

# 7 PCB Information

The information included in this chapter provides a means of locating and identifying components of interest on the Main PCB of the MDT. The information provided is arranged in four separate but interrelated sections, namely:

- parts list
- component grid reference index
- grid-referenced PCB layout
- circuit diagram.

## 7.1 Using the PCB Information

The following paragraphs outline the salient features of the supplied PCB information, and describe the most effective ways of using it.

- Each individual component is uniquely identified on the circuit diagram and PCB layouts by an alphanumeric component reference code (e.g. C201, D106, R121).
- The circuit diagram and PCB layouts included in this chapter are printed with alphanumeric grid similar to that printed on a map. The grid provides a spatial reference for each individual component with respect to the Main PCB.
- The grid reference index lists the location of each component on the circuit diagram and the PCB layout by component reference.
- The parts list gives the IPN and a description of each component on the Main PCB by component reference.

The component reference code is the key piece of information for each component. It allows you to:

- locate a component of interest on the PCB layout, circuit diagram or PCB by extracting the appropriate grid reference from the index.
- identify an unknown device on the Main PCB by using the component's code printed on the circuit diagram to locate the IPN in the parts list.

## 7.1.1 Circuit Diagram and PCB layouts

The circuit diagram and PCB layouts feature a map-style, alphanumeric grid reference printed around the border. The grid reference can be used to identify/locate a component of interest on the circuit diagram, PCB layouts and the circuit board. This is achieved by reading off the “coordinates” of the component from the horizontal and vertical axes of the grid in the same way as you would read from a road map. The grid referencing system employed throughout this manual uses letters to subdivide the horizontal axis of the diagram, and numbers to subdivide the vertical axis.

Grid references also appear on circuit diagrams that consist of two or more sheets. When a line representing part of the circuitry is discontinued, a circuit diagram reference is given at the end of the line to identify where the rest of the circuitry is located. The circuit diagram reference comprises three characters in the format X-YZ, where X identifies the sheet number of the circuit diagram and YZ gives the coordinates of the circuitry on that sheet. For example: circuit diagram reference 1-D5 indicates that the circuitry is continued at location D5 of sheet 1.

## 7.1.2 Grid Reference Index

The grid reference index assists in locating components and labelled pads on the PCB layouts and circuit diagram. The index lists the components and pads, according to circuit reference code, in alphabetical/numerical order. Each component entry in the index comprises three columns: the component reference, PCB layout reference and circuit diagram reference.

### PCB layout reference

The PCB layout reference comprises three characters in the format X:YZ, where X is the value 1 or 2 and identifies the side of the PCB layout on which the component is present (1 corresponds to the top side layout and 2 is the bottom side layout), and YZ gives the coordinates of the component on that layout.

For example, PCB layout reference 1:E5 refers to location E5 on the top side of the PCB.

### Circuit diagram reference

The circuit diagram reference comprises three characters in the format X-YZ, where X identifies the sheet number of the circuit diagram (printed on the bottom, right-hand side of the circuit diagram), and YZ gives the coordinates of the component on that sheet.

For example: circuit diagram reference 1-D5 refers to location D5 of sheet 1.

### **7.1.3 Parts List**

Each component within the MDT is identified by a ten-digit internal part number (000-00000-00), or IPN. Spare parts orders can be handled more efficiently if you quote: equipment type, component reference and IPN, together with a brief description of the part. Use the parts lists included in this chapter to identify the IPN of a component of interest when ordering and making enquiries.

The parts list is divided into two separate sections: a list for those components with a reference code and a list for those without (mechanical and miscellaneous). Each component entry comprises three columns: the component reference code, IPN and description. The components with a reference code are presented according to the component reference in alphabetical/numerical order. The miscellaneous and mechanical parts list gives the variant (if applicable) and common parts in alphabetical/IPN order.

