

## 5.2 T889 Power Amplifier PCB

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## T889 Parts List (IPN 220-01326-04)

### How To Use This Parts List

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

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

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

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

### Parts List Amendments

C130, C159	Deleted to reduce the effects of internal RF circulation on forward and reverse power meter calibration (711128).
D101, D105	Removed from the main PCB and replaced by two 1N4148 diodes (IPN 001-50012-00) placed on the D-range PCB: one soldered between PL101 pins 5 and 7 (cathode), the other between PL101 pins 6 and 8 (cathode). To allow external power meters to read zero and still provide meter overvoltage protection (710978).
DCR1, DCR2	Changed from 100Ω (IPN 036-13100-00) to 270Ω (IPN 036-13270-00) to improve the directivity of the directional coupler (710959).
Q135	SMD transistor (IPN 000-10008-17) replaced with a leaded BD139 (IPN 000-00011-91) as the SMD part is under-rated and prone to failure - refer to TN-604 for the replacement procedure (711147).
R123, R158	Changed from 1k resistors (IPN 036-14100-00) to BA592 diodes (IPN 001-10059-20) to allow external power meters to read zero (710978).
R149	Changed from 12k (IPN 036-15120-00) to 6k8 (IPN 036-14680-00) to increase the reverse power sense gain to improve alarm operation (710958).
258-00010-03	Cooling fan: some T889 PAs may be fitted with a different fan (IPN 258-00010-06). If so, a 100μH inductor (IPN 056-00021-02) may be fitted in series in the fan power feed wire with a 10μF capacitor (IPN 025-08100-03) fitted in parallel with this inductor (710921).

**Parts List Amendments - Continued**

This page is provided for entering future amendments to the Parts List.

