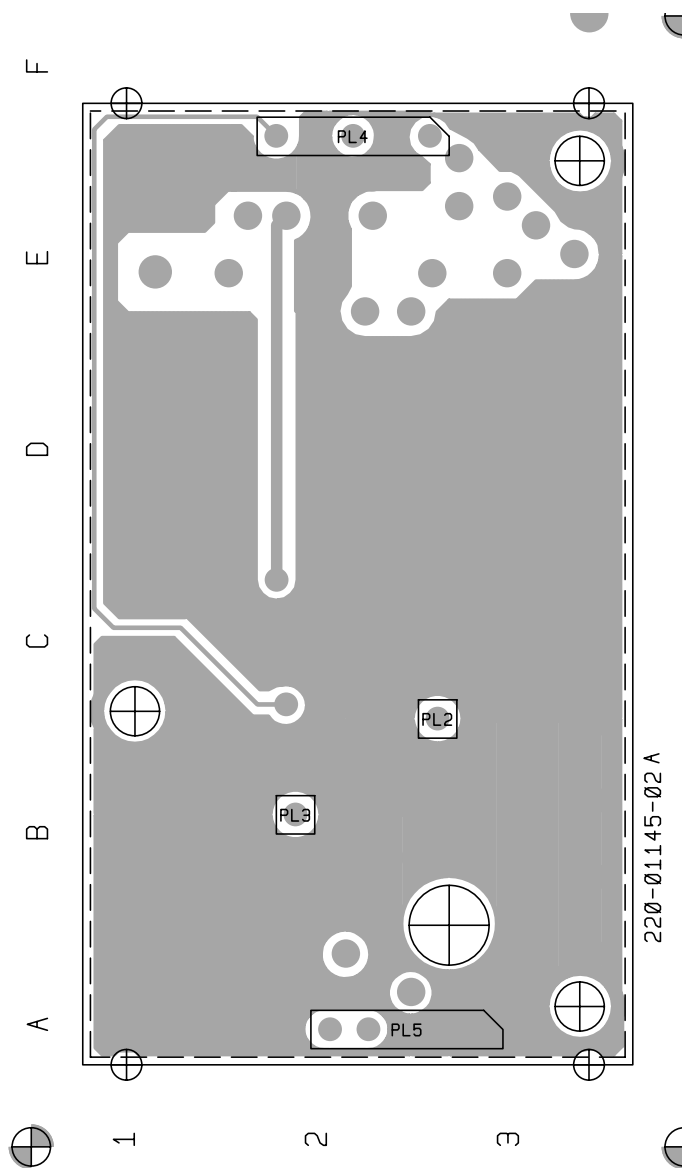
The miscellaneous and mechanical section lists the variant and common parts in IPN order.

Parts List Amendments

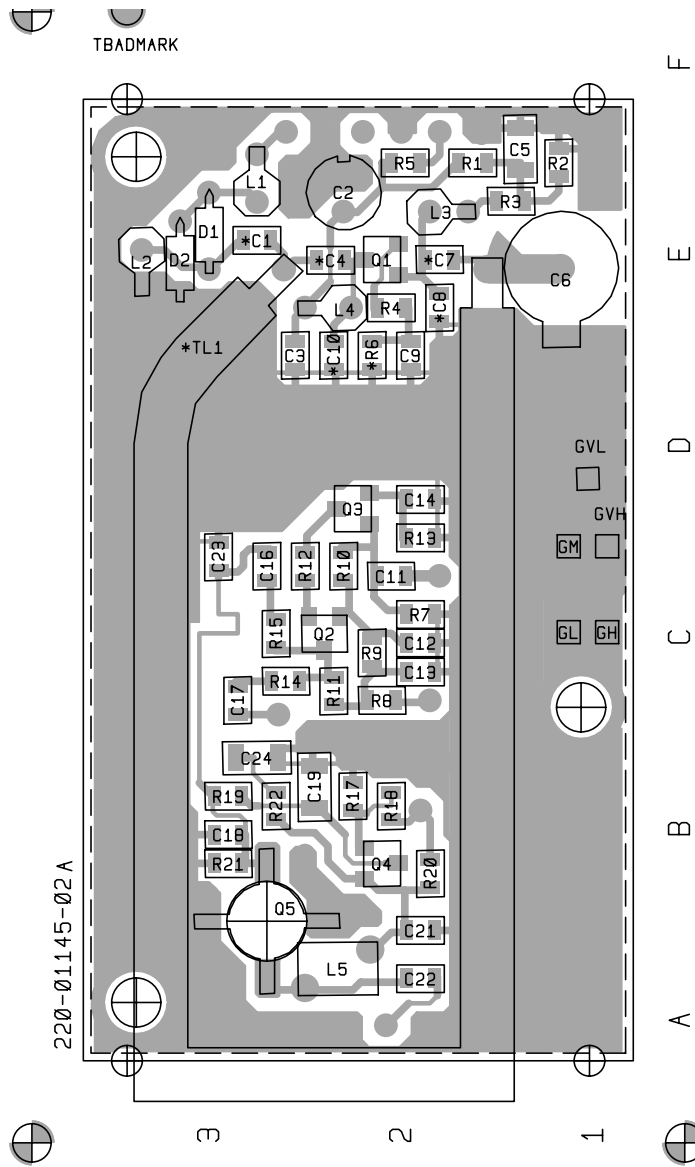
There were no amendments to the parts list at the time of publication.

