

5.3 T839 Power Amplifier PCB

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T839 Parts List (IPN 220-01404-03)

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

C155	Changed from 10n (IPN 015-25100-08) to 100n (IPN 015-26100-08) for T839-20-1020 product type. Circuit reference changed to %C155.	
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).	
D113	Changed from MR750 (IPN 001-00011-60) to MR2520L (IPN 001-00012-90) to provide overvoltage transient suppression (750087/88/89/90/91/92).	
IC204	Changed from LMC622CM to LM358 (710382).	
*L236	Changed from through-hole link (IPN 051-00640-01) to SMD link (IPN 051-00640-02) (710580).	
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).	
*R206	Changed from 390Ω (IPN 036-13390-10) to 100Ω (IPN 036-13100-10)	} 100k thermistor assembly replaced with 10k item; values of associated components changed accordingly (710394/411/447).
R207, *R208	Changed from 47k (IPN 036-15470-10) to 4k7 (IPN 036-14470-10)	
R209	Changed from 1k5 (IPN 036-14150-10) to 390Ω (IPN 036-13390-10)	
R210	Changed from 4k7 (IPN 036-14470-10) to 390Ω (IPN 036-13390-10)	
*R211	Changed from 56k (IPN 036-15560-10) to 6k8 (IPN 036-14680-10)	
R213	Changed from 3k9 (IPN 036-14390-00) to 560Ω (IPN 036-13560-00)	
*R215	Changed from 100k NTC (IPN 045-06100-05) to 10k NTC (IPN 045-05100-02)	
R218	Changed from 390Ω (IPN 036-13390-10) to 100Ω (IPN 036-13100-10)	
R219	Changed from 100k NTC (IPN 045-06100-05) to 10k NTC (IPN 045-05100-02)	
R220, R222	Changed from 47k (IPN 036-15470-10) to 4k7 (IPN 036-14470-10)	
R224	Changed from 1k5 (IPN 036-14150-10) to 390Ω (IPN 036-13390-10)	
R228	Changed from 4k7 (IPN 036-14470-10) to 390Ω (IPN 036-13390-10)	
R229	Changed from 56k (IPN 036-15560-10) to 6k8 (IPN 036-14680-10)	

Parts List Amendments - Continued

- 258-00010-03 Cooling fan: some T839 PAs may be fitted with a different fan (IPN 258-00010-06). If so, a 100 μ H inductor (IPN 056-00021-02) may be fitted in series in the fan power feed wire with a 10 μ F capacitor (IPN 025-08100-03) fitted in parallel with this inductor (710977).
- 349-00020-36 The two M3x8 Torx screws which secure the module into the rack frame have been replaced by M3x8 Pozidriv screws (IPN 349-00020-55) (750101/2/3/5/6).