Ref	Var	IPN	Description	Ref	Var	IPN	Description
C1		015-02470-03	CAP CER 47P 5% 500V GRH111	C185		015-22470-01	CAP CER 0805 47P 5% NPO 50V
*C2		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	C187		015-06100-08	CAP CER 1206 100N 10% X7R 50V
*C3		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	C189		015-25100-08	CAP CER 0805 10N 10% X7R 50V
C4		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	C190		015-22470-01	CAP CER 0805 47P 5% NPO 50V
C6		015-02470-03	CAP CER 47P 5% 500V GRH111	C192		015-06100-08	CAP CER 1206 100N 10% X7R 50V
C7		015-06100-08	CAP CER 1206 100N 10% X7R 50V	C193		015-06100-08	CAP CER 1206 100N 10% X7R 50V
*C9		015-02100-07	CAP CER CHIP 10P 5% 500V MULTI	C195		014-08100-00	CAP TANT CHIP 10M 16VW +20%
*C10		015-02100-07	CAP CER CHIP 10P 5% 500V MULTI	C196		014-07100-02	CAP TANT CHIP 1U0 3.2 X 1.6MM
*C11		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	C197		015-25100-08	CAP CER 0805 10N 10% X7R 50V
*C12		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	C198		015-06100-08	CAP CER 1206 100N 10% X7R 50V
*C13		029-02200-02	CAP MICA 5 CASE 20P 5%	C199		014-07470-00	CAP TANT CHIP 4U7 3.5 X 2.8MM
C14		029-02220-02	CAP MICA 5 CASE 22P 5%	C200		015-24470-08	CAP CER 0805 4N7 10% X7R 50V
C16		015-02470-03	CAP CER 47P 5% 500V GRH111	C201		014-07470-03	L) CAP TANT SMD 4U7 35V 20%
C17		015-06100-08	CAP CER 1206 100N 10% X7R 50V	C203		015-24100-08	CAP CER 0805 1N 10% X7R 50V
C18		014-07470-03	L) CAP TANT SMD 4U7 35V 20%	C204		015-22470-01	CAP CER 0805 47P 5% NPO 50V
*C19		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	C205		015-22470-01	CAP CER 0805 47P 5% NPO 50V
C20		015-02150-07	CAP CER CHIP 15P 5% 500V MULTI	C206		015-23100-01	CAP CER 0805 100P 5% NPO 50V
*C21		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	C207		015-23100-01	CAP CER 0805 100P 5% NPO 50V
C22		029-02180-02	CAP MICA 5 CASE 18P 5%	C210		015-23100-01	CAP CER 0805 100P 5% NPO 50V
C23		029-02220-02	CAP MICA 5 CASE 22P 5%	C211		015-23100-01	CAP CER 0805 100P 5% NPO 50V
C24		015-02470-03	CAP CER 47P 5% 500V GRH111	C225		015-02470-03	CAP CER 47P 5% 500V GRH111
C26		015-02150-07	CAP CER CHIP 15P 5% 500V MULTI	C245		015-02470-03	CAP CER 47P 5% 500V GRH111
*C27		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	C250		015-02470-03	CAP CER 47P 5% 500V GRH111
C28		029-02180-02	CAP MICA 5 CASE 18P 5%	C252		015-02470-03	CAP CER 47P 5% 500V GRH111
C29		015-06100-08	CAP CER 1206 100N 10% X7R 50V	C258		015-02470-03	CAP CER 47P 5% 500V GRH111
C30		029-02220-02	CAP MICA 5 CASE 22P 5%				
C31		015-02470-03	CAP CER 47P 5% 500V GRH111	D101		001-50012-00	S) DIODE AI 1N4148 SI
C33		015-02150-07	CAP CER CHIP 15P 5% 500V MULTI	D103		008-00014-79	S)LED 3MM RED WITH WIRE
*C34		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	D105		001-50012-00	S) DIODE AI 1N4148 SI
C35		029-02180-02	CAP MICA 5 CASE 18P 5%	D107		008-00014-80	S)LED 3MM GREEN WITH WIRE
C36		029-02220-02	CAP MICA 5 CASE 22P 5%	D109		008-00014-79	S)LED 3MM RED WITH WIRE
C37		015-02470-03	CAP CER 47P 5% 500V GRH111	D113		001-00012-90	S) DIODE MR2520L O-VOLT SUPP
C39		014-07470-03	L) CAP TANT SMD 4U7 35V 20%				
C40		015-02150-07	CAP CER CHIP 15P 5% 500V MULTI	DCC1		015-22470-01	CAP CER 0805 47P 5% NPO 50V
*C41		015-02120-07	CAP CER CHIP 12P 5% 500V MULTI	DCC4		015-22470-01	CAP CER 0805 47P 5% NPO 50V
C42		029-02180-02	CAP MICA 5 CASE 18P 5%	DCIC1		001-10066-00	DIODE SCHOTTKY HSMS2815
C43		029-02220-02	CAP MICA 5 CASE 22P 5%	DCIC2		001-10066-00	DIODE SCHOTTKY HSMS2815
C44		015-02470-03	CAP CER 47P 5% 500V GRH111	DCR1		036-13270-00	RES M/F 0805 270E 5%
C46		015-06100-08	CAP CER 1206 100N 10% X7R 50V	DCR2		036-13270-00	RES M/F 0805 270E 5%
C47		014-07470-03	L) CAP TANT SMD 4U7 35V 20%				
C48		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	FTC		012-04100-05	CAP F/THRU 1N SUPPR FLTR S-MTG
C52		015-24470-08	CAP CER 0805 4N7 10% X7R 50V				
C58		015-06100-08	CAP CER 1206 100N 10% X7R 50V	IC101		002-10003-24	S) IC SMD 324 4X O-AMP SO14
C59		014-07470-03	L) CAP TANT SMD 4U7 35V 20%	IC103		002-10003-24	S) IC SMD 324 4X O-AMP SO14
C60		014-07470-03	L) CAP TANT SMD 4U7 35V 20%	IC105		002-10003-58	S) IC SMD LM358 DUAL O-AMP
C66		015-22470-01	CAP CER 0805 47P 5% NPO 50V	IC107		002-12951-00	IC SMD LP2951CM ADJ VLTGE REG
C67		015-02470-03	CAP CER 47P 5% 500V GRH111	IC109		002-10003-17	(S) IC LM317L REG SO-8 100MA
C68		015-02470-03	CAP CER 47P 5% 500V GRH111				
C72		015-02470-03	CAP CER 47P 5% 500V GRH111	L1		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C73		015-02470-03	CAP CER 47P 5% 500V GRH111	L2		051-00644-00	IND HAIRPIN 17MM TALL T889
C74		015-02470-03	CAP CER 47P 5% 500V GRH111	L3		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C75		014-07470-03	L) CAP TANT SMD 4U7 35V 20%	L4		051-00644-00	IND HAIRPIN 17MM TALL T889