# 7.2 Main PCB

## Parts List (IPN 220-01310-01)

Ref	IPN	Description	Ref	IPN	Description
C1	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	C204	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J
C1A	015-25100-08	CAP10N 10% 50V X7R CHIP 0805 10NS	C205	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S
C1B	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	C206	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S
C2	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	C207	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S
C3	015-25100-08	CAP10N 10% 50V X7R CHIP 0805 10NS	C208	020-57470-10	CAP4U7 ELEC 50V AI 4*7 RADIAL LO ESR +105C 4U7F150LESR
C5	015-25100-08	CAP10N 10% 50V X7R CHIP 0805 10NS	C209	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S
C6	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	C210	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S
C7	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	D1	001-00590-80	DIODE1N5908 ZENER 5V0 TRANSIENT SUPPRESS CB-429 1N5908
C8	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	D2	001-10036-00	DIODEMBRD360 SWITCHMODE POWER RECT DPAK 369A-04 MBRD360
C9	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	D3	001-10000-99	DIODEBAV99 DUAL SW(PIN3 IS ANODE / CATH) SOT-23 BAV99
#C100	015-24100-08	CAP 1N0 5% 50V X7R CHIP 0805 1N0S	D4	001-10000-99	DIODEBAV99 DUAL SW(PIN3 IS ANODE / CATH) SOT-23 BAV99
#C101	015-24100-08	CAP 1N0 5% 50V X7R CHIP 0805 1N0S	D5	001-00012-77	DIODE1.5KE18A ZENER 18V TRANSIENT SUPP 41-11 1.5KE18A
#C102	015-24100-08	CAP 1N0 5% 50V X7R CHIP 0805 1N0S	D6	001-10014-03	DIODESMD SCHOTTKY 1.0A/40V MBRS140T3
#C103	015-24100-08	CAP 1N0 5% 50V X7R CHIP 0805 1N0S	#D7	001-10000-99	DIODE BAV99 DUAL SW(PIN3 IS ANODE / CATH) SOT-23 BAV99
C120	015-22270-01	CAP27P 5% NPO 50V CHIP 0805 27PS	#D8	001-10000-99	DIODE BAV99 DUAL SW(PIN3 IS ANODE / CATH) SOT-23 BAV99
C121	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	#D9	001-10000-99	DIODE BAV99 DUAL SW(PIN3 IS ANODE / CATH) SOT-23 BAV99
C125	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	#D10	001-10000-99	DIODE BAV99 DUAL SW(PIN3 IS ANODE / CATH) SOT-23 BAV99
C126	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	IC1	002-17032-00	ICUPD70320 SMD 16 BIT MICROPROCESSOR PQFP-94 UPD70320
C127	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	IC2	002-20290-10	ICAM29F010-120JC 128KX8 FLASH MEMORY PLCC32 AM29F010
C128	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	%IC3	002-15256-10	ICM5M5256BVP-10LL SRAM 32K*8 100NS VSOP28 5256BVP-10LL
C129	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	%IC5	002-15100-80	ICM5M51008VP-10LL SRAM 128K*8 100NS TSOP32 51008VP-10LL
C130	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	IC6	002-10069-11	ICMAX691ACSE MICRO SUPERVISORY CIRCUIT SO16 ACSE
C131	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	IC7	002-74900-04	IC74HC04D HEX BUFFERED INVERTER CMOS SO14 74HC04
C132	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	IC8	002-10003-58	IC358D DUAL OP AMP SO8 358D
C134	020-57470-10	CAP4U7 ELEC 50V AI 4*7 RADIAL LO ESR +105C 4U7F150LESR	IC9	002-74900-00	IC74HC00 HCMOS QUAD 2 I/P NAND GATE SO14 74HC00S
C140	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	IC10	002-12575-50	ICLM2575M-5 1-AMP STEP-DOWN VOLTAGE REGULATOR LM2575M-5
C148	022-56100-10	CAP100N 10% 63V AI MYLAR POTTED ON TAPE 100NYPI	IC12	002-10063-50	ICMAX635 5V FIXED OUTPUT INVERTING REG SO8 MAX635D
C150	015-22270-01	CAP27P 5% NPO 50V CHIP 0805 27PS	IC13	002-10002-32	ICMAX232 / RS232 RECEIVER/TRANSMITTER SOL16 MAX232 MAX691