Ref	Var	IPN	Description	Ref	Var	IPN	Description
<p>Note: The T838 and T839 share the same basic design and are built on the same PCB. While most components in this design are common to both products, there are a number of components that are placed in only one product.</p> <p>Because the circuit diagrams for this design cover both products, we have indicated on the diagrams those components which are placed only in the T839 by enclosing them in a labelled box. The circuit reference for each of these components is also prefixed with the "*" character.</p> <p>The "*" character is used in this parts list to indicate components used only in the T839.</p>							
C222		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	C222		015-24470-08	CAP CER 0805 4N7 10% X7R 50V
C223		015-24100-08	CAP CER 0805 1N 10% X7R 50V	C223		015-24100-08	CAP CER 0805 1N 10% X7R 50V
C224		015-23680-08	CAP CER 0805 680P 10% X7R 50V	C224		015-23680-08	CAP CER 0805 680P 10% X7R 50V
C225		015-03680-06	CAP CER 1210 680P NPO200VGRM42	C225		015-03680-06	CAP CER 1210 680P NPO200VGRM42
C226		015-23680-08	CAP CER 0805 680P 10% X7R 50V	C226		015-23680-08	CAP CER 0805 680P 10% X7R 50V
C227		015-03680-06	CAP CER 1210 680P NPO200VGRM42	C227		015-03680-06	CAP CER 1210 680P NPO200VGRM42
C229		015-03680-03	CAP CER 680P 5% NPO100V GRH111	C229		015-03680-03	CAP CER 680P 5% NPO100V GRH111
*C230		015-06100-08	CAP CER 1206 100N 10% X7R 50V	*C230		015-06100-08	CAP CER 1206 100N 10% X7R 50V
*C231		015-03680-06	CAP CER 1210 680P NPO200VGRM42	*C231		015-03680-06	CAP CER 1210 680P NPO200VGRM42
*C232		015-03680-06	CAP CER 1210 680P NPO200VGRM42	*C232		015-03680-06	CAP CER 1210 680P NPO200VGRM42
*C233		015-06100-08	CAP CER 1206 100N 10% X7R 50V	*C233		015-06100-08	CAP CER 1206 100N 10% X7R 50V
*C234		014-07470-03	L) CAP TANT SMD 4U7 35V 20%	*C234		014-07470-03	L) CAP TANT SMD 4U7 35V 20%
*C240		015-03680-03	CAP CER 680P 5% NPO100V GRH111	*C240		015-03680-03	CAP CER 680P 5% NPO100V GRH111
C259		015-23680-08	CAP CER 0805 680P 10% X7R 50V	C259		015-23680-08	CAP CER 0805 680P 10% X7R 50V
C261		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	C261		015-24470-08	CAP CER 0805 4N7 10% X7R 50V
C268		029-02220-02	CAP MICA 5 CASE 22P 5%	C268		029-02220-02	CAP MICA 5 CASE 22P 5%
C270		029-02560-03	CAP MICA 10 CASE 56P 2%	C270		029-02560-03	CAP MICA 10 CASE 56P 2%
C271		029-02470-03	CAP MICA 10 CASE 47P 2%	C271		029-02470-03	CAP MICA 10 CASE 47P 2%
C272		029-02560-03	CAP MICA 10 CASE 56P 2%	C272		029-02560-03	CAP MICA 10 CASE 56P 2%
C273		029-02220-02	CAP MICA 5 CASE 22P 5%	C273		029-02220-02	CAP MICA 5 CASE 22P 5%
C294		015-23680-08	CAP CER 0805 680P 10% X7R 50V	C294		015-23680-08	CAP CER 0805 680P 10% X7R 50V
C295		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	C295		015-24470-08	CAP CER 0805 4N7 10% X7R 50V
C297		015-23680-08	CAP CER 0805 680P 10% X7R 50V	C297		015-23680-08	CAP CER 0805 680P 10% X7R 50V
C298		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	C298		015-24470-08	CAP CER 0805 4N7 10% X7R 50V
*C101		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D101		001-10000-70	(S) DIODE SMD BAV70 D-SW SOT23
*C103		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D103		008-00013-32	(S) LED 3 RED LO CURRENT NO MTG
*C105		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D105		001-10000-70	(S) DIODE SMD BAV70 D-SW SOT23
*C107		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D107		008-00013-35	(S) LED 3 GRN LO CURRENT NO MTG
*C109		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D109		008-00013-32	(S) LED 3 RED LO CURRENT NO MTG
*C111		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D111		001-10000-70	(S) DIODE SMD BAV70 D-SW SOT23
*C113		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D113		001-00011-60	(S) DIODE SR2607 -- USE MR750
*C115		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D201		001-00013-45	(S) DIODE SCHTTKY 1S97/2
*C117		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D202		001-10000-70	(S) DIODE SMD BAV70 D-SW SOT23
*C119		015-23680-08	CAP CER 0805 680P 10% X7R 50V	D203		001-00013-45	(S) DIODE SCHTTKY 1S97/2
*C121		015-23680-08	CAP CER 0805 680P 10% X7R 50V	IC101		002-10003-24	(S) IC SMD 324 4X O-AMP SO14
*C123		015-23680-08	CAP CER 0805 680P 10% X7R 50V	IC103		002-10003-24	(S) IC SMD 324 4X O-AMP SO14
*C124		015-23680-08	CAP CER 0805 680P 10% X7R 50V	IC105		002-10003-58	(S) IC SMD LM358 DUAL O-AMP
*C125		015-23680-08	CAP CER 0805 680P 10% X7R 50V	IC107		002-10003-17	(S) IC LM317L REG S0-8 100MA
*C127		015-23680-08	CAP CER 0805 680P 10% X7R 50V	IC109		002-10003-17	(S) IC LM317L REG S0-8 100MA
C129		015-23680-08	CAP CER 0805 680P 10% X7R 50V	#IC201	10	004-00687-02	MODULE M68702L 135-160MHZ 60W
C131		015-27100-10	CAP CER 0805 1M+80-20% Y5V 16V	#IC201	20	004-00687-03	MODULE M68702H 150-174MHZ 60W
C132		015-24100-08	CAP CER 0805 1N 10% X7R 50V	*#IC202	10	004-00687-02	MODULE M68702L 135-160MHZ 60W
C133		015-23680-08	CAP CER 0805 680P 10% X7R 50V	*#IC202	20	004-00687-03	MODULE M68702H 150-174MHZ 60W
C137		015-23680-08	CAP CER 0805 680P 10% X7R 50V	*IC203		051-00005-36	RFPOWER 3DB HYBRID COUPLER