C97		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L5		052-08160-55	COIL A/W 5.5T/6.0MM HOR 0.8MM
C98		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	L6		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C101		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L7		051-00644-00	IND HAIRPIN 17MM TALL T889
C103		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L8		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C105		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L9		051-00643-00	IND HAIRPIN 10MM TALL T889
C107		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L10		052-08160-55	COIL A/W 5.5T/6.0MM HOR 0.8MM
C109		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L12		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C111		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L13		051-00619-00	COUPLR WRELNE 53MM JCKT STRGT
C113		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L14		051-00619-00	COUPLR WRELNE 53MM JCKT STRGT
C115		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L15		051-00619-00	COUPLR WRELNE 53MM JCKT STRGT
C117		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L16		051-00626-00	COAX 1/4 WAVE XFMR 35E HELI LH
C119		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L17		051-00648-00	IND ETCH HAIRPIN 14.3NH POWF
C121		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L18		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C123		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L19		051-00643-00	IND HAIRPIN 10MM TALL T889
C125		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L20		052-08160-55	COIL A/W 5.5T/6.0MM HOR 0.8MM
C127		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L21		051-00623-00	COAX 1/4 WAVE XFMR 25E HAIRPIN
C129		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L23		051-00624-00	COAX 1/4 WAVE XFMR 25E HCKY LH
C130		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L24		051-00629-00	COAX 1/4 WAVE XFMR 35E HCKY RH
C131		014-07100-02	CAP TANT CHIP 1U0 3.2 X 1.6MM	L26		051-00627-00	COAX 1/4 WAVE XFMR 35E HELI RH
C132		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L27		051-00648-00	IND ETCH HAIRPIN 14.3NH POWF
C133		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L28		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C139		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L29		051-00643-00	IND HAIRPIN 10MM TALL T889
C143		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L30		052-08160-55	COIL A/W 5.5T/6.0MM HOR 0.8MM
C145		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L32		051-00621-00	COAX 1/4 WAVE XFMR 25E HELI LH
C147		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L33		051-00626-00	COAX 1/4 WAVE XFMR 35E HELI LH
C149		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L34		051-00648-00	IND ETCH HAIRPIN 14.3NH POWF
C151		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L35		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C153		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L36		051-00643-00	IND HAIRPIN 10MM TALL T889
C155		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L37		052-08160-55	COIL A/W 5.5T/6.0MM HOR 0.8MM
C159		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L39		051-00622-00	COAX 1/4 WAVE XFMR 25E HELI RH
C161		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L40		051-00619-00	COUPLR WRELNE 53MM JCKT STRGT
C162		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L41		051-00619-00	COUPLR WRELNE 53MM JCKT STRGT
C164		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	L42		051-00619-00	COUPLR WRELNE 53MM JCKT STRGT
C167		015-24100-08	CAP CER 0805 1N 10% X7R 50V	L43		051-00628-00	COAX 1/4 WAVE XFMR 35E HCKY LH
C169		014-07470-03	L) CAP TANT SMD 4U7 35V 20%	L44		051-00648-00	IND ETCH HAIRPIN 14.3NH POWF
C171		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	L45		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C173		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L46		051-00643-00	IND HAIRPIN 10MM TALL T889
C174		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L47		052-08160-55	COIL A/W 5.5T/6.0MM HOR 0.8MM
C176		015-06100-08	CAP CER 1206 100N 10% X7R 50V	L49		051-00645-00	COAX 1/4 WAVE XFMR 25E HCKY RH
C177		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L50		056-10330-02	(L) IND SMD 330NH
C178		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L51		056-10330-02	(L) IND SMD 330NH
C179		015-06100-08	CAP CER 1206 100N 10% X7R 50V	L52		056-10330-02	(L) IND SMD 330NH
C180		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L55		051-00646-00	IND ETCHED HAIRPIN 13NH LPF
C181		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L57		051-00647-00	IND ETCHED HAIRPIN 14.6NH LPF
C182		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	L59		051-00647-00	IND ETCHED HAIRPIN 14.6NH LPF
C183		015-22470-01	CAP CER 0805 47P 5% NPO 50V	L61		051-00646-00	IND ETCHED HAIRPIN 13NH LPF