C152	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	L1	057-03470-06	INDSMD 470UH VERT ON FERRITE CORE 470UHCDR105
C154	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	L2	065-10004-20	BEADSMD CHIP PACKAGE CBD4.6/3/3-4S2 CBD4.6/3/3 CBD4.6/3/3
C155	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	L3	055-01012-00	220UHTOROIDAL INDUCTOR 10%TOL FORMER T68-26 T68-26
C156	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	L4	065-10004-20	BEADSMD CHIP PACKAGE CBD4.6/3/3-4S2 CBD4.6/3/3 CBD4.6/3/3
C157	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	L5	065-10004-20	BEADSMD CHIP PACKAGE CBD4.6/3/3-4S2 CBD4.6/3/3 CBD4.6/3/3
C158	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	L6	065-10004-20	BEADSMD CHIP PACKAGE CBD4.6/3/3-4S2 CBD4.6/3/3 CBD4.6/3/3
C159	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	L7	065-10004-20	BEADSMD CHIP PACKAGE CBD4.6/3/3-4S2 CBD4.6/3/3 CBD4.6/3/3
C163	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	PL3	240-00021-15	SKT24WAY 2X12 SIDE ENTRY PL2X12SR
C164	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	PZ1	250-00010-23	PIEZO-SOUNDER PS1740P02C
C167	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	Q1	000-10305-51	MTD3055ELT4 N-CHNL PWR MOSFET SMD DPAK 369A-04 MTD3055ELT4
C168	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	Q2	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848
C169	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	Q3	000-10008-57	TRANSISTOR BCW70/BC857 PNP AF SMALL SIG SOT-23 BC857
C171	020-59120-06	CAP120U ELEC 16V 6.3*11.5 AI RADIAL LESR 120UF16LESR	Q4	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848
C174	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	Q5	000-10008-57	TRANSISTOR BCW70/BC857 PNP AF SMALL SIG SOT-23 BC857
C175	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	Q6	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848
C176	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	Q7	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848
C177	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J	Q8	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848
C178	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S	Q9	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848
C179	015-25100-08	CAP10N 10% 50V X7R CHIP 0805 10NS			
C180	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J			
C181	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S			
C182	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S			
C183	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S			
C184	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S			
C185	020-57470-10	CAP4U7 ELEC 50V AI 4*7 RADIAL LO ESR +105C 4U7F150LESR			
C186	020-57470-10	CAP4U7 ELEC 50V AI 4*7 RADIAL LO ESR +105C 4U7F150LESR			
C190	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J			
C191	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S			
C192	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S			
C193	020-57470-10	CAP4U7 ELEC 50V AI 4*7 RADIAL LO ESR +105C 4U7F150LESR			
C194	020-57470-10	CAP4U7 ELEC 50V AI 4*7 RADIAL LO ESR +105C 4U7F150LESR			
C195	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S			
C196	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S			
C197	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S			
C198	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S			
C199	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S			
C200	015-27100-10	CAP1U0 +80/-20% Y5V 16V CHIP 0805 1U0S			
C201	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S			
C202	015-24100-08	CAP1N0 5% 50V X7R CHIP 0805 1N0S			
C203	018-16100-01	CAP100N 10% 16V CHIP 0603 100NV16J			