Ref	Var	IPN	Description	Ref	Var	IPN	Description
C1	A	015-21150-01	CAP CER 0805 CHIP 1P5 +/-0.25P NPO 50V	R6	C	036-12820-00	RES M/F 0805 CHIP 82E 5%
C1	B	015-21180-01	CAP CER 0805 CHIP 1P8 +/-0.25 NPO 50V	R6	D	036-13120-00	RES M/F 0805 CHIP 120E 5%
C1	C	015-21220-01	CAP CER 0805 CHIP 2P2 +/-0.25P NPO 50V	R7		036-14100-00	RES M/F 0805 CHIP 1K 5%
C1	D	015-21220-01	CAP CER 0805 CHIP 2P2 +/-0.25P NPO 50V	R8		036-12220-00	RES M/F 0805 CHIP 22E 5%
C2		025-08100-02	CAP TANT BEAD 10M 10% 16V	R9		036-14270-00	RES M/F 0805 CHIP 2K7 5%
C3		015-24100-08	CAP CER 0805 CHIP 1N 10% X7R 50V	R10		036-14120-00	RES M/F 0805 CHIP 1K2 5%
C4		015-21100-01	CAP CER 0805 CHIP 1P0 +/-0.25P NPO 50V	R11		036-13150-00	RES M/F 0805 CHIP 150E 5%
C5		015-06100-08	CAP CER 1206 CHIP 100N 10% X7R 50V	R12		036-12100-00	RES M/F 0805 CHIP 10E 5%
C6		028-02100-08	CAP TRIM 2/10P CER 5MM TOP ADJ	R13		036-12560-00	RES M/F 0805 CHIP 56E 5%
C7	A	015-21680-01	CAP CER 0805 CHIP 6P8 +/-0.25P NPO 50V	R14		036-13330-00	RES M/F 0805 CHIP 330E 5%
C7	B	015-21470-01	CAP CER 0805 CHIP 4P7 +/-0.25P NPO 50V	R15		036-12100-00	RES M/F 0805 CHIP 10E 5%
C7	C	015-21680-01	CAP CER 0805 CHIP 6P8 +/-0.25P NPO 50V	R17		036-14680-00	RES M/F 0805 CHIP 6K8 5%
C7	D	015-21820-01	CAP CER 0805 CHIP 8P2 +/-0.25P NPO 50V	R18		036-14180-00	RES M/F 0805 CHIP 1K8 5%
C8	A	015-22270-01	CAP CER 0805 CHIP 27P 5% NPO 50V	R19		036-14100-00	RES M/F 0805 CHIP 1K 5%
C8	B	015-22270-01	CAP CER 0805 CHIP 27P 5% NPO 50V	R20		036-12180-00	RES M/F 0805 CHIP 18E 5%
C8	C	015-22330-01	CAP CER 0805 CHIP 33P 5% NPO 50V	R21		036-13330-00	RES M/F 0805 CHIP 330E 5%
C8	D	015-22330-01	CAP CER 0805 CHIP 33P 5% NPO 50V	R22		036-12100-00	RES M/F 0805 CHIP 10E 5%
C9		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V	TL1	A	051-00005-43	RESNTR TAIT NO 543 480-520MHZ T855/7
C10		015-21180-01	CAP CER 0805 CHIP 1P8 +/-0.25 NPO 50V	TL1	B	051-00005-42	RESNTR TAIT NO 542 435-480MHZ T855/7
C11		015-21330-01	CAP CER 0805 CHIP 3P3 +/-0.25P NPO 50V	TL1	C	051-00005-41	RESNTR TAIT NO 541 395-440MHZ T855/7
C12		015-24100-08	CAP CER 0805 CHIP 1N 10% X7R 50V	TL1	D	051-00005-40	RESNTR TAIT NO 540 355-395MHZ T855/7
C13		015-24100-08	CAP CER 0805 CHIP 1N 10% X7R 50V				