Ref	Var	IPN	Description	Ref	Var	IPN	Description
L63		052-56130-85	COIL A/W 8.5T/3.0MM HOR 0.56MM	R144		036-15820-00	RES M/F 0805 82K 5%
L64		051-00632-00	LNK 15MM 1.4MM2 COP STP 1.5SLV	R145		036-15470-10	RES M/F 0805 47K 1%
L65		051-00632-00	LNK 15MM 1.4MM2 COP STP 1.5SLV	R146		036-14180-00	RES M/F 0805 1K8 5%
L66		051-00632-00	LNK 15MM 1.4MM2 COP STP 1.5SLV	R148		036-15120-00	RES M/F 0805 12K 5%
L175		051-00638-01	COAX T889 SEMI-RIG N-TYPE EXTN	R149		036-14680-10	RES M/F 0805 6K8 1%
L200		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2	R151		036-15100-10	RES M/F 0805 10K 1%
L201		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2	R152		036-15100-10	RES M/F 0805 10K 1%
LINK2		036-10000-00	RES M/F 0805 ZERO OHM	R153		036-14470-10	RES M/F 0805 4K7 1%
P1		240-02100-44	SKT COAX MINI JACK PCB MT ANG.	R154		036-14470-10	RES M/F 0805 4K7 1%
Q1		000-00293-30	S) XSTR 2SC2933 NPN 900MHZ 14W	R155		036-13220-00	RES M/F 0805 220E 5%
Q2		000-00141-40	LS) XSTR SD1414 6LFL UHF 45W	R156		036-13100-10	RES M/F 0805 100E 1%
Q3		000-00141-40	LS) XSTR SD1414 6LFL UHF 45W	R158		001-10059-20	LS) DIODE SMD BA592 SW SOD323
Q4		000-00141-40	LS) XSTR SD1414 6LFL UHF 45W	R159		036-15100-10	RES M/F 0805 10K 1%
Q5		000-00141-40	LS) XSTR SD1414 6LFL UHF 45W	R160		036-14470-10	RES M/F 0805 4K7 1%
Q6		000-00141-40	LS) XSTR SD1414 6LFL UHF 45W	R162		036-17100-10	RES M/F 0805 1M 1%
Q101		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R164		036-14220-00	RES M/F 0805 2K2 5%
Q103		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	R165		036-14100-10	RES M/F 0805 1K 1%
Q105		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	R166		036-13680-00	RES M/F 0805 680E 5%
Q107		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R168		036-15100-10	RES M/F 0805 10K 1%
Q109		000-10008-69	S) XSTR SMD BC869 PNP 1W SOT89	R169		036-14100-10	RES M/F 0805 1K 1%
Q111		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R170		036-14100-10	RES M/F 0805 1K 1%
Q115		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R171		036-14100-10	RES M/F 0805 1K 1%
Q117		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	R172		036-15100-10	RES M/F 0805 10K 1%
Q119		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R173		036-13470-00	RES M/F 0805 470E 5%
Q121		000-10017-00	LS) XSTR SMD BF170LT1 SOT23	R174		036-13220-00	RES M/F 0805 220E 5%
Q123		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R175		036-16220-00	RES M/F 0805 220K 5%
Q125		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R176		036-15100-10	RES M/F 0805 10K 1%
Q127		000-10008-57	S) XSTR SMD BCW70 PNP SOT23 SS	R177		036-14470-10	RES M/F 0805 4K7 1%
Q129		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	R178		036-16100-00	RES M/F 0805 100K 5%
Q131		000-10017-00	LS) XSTR SMD BF170LT1 SOT23	R179		036-15100-10	RES M/F 0805 10K 1%
Q133		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R180		036-16150-00	RES M/F 0805 150K 5%
Q135		000-10008-17	S) XSTR SMD BC817-25 NPN SOT23	R181		036-14390-10	RES M/F 0805 3K9 1%
Q137		000-00030-95	S) XSTR 2N6107 PNP TO220 AF	R182		036-16100-00	RES M/F 0805 100K 5%
Q138		000-10008-48	S) XSTR SMD BCW60 NPN SOT23 SS	R183		036-14470-10	RES M/F 0805 4K7 1%
R1		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R184		036-14100-10	RES M/F 0805 1K 1%
R2		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R185		036-14220-00	RES M/F 0805 2K2 5%
R3		036-02100-02	RES 10E 1206 200V 250MW RC01	R186		036-13100-10	RES M/F 0805 100E 1%
R4		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R187		036-12220-00	RES M/F 0805 22E 5%
R5		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R188		036-16100-00	RES M/F 0805 100K 5%