C138		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	IC204		002-10006-62	(S) IC SMD LMC662CM 2X O-AMP
C139		015-23680-08	CAP CER 0805 680P 10% X7R 50V	*IC205		051-00005-36	RFPOWER 3DB HYBRID COUPLER
C141		014-07100-02	CAP TANT CHIP 1U0 3.2 X 1.6MM	L101		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C143		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L103		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C145		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L105		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C147		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	*L202		056-14150-02	(L) IND SMD 1.5UH
C149		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L203		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C151		015-23680-08	CAP CER 0805 680P 10% X7R 50V	*L204		056-14150-02	(L) IND SMD 1.5UH
C153		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L206		056-14150-02	(L) IND SMD 1.5UH
C155		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L208		056-14150-02	(L) IND SMD 1.5UH
C159		015-23680-08	CAP CER 0805 680P 10% X7R 50V	*L211		056-10330-02	(L) IND SMD 330NH
C161		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L215		052-08340-40	COIL A/W 4T/4.0MM SMD 0.8MM
C162		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L217		052-08340-40	COIL A/W 4T/4.0MM SMD 0.8MM
C164		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	*L223		052-08340-40	COIL A/W 4T/4.0MM SMD 0.8MM
C165		015-23680-08	CAP CER 0805 680P 10% X7R 50V	*L230		065-10004-20	BEAD FE SMD CBD 4.6/3/3-4S2
C167		015-24100-08	CAP CER 0805 1N 10% X7R 50V	*L231		052-08340-40	COIL A/W 4T/4.0MM SMD 0.8MM
C169		014-07470-03	L) CAP TANT SMD 4U7 35V 20%	L233		056-10330-02	(L) IND SMD 330NH
C171		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	*L236		051-00640-01	LNK 65.5 COP STPL C/W SLCN SLV
C173		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L239		056-10330-02	(L) IND SMD 330NH
C174		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L241		052-08360-20	COIL A/W 2T/6.0MM SMD 0.8MM
C176		015-06100-08	CAP CER 1206 100N 10% X7R 50V	L243		052-08340-20	COIL A/W 2T/4.0MM SMD 0.8MM
C178		015-25100-08	CAP CER 0805 10N 10% X7R 50V	L245		052-08345-10	COIL A/W 1T/4.5MM SMD 0.8MM
C179		015-06150-08	CAP CER1206150N10% X7R25VW 25V	L247		052-08340-20	COIL A/W 2T/4.0MM SMD 0.8MM
C180		015-23680-08	CAP CER 0805 680P 10% X7R 50V	L248		052-08345-10	COIL A/W 1T/4.5MM SMD 0.8MM
C181		015-23100-01	CAP CER 0805 100P 5% NPO 50V	L249		052-08360-20	COIL A/W 2T/6.0MM SMD 0.8MM
C182		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	L264		056-10330-02	(L) IND SMD 330NH
C184		015-25100-08	CAP CER 0805 10N 10% X7R 50V	LINK1		240-00020-68	HEADER 2W PCB MTG STD
C185		015-23680-08	CAP CER 0805 680P 10% X7R 50V	LINK2		036-10000-00	RES M/F 0805 ZERO OHM
C186		015-23680-08	CAP CER 0805 680P 10% X7R 50V	LINK201		240-00020-59	HEADER 3 W 1 R PCB MTG
C187		015-06100-08	CAP CER 1206 100N 10% X7R 50V	PL101		240-00010-55	PLUG 15 W D RANGE W/W PNL MT
C188		014-08100-00	CAP TANT CHIP 10M 16VW +20%	*Q101		000-10008-57	(S) XSTR SMD BCW70 PNP SOT23 SS
C189		015-25100-08	CAP CER 0805 10N 10% X7R 50V	*Q103		000-10008-17	(S) XSTR SMD BC817-25 NPN SOT23
C190		015-23680-08	CAP CER 0805 680P 10% X7R 50V	*Q105		000-10008-17	(S) XSTR SMD BC817-25 NPN SOT23
C192		015-06100-08	CAP CER 1206 100N 10% X7R 50V	*Q107		000-10008-57	(S) XSTR SMD BCW70 PNP SOT23 SS
C193		015-06100-08	CAP CER 1206 100N 10% X7R 50V	*Q109		000-10008-69	(S) XSTR SMD BC869 PNP 1W SOT89
C195		014-08100-00	CAP TANT CHIP 10M 16VW +20%	Q111		000-10008-57	(S) XSTR SMD BCW70 PNP SOT23 SS
C201		014-07470-03	L) CAP TANT SMD 4U7 35V 20%	Q113		000-10008-48	(S) XSTR SMD BCW60 NPN SOT23 SS
*C202		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	Q115		000-10008-57	(S) XSTR SMD BCW70 PNP SOT23 SS
C205		015-06100-08	CAP CER 1206 100N 10% X7R 50V	Q117		000-10008-17	(S) XSTR SMD BC817-25 NPN SOT23
C207		015-06100-08	CAP CER 1206 100N 10% X7R 50V	Q119		000-10008-48	(S) XSTR SMD BCW60 NPN SOT23 SS
*C208		015-23680-08	CAP CER 0805 680P 10% X7R 50V	Q121		000-10017-00	(L) XSTR SMD BF170LT1 SOT23
*C209		015-23680-08	CAP CER 0805 680P 10% X7R 50V	Q123		000-10008-57	(S) XSTR SMD BCW70 PNP SOT23 SS
*C210		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	Q125		000-10008-57	(S) XSTR SMD BCW70 PNP SOT23 SS
*C212		015-24100-08	CAP CER 0805 1N 10% X7R 50V	Q127		000-10008-57	(S) XSTR SMD BCW70 PNP SOT23 SS
*C213		015-23680-08	CAP CER 0805 680P 10% X7R 50V	Q129		000-10008-17	(S) XSTR SMD BC817-25 NPN SOT23
C215		015-23680-08	CAP CER 0805 680P 10% X7R 50V	Q131		000-10017-00	(L) XSTR SMD BF170LT1 SOT23
C216		015-24470-08	CAP CER 0805 4N7 10% X7R 50V	Q133		000-10008-48	(S) XSTR SMD BCW60 NPN SOT23 SS
*C217		015-03680-06	CAP CER 1210 680P NPO200VGRM42	Q135		000-10008-17	(S) XSTR SMD BC817-25 NPN SOT23
C218		015-23680-08	CAP CER 0805 680P 10% X7R 50V				
*C219		015-03680-06	CAP CER 1210 680P NPO200VGRM42				
C220		015-23680-08	CAP CER 0805 680P 10% X7R 50V				
C221		015-06100-08	CAP CER 1206 100N 10% X7R 50V				