C14		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V				
C16		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V				
C17		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V			065-00010-13	BEAD FERRITE 7D 1.9*0.9*3.8MM STACK POLE Place On Lead Of L4, Secure With Loctite 454-16 Gel
C18		015-22220-01	CAP CER 0805 CHIP 22P 5% NPO 50V				
C19		015-05470-08	CAP CER 1206 CHIP 47N 10% X7R 50V				
C21		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V			220-01145-00	PCB T855/856/857 VCO
C22		015-23120-01	CAP CER 0805 CHIP 120P 5% NPO 50V				
C23		015-21820-01	CAP CER 0805 CHIP 8P2 +/-0.25P NPO 50V			240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN
C24		015-05470-08	CAP CER 1206 CHIP 47N 10% X7R 50V				
						345-00040-10	SCREW M3*6MM PAN POZI ST BZ
D1		001-00012-63	(S) DIODE VARICAP BB809				
D2		001-00012-63	(S) DIODE VARICAP BB809			350-00016-42	SPACER 5MM HI 8MM X M3 STUD 2.5MM X M3
L1		056-00021-60	IND FXD 330NH 6.6X2.7MM AXIAL NON MAGNET				
L2		056-00021-60	IND FXD 330NH 6.6X2.7MM AXIAL NON MAGNET			353-00010-10	WASHER M3 FLAT 7MM*0.6MM ST BZ
L3		056-00021-60	IND FXD 330NH 6.6X2.7MM AXIAL NON MAGNET				
L4		056-00021-60	IND FXD 330NH 6.6X2.7MM AXIAL NON MAGNET			353-00010-13	WASHER M3 SHAKEPROOF INT BZ
L5		052-08135-35	COIL A/W 3.5T/3.5MM HOR 0.8MM WIRE				
PL2		240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN				
PL3		240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN				
PL4		240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN				
PL5		240-00025-36	PLUG 32WAY 1ROW PC MTG HARWIN				
Q1		000-10057-10	(S) XSTR SMD MMBR571 NPN SOT-23 UHF LO PW				
Q2		000-10057-10	(S) XSTR SMD MMBR571 NPN SOT-23 UHF LO PW				
Q3		000-10057-10	(S) XSTR SMD MMBR571 NPN SOT-23 UHF LO PW				
Q4		000-10008-57	(S) XSTR SMD BCW70/BC857-215 PNP SOT23AF				
Q5		000-00032-47	(S) XSTR MRF559 NPN XPACK UHF PWR 0.5W				
R1		036-14390-00	RES M/F 0805 CHIP 3K9 5%				
R2		036-14100-00	RES M/F 0805 CHIP 1K 5%				
R3		036-13100-00	RES M/F 0805 CHIP 100E 5%				
R4		036-12220-00	RES M/F 0805 CHIP 22E 5%				
R5		036-12270-00	RES M/F 0805 CHIP 27E 5%				
R6	A	036-12820-00	RES M/F 0805 CHIP 82E 5%				
R6	B	036-12820-00	RES M/F 0805 CHIP 82E 5%				