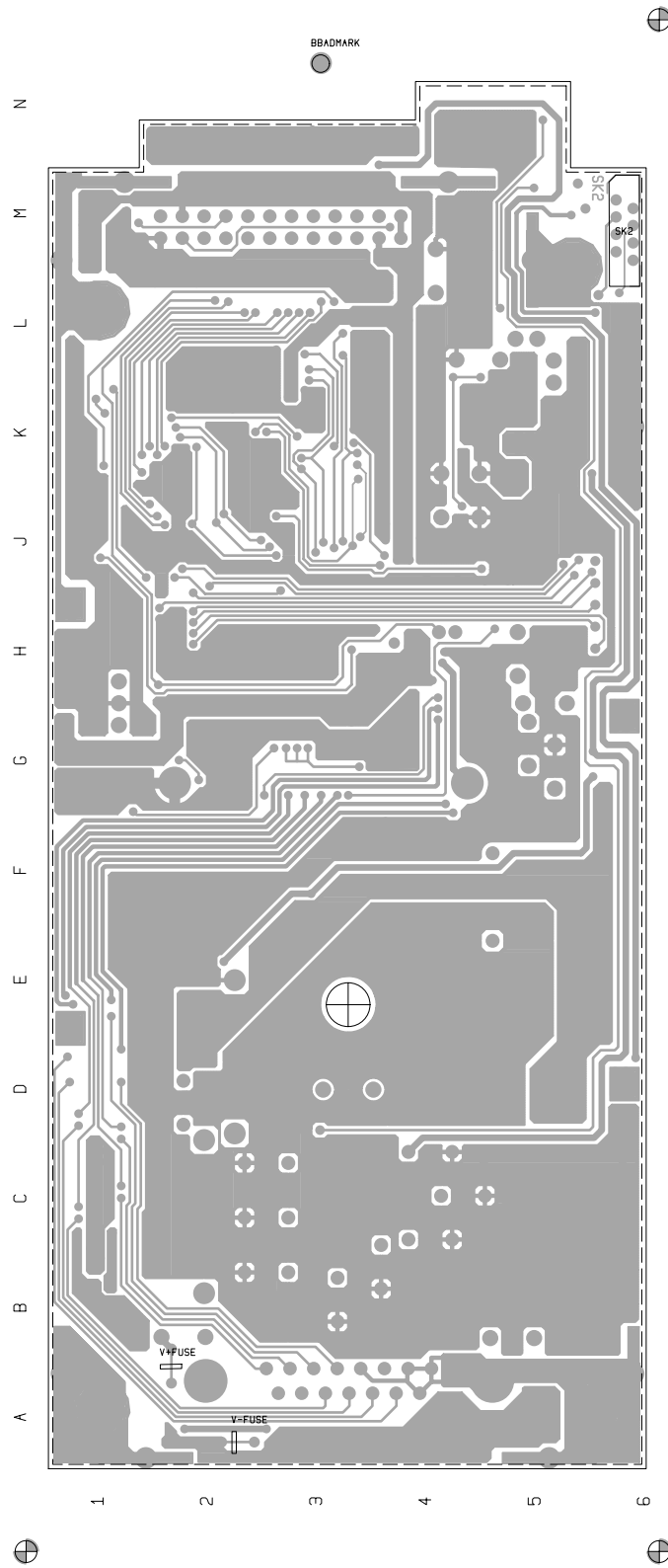
Ref	IPN	Description	Ref	IPN	Description
Q10	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848	MPT1-1	220-01310-01	PCB 220-01310-01
Q11	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848			
Q12	000-10008-48	TRANSISTOR BCW60/BC848 NPN AF SMALL SIG SOT-23 BC848			
Q13	000-10008-57	TRANSISTOR BCW70/BC857 PNP AF SMALL SIG SOT-23 BC857			
#R2	038-14220-00	RES2K2 5% CHIP 0603 2K2J			
#R3	038-14220-00	RES2K2 5% CHIP 0603 2K2J			
#R4	038-14220-00	RES2K2 5% CHIP 0603 2K2J			
#R5	038-14220-00	RES2K2 5% CHIP 0603 2K2J			
#R6	038-14220-00	RES2K2 5% CHIP 0603 2K2J			
#R7	038-14220-00	RES2K2 5% CHIP 0603 2K2J			
#R8	038-14220-00	RES2K2 5% CHIP 0603 2K2J			
#R9	038-14220-00	RES2K2 5% CHIP 0603 2K2J			
R10	036-15100-00	RES10K 5% CHIP 0805 10KS			
R11	036-15100-00	RES10K 5% CHIP 0805 10KS			
R12	036-16270-00	RES270K 5% CHIP 0805 270KS			
R13	036-16100-00	RES100K 5% CHIP 0805 100KS			
R14	036-14390-00	RES3K9 5% CHIP 0805 3K9S			
R27	036-15220-00	RES22K 5% CHIP 0805 22KS			
R28	036-15220-00	RES22K 5% CHIP 0805 22KS			
R29	036-15220-00	RES22K 5% CHIP 0805 22KS			
R30	036-13560-00	RES560 5% CHIP 0805 560S			
R31	036-14100-00	RES1K0 5% CHIP 0805 1K0S			
R32	036-11330-00	RES3R3 5% CHIP 0805 3R3S			
R33	036-11330-00	RES3R3 5% CHIP 0805 3R3S			
R34	036-11330-00	RES3R3 5% CHIP 0805 3R3S			
R35	036-11330-00	RES3R3 5% CHIP 0805 3R3S			
R36	036-11330-00	RES3R3 5% CHIP 0805 3R3S			
R37	036-11330-00	RES3R3 5% CHIP 0805 3R3S			
R38	036-15100-00	RES10K 5% CHIP 0805 10KS			
R39	036-15100-00	RES10K 5% CHIP 0805 10KS			
R40	036-15220-00	RES22K 5% CHIP 0805 22KS			
R41	036-15100-00	RES10K 5% CHIP 0805 10KS			
R42	036-16100-00	RES100K 5% CHIP 0805 100KS			
R43	036-16100-00	RES100K 5% CHIP 0805 100KS			
R44	036-15470-00	RES47K 5% CHIP 0805 47KS			
R45	036-15470-00	RES47K 5% CHIP 0805 47KS			
R46	036-13100-00	RES100 5% CHIP 0805 100S			
R47	036-15470-00	RES47K 5% CHIP 0805 47KS			
R48	036-16100-00	RES100K 5% CHIP 0805 100KS			
R49	036-16100-00	RES100K 5% CHIP 0805 100KS			
R72	036-15470-00	RES47K 5% CHIP 0805 47KS			
R73	036-15470-00	RES47K 5% CHIP 0805 47KS			
R74	036-15470-00	RES47K 5% CHIP 0805 47KS			