Ref	Var	IPN	Description	Ref	Var	IPN	Description
Q136		000-10008-17	(S) XSTR SMD BC817-25 NPN SOT23	R207		036-15470-10	RES M/F 0805 47K 1%
Q137		000-00030-95	(S) XSTR 2N6107 PNP TO220 AF	*R208		036-15470-10	RES M/F 0805 47K 1%
Q201		000-10008-48	(S) XSTR SMD BCW60 NPN SOT23 SS	R209		036-14150-10	RES MF 0805 CHIP 1K5 1%
R101		036-14100-00	RES M/F 0805 1K 5%	R210		036-14470-10	RES M/F 0805 CHIP 4K7 1%
*R102		036-16220-00	RES M/F 0805 220K 5%	*R211		036-15560-10	RES MF 0805 CHIP 56K 1%
R103		036-15330-00	RES M/F 0805 33K 5%	R212		036-15100-00	RES M/F 0805 10K 5%
R104		036-16470-00	RES M/F 0805 470K 5%	R213		036-14390-00	RES M/F 0805 3K9 5%
*R105		036-15150-00	RES M/F 0805 15K 5%	R214		036-14470-00	RES M/F 0805 4K7 5%
*R106		036-15150-00	RES M/F 0805 15K 5%	*R215			available as sub-assembly only - refer to (20) (045-06100-05) in the mechanical parts list
*R107		036-14390-00	RES M/F 0805 3K9 5%	*R216		036-03100-02	RES 100E 1206 200V 250MW RC01
*R108		036-14330-00	RES M/F 0805 3K3 5%	*R217		036-03100-02	RES 100E 1206 200V 250MW RC01
*R109		036-15100-00	RES M/F 0805 10K 5%	R218		036-13390-10	RES MF 0805 CHIP 390E 1%
*R111		036-14820-00	RES M/F 0805 8K2 5%	R219			available as sub-assembly only - refer to (20) (045-06100-05) in the mechanical parts list
*R112		036-14680-00	RES M/F 0805 6K8 5%	R220		036-15470-10	RES M/F 0805 47K 1%
*R113		036-14100-00	RES M/F 0805 1K 5%	R222		036-15470-10	RES M/F 0805 47K 1%
*R114		036-16100-00	RES M/F 0805 100K 5%	*R223		039-05050-00	RES TO22050E 50W MP850
*R115		036-16220-00	RES M/F 0805 220K 5%	R224		036-14150-10	RES MF 0805 CHIP 1K5 1%
*R116		045-04470-00	RES NTC SMD 4K7 5% 20MW	R225		030-03120-00	RES FILM 120E 5% 0.25W 7X2.5
R117		036-16220-00	RES M/F 0805 220K 5%	R228		036-14470-10	RES M/F 0805 CHIP 4K7 1%
R118		036-15270-00	RES M/F 0805 27K 5%	R229		036-15560-10	RES MF 0805 CHIP 56K 1%
R119		036-16470-00	RES M/F 0805 470K 5%	*R230		036-02100-02	RES 10E 1206 200V 250MW RC01
*R121		036-15150-00	RES M/F 0805 15K 5%	R231		030-03120-00	RES FILM 120E 5% 0.25W 7X2.5
*R122		036-14390-00	RES M/F 0805 3K9 5%	*R232		036-02100-02	RES 10E 1206 200V 250MW RC01
R123		036-14100-00	RES M/F 0805 1K 5%	R237		045-04470-00	RES NTC SMD 4K7 5% 20MW
R124		036-16100-00	RES M/F 0805 100K 5%	RV101		042-04500-05	RES PRESET SMD 5K CER 4MM SQ
R125		036-15100-00	RES M/F 0805 10K 5%	RV103		042-05500-05	RES PRESET SMD 50K CER 4MM SQ
R126		036-14100-00	RES M/F 0805 1K 5%	RV105		042-04500-05	RES PRESET SMD 5K CER 4MM SQ
R127		036-15100-00	RES M/F 0805 10K 5%	RV107		042-05500-05	RES PRESET SMD 50K CER 4MM SQ
R128		036-15220-00	RES M/F 0805 22K 5%	RV109		044-04200-03	RES PRE 2K 10 TURN PNL MTG
R129		036-17100-00	RES M/F 0805 1M 5%	RV113		042-06500-05	RES PRESET SMD 500K CER 4MM SQ
R130		036-14220-00	RES M/F 0805 2K2 5%	RV115		042-04220-05	RES PRESET SMD 2K CER 4MM SQ
R131		036-16180-00	RES M/F 0805 180K 5%	SK101		240-10000-05	CONN SMD SKT 8W 2R M-MATCH