R6		036-02100-02	RES 10E 1206 200V 250MW RC01	R189		036-14150-00	RES M/F 0805 1K5 5%
R10		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R190		036-12220-00	RES M/F 0805 22E 5%
R11		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R191		036-14100-10	RES M/F 0805 1K 1%
R12		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R192		036-13220-00	RES M/F 0805 220E 5%
R13		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R193		036-12100-00	RES M/F 0805 10E 5%
R14		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R194		036-12220-00	RES M/F 0805 22E 5%
R15		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R271		036-13680-00	RES M/F 0805 680E 5%
R19		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R272		039-50500-00	RES TERM 50E 50W RFP50-50TCG
R20		036-02100-03	L) RES 1218 PWR 10E 20% 1W	R274		039-00100-50	RES TERM 50E 100W RFP-100-50TW
R21		036-02100-02	RES 10E 1206 200V 250MW RC01	R275		039-50500-00	RES TERM 50E 50W RFP50-50TCG
R24		036-02100-02	RES 10E 1206 200V 250MW RC01	R276		039-02050-00	RES TERM 50E 20W RFP20-50TPC
R29		036-02100-02	RES 10E 1206 200V 250MW RC01	R277		039-50500-00	RES TERM 50E 50W RFP50-50TCG
R59A		036-01560-03	L) RES 1218 PWR 5E6 20% 1W	R278		039-02050-00	RES TERM 50E 20W RFP20-50TPC
R60		036-03820-03	L) RES 1218 PWR 820E 20% 1W	R280		036-14100-10	RES M/F 0805 1K 1%
R60A		036-03820-03	L) RES 1218 PWR 820E 20% 1W	R285		036-13560-00	RES M/F 0805 560E 5%
R72		045-04470-00	RES NTC SMD 4K7 5% 20MW	RV101		042-04500-05	RES PRESET SMD 5K CER 4MM SQ
R101		036-14100-10	RES M/F 0805 1K 1%	RV103		042-05500-05	RES PRESET SMD 50K CER 4MM SQ
R102		036-16220-00	RES M/F 0805 220K 5%	RV105		042-04500-05	RES PRESET SMD 5K CER 4MM SQ
R103		036-15330-00	RES M/F 0805 33K 5%	RV107		042-05500-05	RES PRESET SMD 50K CER 4MM SQ
R104		036-16470-00	RES M/F 0805 470K 5%	*RV109		044-04200-06	RES PRE MULT 2K 15T PNL MTG
R105		036-15150-00	RES M/F 0805 15K 5%	RV113		042-06500-05	RES PRESET SMD 500K CER 4MM SQ
R106		036-15150-00	RES M/F 0805 15K 5%	RV115		042-05200-05	RES PRESET SMD 20K CER 4MM SQ
R107		036-14390-10	RES M/F 0805 3K9 1%	SHIELD1		319-01219-00	SHIELD WALL T889 LOW PASS FILT
R108		036-14330-10	RES M/F 0805 3K3 1%	SK101		240-10000-05	CONN SMD SKT 8W 2R M-MATCH
R109		036-15100-10	RES M/F 0805 10K 1%	SK103		240-10000-05	CONN SMD SKT 8W 2R M-MATCH
R111		036-14820-10	RES M/F 0805 8K2 1%	SK105		240-10000-05	CONN SMD SKT 8W 2R M-MATCH
R112		036-14680-10	RES M/F 0805 6K8 1%	SK107		240-10000-05	CONN SMD SKT 8W 2R M-MATCH
R113		036-14100-10	RES M/F 0805 1K 1%				
R114		036-16100-00	RES M/F 0805 100K 5%				
R115		036-16220-00	RES M/F 0805 220K 5%				
R116		045-04470-00	RES NTC SMD 4K7 5% 20MW				
R117		036-16220-00	RES M/F 0805 220K 5%				
R118		036-15270-00	RES M/F 0805 27K 5%				
R119		036-16470-00	RES M/F 0805 470K 5%				
R120		036-15220-00	RES M/F 0805 22K 5%				
R121		036-15150-00	RES M/F 0805 15K 5%				
R122		036-14390-10	RES M/F 0805 3K9 1%				
R123		001-10059-20	LS) DIODE SMD BA592 SW SOD323				
R124		036-16100-00	RES M/F 0805 100K 5%				
R125		036-15100-10	RES M/F 0805 10K 1%				
R126		036-14100-10	RES M/F 0805 1K 1%				
R127		036-15100-10	RES M/F 0805 10K 1%				
R129		036-17100-10	RES M/F 0805 1M 1%				
R130		036-14220-00	RES M/F 0805 2K2 5%				
R131		036-16180-00	RES M/F 0805 180K 5%				
R132		036-14100-10	RES M/F 0805 1K 1%				
R133		036-15100-10	RES M/F 0805 10K 1%				
R134		036-13470-00	RES M/F 0805 470E 5%				
R135		036-13680-00	RES M/F 0805 680E 5%				
R136		036-15100-10	RES M/F 0805 10K 1%				
R137		036-14220-00	RES M/F 0805 2K2 5%				
R138		036-15100-10	RES M/F 0805 10K 1%				
R141		036-15100-10	RES M/F 0805 10K 1%				
R142		036-15100-10	RES M/F 0805 10K 1%				
R143		036-15100-10	RES M/F 0805 10K 1%				