R75	036-15470-00	RES47K 5% CHIP 0805 47KS			
R76	036-15100-00	RES10K 5% CHIP 0805 10KS			
R77	036-12560-00	RES56 5% CHIP 0805 56S			
R78	036-12560-00	RES56 5% CHIP 0805 56S			
R79	036-12560-00	RES56 5% CHIP 0805 56S			
R80	036-12560-00	RES56 5% CHIP 0805 56S			
R81	045-06100-01	RES100K NTC 20% 5MM DISC 100KNTC			
R82	045-06100-01	RES100K NTC 20% 5MM DISC 100KNTC			
R83	036-16100-00	RES100K 5% CHIP 0805 100KS			
R84	036-16100-00	RES100K 5% CHIP 0805 100KS			
R100	036-13100-00	RES100 5% CHIP 0805 100S			
R101	036-13100-00	RES100 5% CHIP 0805 100S			
R102	036-12560-00	RES56 5% CHIP 0805 56S			
R103	036-12560-00	RES56 5% CHIP 0805 56S			
R104	036-12560-00	RES56 5% CHIP 0805 56S			
R105	036-12560-00	RES56 5% CHIP 0805 56S			
&R106	030-51470-20	RES 4R7 5% 4*1.6 M/F .2" 4R7X			
R107	036-15470-00	RES47K 5% CHIP 0805 47KS			
R108	036-15470-00	RES47K 5% CHIP 0805 47KS			
R109	036-15470-00	RES47K 5% CHIP 0805 47KS			
R110	036-15470-00	RES47K 5% CHIP 0805 47KS			
R111	036-15100-00	RES10K 5% CHIP 0805 10KS			
#R112	036-15470-00	RES 47K 5% CHIP 0805 47KS			
R112	036-15100-00	RES10K 5% CHIP 0805 10KS			
#R113	036-15470-00	RES 47K 5% CHIP 0805 47KS			
R113	036-15100-00	RES10K 5% CHIP 0805 10KS			
R114	036-15100-00	RES10K 5% CHIP 0805 10KS			
#R114	036-15470-00	RES 47K 5% CHIP 0805 47KS			
#R115	036-15470-00	RES 47K 5% CHIP 0805 47KS			
R115	036-15100-00	RES10K 5% CHIP 0805 10KS			
R116	036-15100-00	RES10K 5% CHIP 0805 10KS			
R117	036-16100-00	RES100K 5% CHIP 0805 100KS			
R118	036-16100-00	RES100K 5% CHIP 0805 100KS			
R119	036-16100-00	RES100K 5% CHIP 0805 100KS			
R120	036-16100-00	RES100K 5% CHIP 0805 100KS			
R121	036-16100-00	RES100K 5% CHIP 0805 100KS			
R122	036-16100-00	RES100K 5% CHIP 0805 100KS			
R123	036-14270-00	RES2K7 5% CHIP 0805 2K7S			
R124	036-14270-00	RES2K7 5% CHIP 0805 2K7S			
R125	036-15100-00	RES10K 5% CHIP 0805 10KS			
SK1	240-00010-83	SKT15 WAY DRANGE SIDE ENTRY SK15DRR			
SK2	240-00021-16	SKT52030-0810 8 WAY TOP ENT FOR 0.3MM FLEXI BRD 52038			
SN1	002-10240-10	SILICON SERIAL NUMBER DS2401 SOT-223 DS2401			
X1	276-00010-75	CERAMIC RESONATOR 16.0 MHZ +/-0.5% CSA16.0MX			
BATT	290-00010-40	LITHIUM BACKUP BATTERY 3V0 500MA PCB MTG 3V0-LITHIUM			