R132		036-14100-00	RES M/F 0805 1K 5%	SK103		240-10000-05	CONN SMD SKT 8W 2R M-MATCH
R133		036-15100-00	RES M/F 0805 10K 5%	*SK201		240-02100-44	SKT COAX MINI JACK PCB MT ANG.
R134		036-13470-00	RES M/F 0805 470E 5%				
R135		036-13680-00	RES M/F 0805 680E 5%				
R136		036-15100-00	RES M/F 0805 10K 5%				
R137		036-13470-00	RES M/F 0805 470E 5%				
R138		036-15100-00	RES M/F 0805 10K 5%				
R141		036-15100-00	RES M/F 0805 10K 5%				
R142		036-15100-00	RES M/F 0805 10K 5%				
R143		036-15100-00	RES M/F 0805 10K 5%				
R144		036-15820-00	RES M/F 0805 82K 5%				
R145		036-15470-00	RES M/F 0805 47K 5%				
R146		036-14180-00	RES M/F 0805 1K8 5%				
R148		036-14820-00	RES M/F 0805 8K2 5%				
R149		036-13470-00	RES M/F 0805 470E 5%				
R150		036-12220-00	RES M/F 0805 22E 5%				
R151		036-15100-00	RES M/F 0805 10K 5%				
R152		036-15100-00	RES M/F 0805 10K 5%				
R153		036-14680-00	RES M/F 0805 6K8 5%				
R154		036-14680-00	RES M/F 0805 6K8 5%				
R155		036-13220-00	RES M/F 0805 220E 5%				
R156		036-13100-00	RES M/F 0805 100E 5%				
R157		036-12220-00	RES M/F 0805 22E 5%				
R158		036-14100-00	RES M/F 0805 1K 5%				
R159		036-15100-00	RES M/F 0805 10K 5%				
R160		036-14470-00	RES M/F 0805 4K7 5%				
R161		036-14100-00	RES M/F 0805 1K 5%				
R162		036-17100-00	RES M/F 0805 1M 5%				
R163		036-13680-00	RES M/F 0805 680E 5%				
R164		036-14220-00	RES M/F 0805 2K2 5%				
R165		036-14100-00	RES M/F 0805 1K 5%				
R166		036-13680-00	RES M/F 0805 680E 5%				
R168		036-15100-10	RES M/F 0805 10K 1%				
R169		036-14100-00	RES M/F 0805 1K 5%				
R170		036-14100-00	RES M/F 0805 1K 5%				
R171		036-14100-00	RES M/F 0805 1K 5%				
R172		036-15100-10	RES M/F 0805 10K 1%				
R173		036-13470-00	RES M/F 0805 470E 5%				
R174		036-13220-00	RES M/F 0805 220E 5%				
R175		036-16220-00	RES M/F 0805 220K 5%				
R176		036-15100-00	RES M/F 0805 10K 5%				
R177		036-14470-00	RES M/F 0805 4K7 5%				
R178		036-16100-00	RES M/F 0805 100K 5%				
R179		036-15100-00	RES M/F 0805 10K 5%				
R180		036-16150-00	RES M/F 0805 150K 5%				
R181		036-14560-00	RES M/F 0805 5K6 5%				
R182		036-16100-00	RES M/F 0805 100K 5%				
R183		036-14470-00	RES M/F 0805 4K7 5%				
R184		036-14100-00	RES M/F 0805 1K 5%				
R185		036-03100-02	RES 100E 1206 200V 250MW RC01				
R186		036-13100-00	RES M/F 0805 100E 5%				
R187		036-03150-03	RES 1218 PWR CHIP 150E 20% 1W				
R188		036-13220-00	RES M/F 0805 220E 5%				
R189		036-12100-00	RES M/F 0805 10E 5%				
R190		036-12220-00	RES M/F 0805 22E 5%				
R191		036-14100-10	RES M/F 0805 CHIP 1K 1%				
R192		036-13220-10	RES 0805 220E 1%				
R193		036-12100-00	RES M/F 0805 10E 5%				
R194		036-03220-03	RES 1218 PWR CHIP 220E 20% 1W				
R195		036-14220-00	RES M/F 0805 2K2 5%				
R196		036-13100-00	RES M/F 0805 100E 5%				
R197		036-10000-00	RES M/F 0805 ZERO OHM				
R203		036-02100-02	RES 10E 1206 200V 250MW RC01				
R205		036-02100-02	RES 10E 1206 200V 250MW RC01				
*R206		036-13390-10	RES MF 0805 CHIP 390E 1%				