## T889 Mechanical &amp; Miscellaneous Parts (220-01326-04)

IPN	Legend	Description	IPN	Legend	Description
025-08100-03		CAP 10M 35V 20% TANT 5MM L/S	356-00010-01		TAG SOLDER 3MM SHORT M6132/3.2
044-04200-07		RES POT COVER H-83P	356-00010-03		TAG SOLDER 3MM LONG M614/3.2
056-00021-02		IND FXD 100UH AX	356-00010-26		PIN TRACK HARWIN FOR 1.6MM PCB
070-01001-00		D-RANGE 15 WAY COMPL T800	356-00010-26		PIN TRACK HARWIN FOR 1.6MM PCB
201-00030-02		WIRE T/C WIRE 7/0.2 PVC RED	357-00010-45		CLAMP CABLE 4.8MM P CLIP
201-00050-25		AUTO 154 RED 41/0.3 PVC	360-00010-41		BUSH SHORTY BLK
201-00050-26		AUTO 154 BLACK 41/0.3 PVC	362-00010-07		GASKET SIL INSULATING TO-220
219-02591-01		LOOM RIBBON 8 WAY FOR T839PA	362-00010-13		BUSH INSULATING 1.1MM TOP HAT
219-02593-01		LOOM RIBBON ASSY FOR T889PA	362-00010-33		GROMMET LED MTG 3MM
219-02600-00		RG316 CABLE ASSEMBLY T889 PA	365-00100-20		LABEL WHITE S/A 28X11MM
219-02639-00		CABLE ASSEMBLY RG223/UN TO BNC	369-00010-14		TIE CABLE NYLON 100*2.6MM
220-01326-04		PCB T889 90W PA SERIES II	399-00010-56		BAG PLASTIC 200*250MM
240-02010-54		SKT 15W DRANGE PNL MTG 125 C	400-00020-07		SLEEVING 2MM SIL RUBBER
240-02100-51		SKT N-TYPE FLANGE FEM SEMI-RIG	400-00020-30		HEATSHRINK 3MM
240-06010-14		CLAMP LATCHING 15 W D RANGE			
240-06010-15		BLOCK LATCHING 15W D RANGE			
258-00010-06		FAN 12V 119x119x25 (CHAMPION)			
302-05204-00		BRKT A3M2314 F/THRU MTG T859			
303-11182-02		HEATSINK T889 MECH, DRILLED			
303-23117-00		COVER SIDE COMPL A2M2223			
306-01010-00		FERRULE A4M948 HANDLE			
308-01007-00		HANDLE A4M949 FXD EQUIP			
316-06515-00		PNL FRT T889 SCRND COMPLETE			
318-01011-00		RAIL A2M1872 BOTTOM T377 PA			
318-01012-00		RAIL A3M1873 TOP T377 PA			
319-01187-00		SHIELD LID T889 HARMONIC FLTR			
319-01202-00		SHIELD T869PA CONTROL CIRCUIT			
319-01220-00		SHIELD LID T889 LOW PASS FILTE			
319-30061-00		SPACER PLATE T889 WIRELINE			
319-30062-00		SPACER T889 PRE DRIVER XSTR			
319-40009-00		STRAP RF PWR XSTR EARTHING 889			
345-00040-09		SCRW M3*6MM CSK POZI TRUNC			
345-00040-16		SCRW M3X20MM P/POZ ST BZ			
349-00020-07		SCRW 4-40 X 5/16 P/POZ T/T BLK			
349-00020-09		SCRW T/T 4-40X3/8 IN P/POZ BLK			
349-00020-36		SCREW TT M3X8m PANTORX BLK			
349-00020-43		SCRW T/T M4X12MM P/POZ BZ			
349-00020-49		SCRW T/T M4X35MM P/POZ BZ			
349-00020-50		SCRW T/T 4-40 * 5/8 P/POZ BLK			
352-00010-29		NUT M4 NYLOC HEX			
353-00010-10		WSHR M3 FLAT 7MM*0.6MM ST BZ			