## Mechanical & Miscellaneous Parts

IPN	Description		IPN	Description	
A18	1:H4	1-P2	C207	1:A2	1-A0
BATT	1:G3	1-R0	C208	1:B2	1-B0
C1	1:G1	1-L7	C209	1:J6	1-H2
C1A	1:G2	1-L8	C210	1:J6	1-H2
C1B	1:G4	1-L8	D1	1:D2	1-J0
C2	1:L4	1-Q8	D2	1:D4	1-H0
C3	1:K4	1-R8	D3	1:F3	1-H9
C5	1:J4	1-R5			1-H9
C6	1:J5	1-R2	D4	1:E2	1-H8
C7	1:H1	1-M0			1-H8
C8	1:E5	1-N0	D5	1:B2	1-B0
C9	1:K1	1-L0	D6	1:K4	1-D7
#C100	1:C1	1-B3	#D7	1:C1	1-F4
#C101	1:C1	1-B3			1-E3
#C102	1:C1	1-C3	#D8	1:C1	1-E4
#C103	1:D1	1-C3			1-D3
C120	1:H1	1-K2	#D9	1:C1	1-E4
C121	1:J5	1-B6			1-D3
C125	1:K5	1-C6	#D10	1:D1	1-E4
C126	1:L4	1-F7			1-C3
C127	1:K5	1-D6	IC1	1:H3	1-K2
C128	1:K5	1-C6	IC2	1:L3	1-P6
C129	1:L5	1-F7	%IC3	1:K3	1-R6
C130	1:K5	1-D6	%IC5	1:K3	1-R3
C131	1:L4	1-E6	IC6	1:J4	1-R0
C132	1:L5	1-E7	IC7	1:J1	1-M0
C134	1:M4	1-E6			1-H0
C140	1:E5	1-C5			1-M6
C148	1:J4	1-Q1			1-M6
C150	1:H1	1-K2			1-N6
C152	1:B3	1-C0			1-G0
C154	1:B3	1-D0			1-L7
C155	1:B3	1-D0	IC8	1:E6	1-M0
C156	1:C4	1-E0			1-C5
C157	1:B4	1-E0			1-E0
C158	1:C4	1-E0	IC9	1:K1	1-L0
C159	1:C4	1-E0			1-L7
C163	1:B4	1-F0			1-M7
C164	1:B4	1-F0			1-M6
C167	1:C3	1-K0			1-M6
C168	1:B3	1-K0	IC10	1:C3	1-G0
C169	1:C3	1-K0	IC12	1:K5	1-D6
C171	1:D2	1-N0	IC13	1:G4	1-D7
C174	1:C2	1-J0	L1	1:K4	1-C6
C175	1:D2	1-M0	L2	1:C3	1-D1
C176	1:D3	1-J0	L3	1:E3	1-H0
C177	1:E2	1-M0	L4	1:D3	1-M0
C178	1:C2	1-L0	L5	1:B3	1-C1
C179	1:C2	1-L0	L6	1:B2	1-C1
C180	1:D3	1-L0	L7	1:B4	1-B6
C181	1:B2	1-C0	MANUAL	1:H4	1-M2
C182	1:B2	1-C0	PL3	1:M2	1-L9
C183	1:D1	1-B7			1-P9
C184	1:E1	1-B7			1-L9
C185	1:G5	1-E8			1-L9
C186	1:H5	1-E9			1-L9
C190	1:H4	1-D9			1-M9
C191	1:K5	1-B6			1-M9
C192	1:L4	1-F7			1-L9
C193	1:H5	1-C9			1-L9
C194	1:G5	1-C8			1-N9
C195	1:G5	1-B8			1-L9
C196	1:E2	1-M0			1-P9
C197	1:B2	1-K0			1-M9
C198	1:B4	1-F0			1-P9
C199	1:B3	1-D0			1-M9
C200	1:F2	1-H8			1-M9
C201	1:D1	1-B7			1-M9
C202	1:E1	1-C7			1-N9
C203	1:M1	1-P9			1-N9
C204	1:M4	1-K9			1-N9
C205	1:B4	1-A6			1-N9
C206	1:B5	1-B6			1-N9