T839 Mechanical & Miscellaneous Parts (220-01404-03)

IPN	Legend	Description	IPN	Legend	Description
000-00030-95	15	Q137	319-01152-00	23	SHIELD A3M2250 F/THRU MTG
004-00687-02/3	18	#IC201, *#IC202	319-01190-01	3	SHIELD WALL HARM. FILTER
012-04100-05	35	CAP F/THRU 1N SUPPR FLTR S-MTG	319-01201-00	41	SHIELD LID HARM. FILTER
012-04150-01	26	CAP CER F/THRU 1N5 NO LEAD	319-01202-00	4	SHIELD CONTROL CIRCUIT
039-05050-00	11	*R223	319-30064-00	17	SPACER HSINK RF MODULE
045-06100-05	20	ASSY 100K NTC FOR MODULE *R215, R219	345-00040-16	27	SCRW M3X20MM P/POZ ST BZ
051-00005-36	9	*IC203, *IC205	349-00010-59	21	SCRW 6-32 X 3/8 P/PH T/T ZP
051-00006-02		SOLDER SPRING 1.3MM A4M1877 Support for front panel LED solder joints.	349-00020-07	8	SCRW 4-40 X 5/16 P/POZ T/T BLK
051-00642-01	32	COAX SEMI-RIG N-TYPE EXTN	349-00020-08	7	SCRW T/T 4-40X3/8 CSK POZI BZ Secure *IC203/205 couplers to heatsink.
065-00010-13	25	BEAD FER 7D 1.9X0.9X3.8	349-00020-09	13	SCRW T/T 4-40X3/8 IN P/POZ BLK
201-00030-02		WIRE T/C 7/0.2 PVC RED Front panel LEDs.	349-00020-36	47	LIM)SCREW TT M3X8m PANTORX BLK
201-00030-10		WIRE T/C 7/0.2 PVC BLACK Front panel LEDs.	349-00020-43	40	SCRW T/T M4X12MM P/POZ BZ
201-00050-25		AUTO 154 RED 41/0.3 PVC DC+ from D-range PCB.	349-00020-49	38	SCRW T/T M4X35MM P/POZ BZ
201-00050-26		AUTO 154 BLACK 41/0.3 PVC DC- from D-range PCB.	352-00010-04	10	NUT M2.5 MACH HEX ST BZ
206-00010-11		COAX 50 OHM RG316-U PTFE Coax from BNC connector to *SK201.	352-00010-29	46	NUT M4 NYLOC HEX
219-02591-00	22	LOOM RIBBON 8 WAY FOR PA	353-00010-10	12	WSHR M3 FLAT 7MMX0.6MM ST BZ
219-02592-00		CABLE ASSY RG223/U N TO BNC Exciter/PA connecting cable.	356-00010-01	36	TAG SOLDER 3MM SHORT M6132/3.2
220-01402-02	2	PCB T838/9 TEFLON DIRNL COUPLER	356-00010-03	2	TAG SOLDER 3MM LONG M614/3.2
220-01404-03	1	PCB T838/9 PA MODULE DESIGN	356-00010-05	19	TAG SOLDER 4MM LONG M6144/4.2
240-00010-55	24	PLUG 15 W D RANGE W/W PNL MT PL101	357-00010-45	39	CLAMP CABLE 4.8MM P CLIP
240-00100-43		PLG COAX MINI PIN CRIMP 1.5D Coax from BNC connector to *SK201.	360-00010-41	44	BUSH SHORTY BLK
240-02010-54		SKT 15W DRANGE PNL MTG 125 C Matching socket for D-range plug PL101.	362-00010-07	14	GASKET SIL INSULATING TO-220
240-02100-06	31	SKT COAX N TYPE PNL MTG OP-TER	362-00010-13	16	BUSH INSULATING 1.1MM TOP HAT
240-02100-17	33	SKT COAX BNC PNL JAC CRP RG316	362-00010-33	43	GROMMET LED MTG 3MM
240-04020-62		SKT 2 W RECEP SHORTING LINK LINK1	365-00100-20		LABEL WHITE S/A 28X11MM
240-06010-14		CLAMP LATCHING 15 W D RANGE Cover for D-range socket.	365-01391-01		LABEL 30X10.8 T/MARK VOID
240-06010-15	29	BLOCK LATCHING 15W D RANGE	365-01539-00		LABEL WARNING 120W/PWR CLAMP
240-06010-44	30	HOOD CONN UHF & N-TYPE	369-00010-14		TIE CABLE NYLON 100X2.6MM
258-00010-03	37	FAN 12V 119X119X25MM TUBE AX	399-00010-56		BAG PLASTIC 200X250MM
302-05204-00	34	BRKT A3M2314 F/THRU MTG	400-00020-07		SLEEVING 2MM SIL RUBBER
303-23146-00	48	COVER SIDE T838/9 PA	400-00020-30		HEATSHRINK 3MM
308-01007-01	45	HANDLE BASE STATION SERIES II	410-00010-43		PKG T296 AMPAC REF 73-46
308-13122-02	5	HEATSINK T838/9 PA COMPLETE			
308-13125-00	6	HEATSINK T839 COUPLER			
316-06651-00	42	PANEL PA 100W REAR DRV SER II			