## T889 Grid Reference Index (IPN 220-01326-04)

### How To Use This Grid Reference Index

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

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

Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit
C1	1:R2	2-B4	C111	1:A3	1-D7	C225	1:N7	2-I4	L17	1:L2	2-K7
*C2	1:Q5	2-D3	C113	1:A2	1-F8	C245	1:F2	2-P7	L18	1:K2	2-K7
*C3	1:Q5	2-D3	C115	1:A2	1-F8	C250	1:G2	2-P5	L19	1:J1	2-N7
C4	1:A1	1-N7	C117	1:A2	1-F9	C252	1:G7	2-P3	L20	1:H1	2-N7
C6	1:S6	2-D4	C119	1:A2	1-G8	C258	1:F7	2-P1	L21	1:P8	2-I4
C7	1:S4	2-C4	C121	1:B5	1-B6				L23	1:G2	2-O7
*C9	1:Q6	2-E3	C123	1:B5	1-B6	D101	1:B4	1-H5	L24	1:M2	2-J7
*C10	1:Q6	2-F4	C125	1:A3	1-D6	D101	1:B4	1-H5	L26	1:L3	2-J5
*C11	1:Q6	2-F3	C127	1:B3	1-D6	D103	1:V8	1-M8	L27	1:L4	2-K5
*C12	1:Q6	2-G3	C129	1:A3	1-Q4	D105	1:A5	1-K2	L28	1:K5	2-K5
*C13	1:Q7	2-H3	C130	1:B3	1-J5	D105	1:A5	1-L2	L29	1:J4	2-N5
C14	1:Q7	2-H3	C131	1:A1	1-K6	D107	1:V9	1-L4	L30	1:H4	2-N5
C16	1:R8	2-G4	C132	1:A2	1-L7	D109	1:V8	1-N5	L32	1:H3	2-O5
C17	1:Q8	2-G4	C133	1:B1	1-M7	D113	1:P1	1-Q1	L33	1:L7	2-J3
C18	1:P8	2-F4	C139	1:A1	1-N6				L34	1:L6	2-K3
*C19	1:Q6	2-E3	C143	1:B3	1-D5	DCC1	1:E7	2-S4	L35	1:K5	2-K3
C20	1:K1	2-K7	C145	1:B3	1-E5	DCC4	1:D7	2-S3	L36	1:J6	2-N4
*C21	1:K2	2-L7	C147	1:E5	1-F4	DCC100	1:D6	2-T4	L37	1:H5	2-N4
C22	1:J2	2-M7	C149	1:E4	1-F5	DCC101	1:C6	2-U4	L39	1:H7	2-O3
C23	1:J1	2-M7	C151	1:B2	1-B4	DCC102	1:C8	2-U4	L40	1:G5	2-Q4
C24	1:J1	2-O7	C153	1:A1	1-B3	DCC103	1:B8	2-V4	L41	1:F5	2-Q5
C26	1:K4	2-K5	C155	1:D4	1-G3	DCC104	1:B6	2-V4	L42	1:F5	2-R5
*C27	1:K4	2-L5	C159	1:A5	1-K2	DCIC1	1:D7	2-S4	L43	1:M8	2-J1
C28	1:J4	2-M5	C161	1:A2	1-M4	DCIC2	1:E8	2-S4	L44	1:L8	2-K1
C29	1:J1	2-N6	C162	1:B3	1-N4	DCR1	1:D8	2-S4	L45	1:L7	2-K1
C30	1:J4	2-M5	C164	1:B2	1-P4	DCR2	1:E7	2-S4	L46	1:J9	2-N2
C31	1:J5	2-O5	C167	1:U4	1-P2				L47	1:H9	2-N2
C33	1:K6	2-K3	C169	1:U3	1-P2	IC101	1:D5	1-G0	L49	1:G8	2-O1
*C34	1:K6	2-L3	C171	1:U4	1-Q2	IC101	1:D5	1-B6	L50	1:E7	2-T5
C35	1:J6	2-M3	C173	1:D4	1-B0	IC101	1:D5	1-M0	L51	1:N1	2-U9
C36	1:J6	2-M3	C174	1:C5	1-C0	IC101	1:D5	1-B7	L52	1:D9	2-T3
C37	1:J5	2-N4	C176	1:E3	1-E0	IC101	1:D5	1-C1	L55	1:D6	2-T4
C39	1:H1	2-O6	C177	1:C1	1-F0	IC103	1:B1	1-C3	L57	1:C7	2-U4
C40	1:K8	2-K1	C178	1:E5	1-G0	IC103	1:B1	1-K8	L58	1:F2	2-R5
*C41	1:K8	2-L1	C179	1:C3	1-G2	IC103	1:B1	1-F0	L59	1:B8	2-U4
C42	1:J8	2-M1	C180	1:T8	2-D5	IC103	1:B1	1-L4	L61	1:B7	2-V4
C43	1:J9	2-M1	C181	1:T7	2-D5	IC103	1:B1	1-C2	L63	1:S2	2-A4
C44	1:J9	2-N2	C182	1:T8	2-C6	IC105	1:D3	1-G2	L64	1:H7	2-P3
C46	1:J9	2-O2	C183	1:S8	2-C5	IC105	1:D3	1-N0	L65	1:H2	2-O7
C47	1:H9	2-O2	C185	1:T8	2-C6	IC105	1:D3	1-M0	L66	1:Q2	2-F5
C48	1:E7	2-U5	C187	1:D2	1-J1	IC107	1:D2	1-K1	L175		2-W4
C52	1:C9	2-T3	C189	1:D3	1-N1	IC109	1:C2	1-N1	L200	1:T6	2-D7
C58	1:J6	2-O4	C190	1:D3	1-N1				L201	1:T7	2-D7
C59	1:H7	2-O4	C192	1:C2	1-N0	L1	1:U3	1-P2			
C60	1:H3	2-O4	C193	1:C4	1-P0	L2	1:Q5	2-C3	LINK2	1:V7	1-D1
C66	1:S3	2-B4	C195	1:C3	1-Q0	L3	1:P4	2-C3			
C67	1:H2	2-O6	C196	1:C2	1-J1	L4	1:R6	2-D4	P1	1:R2	2-A4
C68	1:H6	2-P4	C197	1:C2	1-L1	L5	1:S5	2-D4	P4	1:A7	2-W4
C72	1:H8	2-P2	C198	1:D2	1-L1	L6	1:S5	2-C5			
C73	1:Q8	2-F4	C199	1:D3	1-M1	L7	1:R6	2-F3	P101	1:A5	1-R9
C74	1:S4	2-B4	C200	1:T7	2-D6	L8	1:S7	2-F3	P112	1:U4	1-R0
C75	1:R4	2-C4	C201	1:T6	2-D6	L9	1:Q8	2-H4	P113	1:U2	1-R1
C97	1:P1	2-U9	C203	1:T7	2-C6	L10	1:R8	2-H4			
C98	1:P1	2-V9	C204	1:A1	1-N7	L11	1:Q6	2-E4	PL101	2:V3	2-D0
C101	1:D4	1-B7	C205	1:A1	1-P7	L12	1:U3	1-Q2			
C103	1:D5	1-B8	C206	1:T7	2-E5	L13	1:N5	2-I4	Q1	1:Q5	2-D4
C105	1:A3	1-D8	C207	1:S7	2-D5	L14	1:N5	2-I5	Q2	1:Q7	2-G4
C107	1:A3	1-D9	C210	1:D1	1-G1	L15	1:M5	2-J5	Q3	1:K1	2-M7
C109	1:A3	1-D8	C211	1:C1	1-H1	L16	1:R4	2-C4	Q4	1:K4	2-M5

Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit
Q5	1:K6	2-M3	R136	1:A2	1-L7	SK103	1:A4	2-F0			
Q6	1:K8	2-M1	R137	1:A2	1-L6	SK105	1:C1	2-I0			
Q101	1:A3	1-C8	R138	1:A3	1-M6	SK107	1:Q1	2-G0			
Q103	1:A3	1-D8	R141	1:B3	1-D5						
Q105	1:B2	1-D6	R142	1:B3	1-E5	TB1		2-I4			
Q107	1:A2	1-F8	R143	1:A3	1-E4	TB2		2-I4			
Q109	1:A2	1-G8	R144	1:B4	1-F4	TB3		2-P7			
Q111	1:A5	1-K7	R145	1:E4	1-F5	TB4		2-Q7			
Q115	1:A2	1-M7	R146	1:E4	1-F5	TB5		2-P5			
Q117	1:B1	1-M7	R148	1:B2	1-A4	TB6		2-P5			
Q119	1:A3	1-M6	R149	1:B4	1-A3	TB7		2-P3			
Q121	1:A1	1-P8	R151	1:B2	1-B4	TB8		2-P3			
Q123	1:B3	1-E5	R152	1:A1	1-B3	TB9		2-P1			
Q125	1:B3	1-E5	R153	1:B2	1-E4	TB10		2-Q1			
Q127	1:E4	1-F4	R154	1:A2	1-E3						
Q129	1:B2	1-N4	R155	1:D4	1-G2						
Q131	1:B3	1-P4	R156	1:D4	1-F3						
Q133	1:C5	1-E0	R158	1:A1	1-K3						
Q135	1:S8	2-C5	R159	1:A1	1-L4						
Q137	1:T8	2-B5	R160	1:C3	1-K4						
Q138	1:A1	1-K6	R162	1:A1	1-L3						
			R164	1:B2	1-M4						
R1	1:P5	2-C3	R165	1:B2	1-M3						
R2	1:S5	2-D4	R166	1:V8	1-N5						
R3	1:S5	2-C4	R168	1:C4	1-A1						
R4	1:R6	2-F3	R169	1:C5	1-A0						
R5	1:R8	2-G4	R170	1:C4	1-B1						
R6	1:Q8	2-G4	R171	1:C5	1-B0						
R10	1:L2	2-J7	R172	1:B4	1-B1						
R11	1:H1	2-N7	R173	1:V7	1-C1						
R12	1:L5	2-J5	R174	1:V7	1-C1						
R13	1:H4	2-N5	R175	1:C4	1-C0						
R14	1:L5	2-J3	R176	1:D4	1-D0						
R15	1:H5	2-N4	R177	1:D5	1-D0						
R19	1:L7	2-J1	R178	1:D3	1-E1						
R20	1:H9	2-N2	R179	1:D3	1-E0						
R21	1:H9	2-O2	R180	1:E3	1-E0						
R24	1:H6	2-O4	R181	1:D4	1-E2						
R29	1:H1	2-N6	R182	1:E3	1-E0						
R59A	1:R3	2-B4	R183	1:E3	1-F1						
R60	1:R3	2-B3	R184	1:S7	2-D5						
R60A	1:R3	2-B3	R185	1:D4	1-H2						
R72	1:P1	2-T9	R186	1:T8	2-C6						
R101	1:C4	1-A7	R187	1:C1	1-F0						
R102	1:E4	1-A9	R188	1:D2	1-L1						
R103	1:E5	1-A7	R189	1:C3	1-L0						
R104	1:D4	1-B9	R190	1:E4	1-G0						
R105	1:A5	1-C8	R191	1:C2	1-P0						
R106	1:A3	1-C8	R192	1:B2	1-P0						
R107	1:A5	1-D7	R193	1:B3	1-Q1						
R108	1:A3	1-D9	R194	1:D3	1-M1						
R109	1:A3	1-D8	R271	1:V9	1-L5						
R111	1:A3	1-E8	R272	1:F9	2-Q4						
R112	1:A2	1-E8	R274	1:G1	2-Q5						
R113	1:A2	1-F9	R275	1:F1	2-R5						
R114	1:B4	1-A6	R276	1:N9	2-I4						
R115	1:B5	1-A6	R277	1:N1	2-I5						
R116	1:B4	1-A6	R278	1:L1	2-J5						
R117	1:B5	1-A6	R280	1:A4	1-L3						
R118	1:B5	1-B6	R285	1:D1	1-H1						
R119	1:B4	1-C6									
R120	1:A5	1-K7	RV101	1:C4	1-J8						
R121	1:B4	1-C6	RV103	1:C4	1-H5						
R122	1:B5	1-D6	RV105	1:C3	1-K4						
R123	1:B2	1-H7	RV107	1:C2	1-K3						
R124	1:B1	1-K8	*RV109	1:V6	1-C2						
R125	1:B2	1-K8	RV111	1:V6	1-D2						
R126	1:B4	1-J5	RV113	1:C3	1-E1						
R127	1:A4	1-J7	RV115	1:C2	1-L1						
R129	1:B1	1-L8									
R130	1:B1	1-L8	S3	1:E8	2-T4						
R131	1:A2	1-K7	S4	1:D9	2-T3						
R132	1:B1	1-L8									
R133	1:A2	1-K7	SHIELD1	1:C7	2-C0						
R134	1:A1	1-K6									
R135	1:V9	1-M9	SK101	1:U3	2-K0						