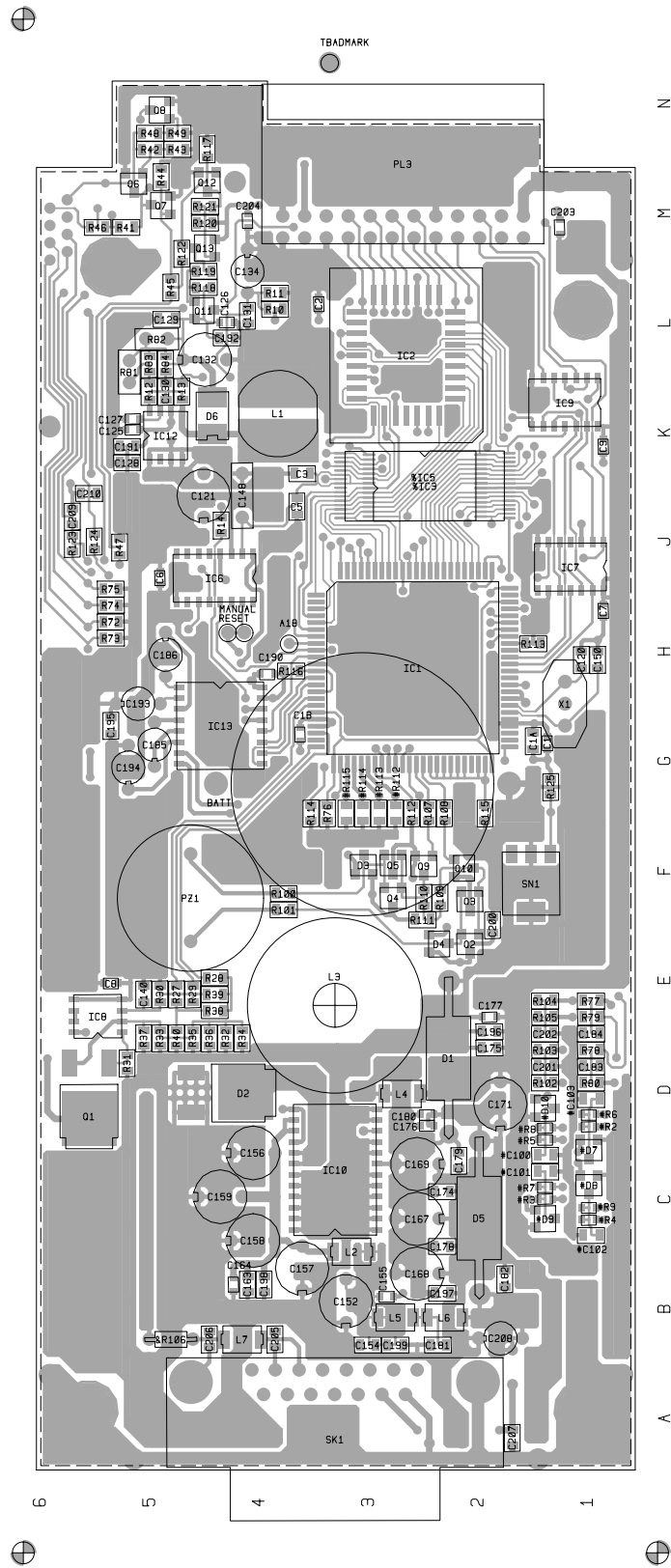
## Grid Reference Index (IPN 220-01310-01)

Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit	Device	PCB	Circuit
		1-P9	R108	1:G2	1-H5						
PZ1	1:F5	1-H8	R109	1:F2	1-H6						
Q1	1:D6	1-B5	R110	1:F3	1-H6						
Q2	1:E2	1-H7	R111	1:F3	1-H6						
Q3	1:F2	1-H7	R112	1:G3	1-J3						
Q4	1:F3	1-H9	#R112	1:G3	1-F4						
Q5	1:F3	1-H9	#R113	1:G3	1-G4						
Q6	1:M5	1-F2	R113	1:H2	1-L6						
Q7	1:M5	1-G2	#R114	1:G3	1-G4						
Q8	1:N5	1-F1	R114	1:G4	1-J4						
Q9	1:F3	1-J6	#R115	1:G3	1-G4						
Q10	1:F2	1-H6	R115	1:G2	1-J6						
Q11	1:L5	1-G6	R116	1:H4	1-J7						
Q12	1:M5	1-F6	R117	1:N5	1-G6						
Q13	1:M5	1-F6	R118	1:L5	1-G7						
RESET	1:H4	1-M2	R119	1:M5	1-F6						
#R2	1:D1	1-C4	R120	1:M5	1-F6						
#R3	1:C1	1-B4	R121	1:M5	1-F6						
#R4	1:C1	1-B4	R122	1:M5	1-G6						
#R5	1:D1	1-B4	R123	1:J6	1-J3						
#R6	1:D1	1-F4	R124	1:J6	1-J3						
#R7	1:C1	1-G4	R125	1:G1	1-H3						
#R8	1:D1	1-G4	SK1	1:A3	1-A6						
#R9	1:C1	1-F4			1-A4						
R10	1:L4	1-E6			1-A5						
R11	1:L4	1-E6			1-A4						
R12	1:K5	1-E6			1-A5						
R13	1:K5	1-E6			1-A5						
R14	1:J4	1-F6			1-A4						
R27	1:E5	1-D4			1-A4						
R28	1:E4	1-D5			1-A4						
R29	1:E5	1-D5			1-A4						
R30	1:E5	1-D5			1-A4						
R31	1:D5	1-B5			1-A8						
R32	1:E4	1-C4			1-A8						
R33	1:E5	1-C4			1-A8						
R34	1:E4	1-C4			1-A8						
R35	1:E5	1-B4			1-A7						
R36	1:E5	1-B4			1-A7						
R37	1:E5	1-B4	SN1	1:F2	1-J2						
R38	1:E4	1-D5	SK2	2:M6	1-E3						
R39	1:E4	1-D5			1-E3						
R40	1:E5	1-D4			1-E3						
R41	1:M5	1-F2			1-E3						
R42	1:N5	1-F2			1-E2						
R43	1:N5	1-F2			1-E2						
R44	1:M5	1-G2			1-E3						
R45	1:L5	1-H2			1-E3						
R46	1:M6	1-E2	V+FUUSE	2:A2	1-B1						
R47	1:J5	1-F1	V-FUUSE	2:A2	1-B0						
R48	1:N5	1-F1	X1	1:H1	1-K2						
R49	1:N5	1-F1									
R72	1:H5	1-G3									
R73	1:H5	1-G3									
R74	1:H5	1-G3									
R75	1:J5	1-G3									
R76	1:G3	1-K7									
R77	1:E1	1-C8									
R78	1:D1	1-C8									
R79	1:E1	1-B8									
R80	1:D1	1-B8									
R81	1:K5	1-E7									
R82	1:L5	1-E7									
R83	1:L5	1-E7									
R84	1:L5	1-E7									
R100	1:F4	1-H9									
R101	1:F4	1-H8									
R102	1:D1	1-B8									
R103	1:D1	1-C7									
R104	1:E1	1-C8									
R105	1:E1	1-B8									
&R106	1:B5	1-B6									
R107	1:G3	1-J5									



**T610 Main PCB - Bottom Side**





T610 Main PCB - Top Side

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