replace A4 pages D5.3.9/D5.3.10 with A3 pages D5.3.9/D5.3.10

replace A4 pages D5.3.9/D5.3.10 with A3 pages D5.3.9/D5.3.10

T839 Grid Reference Index (IPN 220-01404-03)

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
Note: This grid reference index covers both the T838 and T839 and is reproduced in both PCB Information sections for your convenience.			C187	1:D3	1-K1	D113	1:F7	1-Q2	PL101	1:L3	1-C2
*C101	1:E4	1-B8	C188	1:C2	1-L1	D201	1:F6	2-Q3	*Q101	1:C3	1-C9
*C103	1:E4	1-B9	C189	1:C3	1-M1	D202	1:D4	2-18	*Q103	1:B3	1-E8
*C105	1:B3	1-D8	C190	1:C3	1-N1	D202	1:D4	2-18	*Q105	1:C4	1-D7
*C107	1:B3	1-D9	C192	1:B2	1-N1	D203	1:E6	2-R2	*Q107	1:B5	1-F8
*C109	1:B3	1-D8	C193	1:B2	1-P1	IC101	1:D4	1-C6	*Q109	1:A5	1-G9
*C111	1:C4	1-D8	C195	1:C2	1-Q1	IC101	1:D4	1-G0	Q111	1:A3	1-J7
*C113	1:B5	1-F8	C201	1:J7	2-L5	IC101	1:D4	1-B8	Q113	1:A3	1-K6
*C115	1:B5	1-F8	*C202	1:H3	2-B8	IC101	1:D4	1-C0	Q115	1:A3	1-L7
*C117	1:B5	1-F9	*C203	1:P7	2-C1	IC101	1:D4	1-N0	Q117	1:B4	1-K8
*C119	1:B5	1-G8	*C204	1:M6	2-E1	IC103	1:C4	1-D4	Q119	1:B4	1-L6
*C121	1:D4	1-B6	C205	1:L7	2-I5	IC103	1:C4	1-J8	Q121	1:B3	1-L8
*C123	1:D4	1-B6	*C206	1:P6	2-C1	IC103	1:C4	1-F0	Q123	1:E3	1-E7
*C124	1:E3	1-C6	C207	1:K7	2-K5	IC103	1:C4	1-J5	Q125	1:E3	1-F7
*C125	1:C4	1-D7	*C208	1:H3	2-C8	IC103	1:C4	1-E3	Q127	1:D3	1-G7
*C127	1:C4	1-D6	*C209	1:C5	2-D8	IC105	1:D3	1-M0	Q129	1:B4	1-L4
C129	1:B3	1-H5	*C210	1:C5	2-E8	IC105	1:D3	1-P0	Q131	1:B3	1-M5
C131	1:B3	1-J6	*C212	1:D5	2-G9	IC105	1:D3	1-G2	Q133	1:D4	1-D0
C132	1:A3	1-K7	*C213	1:D4	2-H9	IC107	1:D3	1-K1	Q135	1:E2	1-H0
C133	1:B4	1-K8	C215	1:D5	2-J8	IC109	1:B2	1-N1	Q136	1:E3	1-H0
C137	1:B2	1-K8	C216	1:H6	2-B6	#IC201	1:K7	2-I4	Q137	1:D2	1-J0
C138	1:B2	1-L8	*C217	1:P3	2-E3	*#IC202	1:K4	2-I1	Q201	1:D5	2-K8
C139	1:B4	1-M6	C218	1:H5	2-C6	*IC203	1:N5	2-F2	R101	1:E4	1-A8
C141	1:B3	1-M8	*C219	1:P2	2-E3	IC204	1:D5	2-H7	*R102	1:E4	1-A9
C143	1:E3	1-E7	C220	1:E5	2-D6	IC204	1:D5	2-H8	R103	1:E4	1-A8
C145	1:E3	1-F7	C221	1:E5	2-N8	IC204	1:D5	2-N8	R104	1:E4	1-B9
C147	1:D3	1-F6	C222	1:E5	2-E6	*IC205	1:G5	2-P2	*R105	1:D4	1-C8
C149	1:D3	1-F7	C223	1:D5	2-G7	L101	1:K3	1-P3	*R106	1:B3	1-C8
C151	1:C5	1-D5	C224	1:D5	2-M8	L103	1:K2	1-Q3	*R107	1:C4	1-D7
C153	1:B5	1-D3	C225	1:L6	2-I4	L105	1:E2	1-K0	*R108	1:B3	1-E9
C155	1:D3	1-G3	C226	1:D4	2-H7	*L201	1:P7	2-C1	*R109	1:C3	1-E9
C159	1:B3	1-H2	C227	1:K6	2-J4	*L202	1:H3	2-B8	*R111	1:B5	1-E8
C161	1:B4	1-K4	C229	1:H6	2-K4	L203	1:L7	2-I6	*R112	1:B5	1-E9
C162	1:B3	1-L4	*C230	1:L4	2-I2	*L204	1:C5	2-D8	*R113	1:B5	1-F9
C164	1:B3	1-L4	*C231	1:L4	2-I1	L206	1:H5	2-B7	*R114	1:C4	1-A6
C165	1:B3	1-M4	*C232	1:K4	2-J1	L208	1:E5	2-D7	*R115	1:C5	1-A6
C167	1:K3	1-P3	*C233	1:K4	2-K2	*L211	1:P2	2-D3	*R116	1:D4	1-A7
C169	1:K3	1-P3	*C234	1:J4	2-L1	L215	1:L7	2-I5	R117	1:C4	1-A6
C171	1:K3	1-Q3	*C240	1:H4	2-K1	L217	1:J7	2-K5	R118	1:D4	1-B6
C173	1:D4	1-B0	C259	1:F7	2-Q3	*L223	1:J4	2-K2	R119	1:D4	1-C7
C174	1:E4	1-B0	C261	1:F6	2-Q4	*L230	1:L4	2-I3	*R120	1:E3	1-H7
C176	1:D4	1-E0	C268	1:E6	2-S2	*L231	1:L4	2-I2	*R121	1:C4	1-C7
C178	1:C4	1-F0	C270	1:D6	2-T2	L233	1:F6	2-Q3	*R122	1:C4	1-D6
C179	1:D3	1-G2	C271	1:C6	2-T2	*L236	1:H6	2-M2	R123	1:B4	1-H7
C180	1:E2	1-H0	C272	1:B6	2-U2	L239	1:E5	2-R2	R124	1:B4	1-H8
C181	1:D3	1-G0	C273	1:B6	2-V2	L241	1:D6	2-S3	R125	1:B4	1-H8
C182	1:D3	1-H1	C294	1:D6	2-R1	L243	1:C6	2-T3	R126	1:B3	1-H6
C184	1:D4	1-G0	C295	1:D6	2-R1	L245	1:C7	2-T2	R127	1:A3	1-H7
C185	1:D2	1-J1	C297	1:C5	2-L8	L247	1:C6	2-U3	R128	1:A3	1-J7
C186	1:E2	1-J0	C298	1:C6	2-L8	L248	1:D7	2-U2	R129	1:B4	1-J9
			D101	1:B3	1-H5	L249	1:B6	2-V3	R130	1:B4	1-J8
			D101	1:B3	1-G5	L264	1:C6	2-L8	R131	1:A3	1-J7
			D103	1:P7	1-K9	LINK1	1:D3	1-L0	R132	1:B5	1-J8
			D105	1:C2	1-J2	LINK2	1:P6	1-D1	R133	1:A3	1-K7
			D105	1:C2	1-J2	LINK201	1:D5	2-F8	R134	1:B3	1-K6
			D107	1:P7	1-K5	P101	1:A5	1-R9	R135	1:P7	1-K9
			D109	1:P6	1-L5	P103	1:K3	1-R0	R136	1:A3	1-K7
			D111	1:C2	1-M1	P105	1:K2	1-R0	R137	1:B3	1-K6
			D111	1:C2	1-M1	P201	1:B6	2-V3	R138	1:B4	1-L6