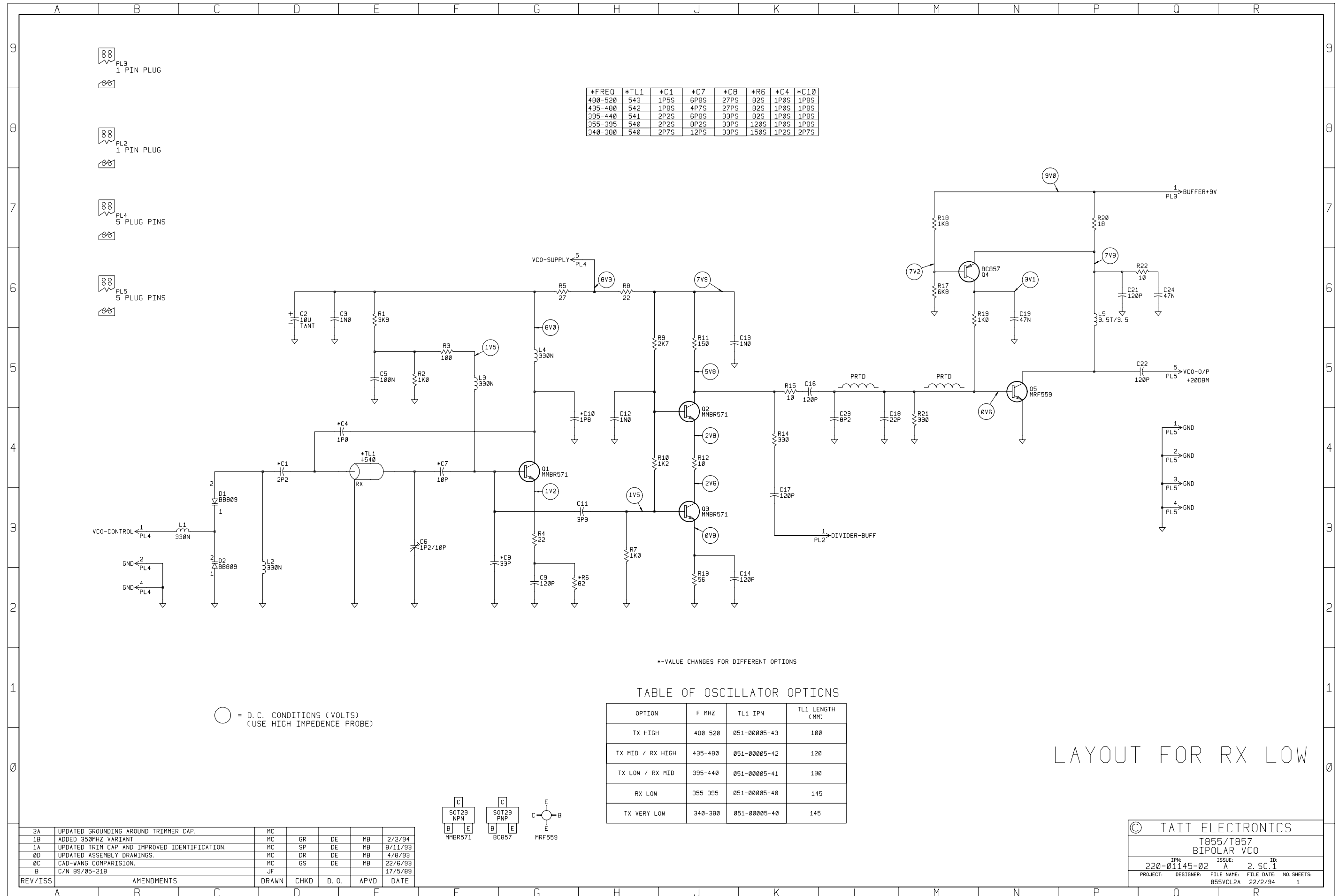
Variant Code	Description	T855 (MHz)	T856/857 (MHz)
A	Tx High	-	480-500
B	Tx Mid/Rx High	480-520	440-480
C	Tx Low/Rx Mid	440-480	400-440
D	Rx Low	400-440	-



T850 VCO PCB (IPN 220-01145-02) - Bottom Side



T850 VCO PCB (IPN 220-01145-02) - Top Side



LAYOUT FOR RX LOW

© TAIT ELECTRONICS
 T855/T857
 BIPOLAR VCO
 IPN: 220-01145-02 ISSUE: A 2 SC. 1
 PROJECT: DESTONER: FILE NAME: FILE DATE: NO. SHEETS:
 B55VCL2A 22/2/94 1