<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>	<u>Device</u>	<u>PCB</u>	<u>Circuit</u>
R141	1:E3	1-C6	*R223	1:F2	2-P2						
R142	1:E3	1-E7	R224	1:D4	2-G7						
R143	1:E4	1-F6	R225	1:E6	2-R3						
R144	1:D3	1-F6	R228	1:E4	2-G7						
R145	1:E4	1-F7	R229	1:D4	2-H7						
R146	1:E4	1-G7	*R230	1:L4	2-I2						
R148	1:C5	1-D5	R231	1:F5	2-Q2						
R149	1:C5	1-C4	*R232	1:K4	2-K1						
R150	1:C4	1-F0	R237	1:C5	2-K8						
R151	1:B5	1-D5	RV101	1:C4	1-H8						
R152	1:B5	1-C3	RV103	1:C4	1-H6						
R153	1:C5	1-F4	RV105	1:C3	1-J5						
R154	1:C5	1-F3	RV107	1:C3	1-J3						
R155	1:D3	1-F2	RV109	1:P5	1-C2						
R156	1:D3	1-F3	*RV111	1:P5	1-D1						
R157	1:D4	1-G0	RV113	1:C3	1-D0						
R158	1:C4	1-H3	RV115	1:C3	1-K0						
R159	1:C4	1-H4	SK101	1:K3	1-A2						
R160	1:C3	1-J5	SK103	1:B4	1-B2						
R161	1:B3	1-J3	*SK201	1:N3	2-D3						
R162	1:B3	1-K4	*SK203	1:N7	2-C1						
R163	1:P8	1-K5									
R164	1:B3	1-K4									
R165	1:B4	1-K4									
R166	1:P7	1-L5									
R168	1:E4	1-A1									
R169	1:E4	1-A0									
R170	1:D4	1-B0									
R171	1:E4	1-B0									
R172	1:E4	1-B0									
R173	1:P6	1-C1									
R174	1:P6	1-C1									
R175	1:D4	1-C0									
R176	1:D4	1-D0									
R177	1:D4	1-D0									
R178	1:D3	1-E1									
R179	1:D4	1-E0									
R180	1:D4	1-E0									
R181	1:E3	1-F2									
R182	1:D4	1-E0									
R183	1:D4	1-F1									
R184	1:E3	1-G1									
R185	1:E2	1-J0									
R186	1:D2	1-H1									
R187	1:E2	1-H0									
R188	1:D2	1-L1									
R189	1:D2	1-L1									
R190	1:C3	1-M1									
R191	1:B2	1-P1									
R192	1:B2	1-P1									
R193	1:C2	1-Q1									
R194	1:D2	1-H0									
R195	1:D3	1-J0									
R196	1:D3	1-J0									
R197	1:D3	1-L1									
*R201	1:N6	2-D1									
*R202	1:N6	2-D1									
R203	1:L7	2-I5									
*R204	1:N6	2-D1									
R205	1:K7	2-K4									
*R206	1:C5	2-E8									
R207	1:D4	2-F8									
*R208	1:C5	2-G9									
R209	1:D5	2-G8									
R210	1:D5	2-G8									
*R211	1:D4	2-H9									
R212	1:D4	2-I8									
R213	1:D5	2-E7									
R214	1:E4	2-J8									
*R215	1:H3	2-B8									
*R216	1:P6	2-E2									
*R217	1:P6	2-E2									
R218	1:E5	2-E7									
R219	1:H6	2-B6									
R220	1:E5	2-F7									
R222	1:D5	2-G7									