

Last update

21-May-03

Note 4 added 14-Oct-2003

Released for manufacture

Item no.	Ref Des	Value	Part Number	Footprint	Manufacturer
1	ASD1	MDT-ASD	MDT-ASD	Quad.80M/80/WG17.45x23.45	
2	ASD2	MDT-ASD	MDT-ASD	Quad.80M/80/WG17.45x23.45	
3	ASD3	MDT-ASD	MDT-ASD	Quad.80M/80/WG17.45x23.45	
4	C1	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
5	C2	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
6	C3	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
7	C4	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
8	C5	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
9	C6	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
10	C7	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
11	C8	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
12	C9	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
13	C10	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
14	C11	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
15	C12	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
16	C13	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
17	C14	100uF @ 16V	TAJD107K016S	Tantalum cap / D package	AVX (See Note 1)
18	C15	100uF @ 16V	TAJD107K016S	Tantalum cap / D package	AVX (See Note 1)
19	C16	omit			
20	C17	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
21	C18	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
22	C19	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
23	C20	10uF @ 16V	TAJC106K016S	Tantalum cap / C package	AVX (See Note 1)
24	C21	100uF @ 16V	TAJD107K016S	Tantalum cap / D package	AVX (See Note 1)
25	C22	100uF @ 16V	TAJD107K016S	Tantalum cap / D package	AVX (See Note 1)
26	C23	27pF @ 25V	06033C270JAT2A	SM/C_0603	AVX
27	C24	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
28	C25	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
29	C26	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
30	C27	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
31	C28	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
32	C29	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
33	C30	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
34	C31	2.2uF @ 25V	TAJA225K025S	Tantalum cap / A package	AVX (See Note 1)
35	C32	2.2uF @ 25V	TAJA225K025S	Tantalum cap / A package	AVX (See Note 1)
36	C33	2.2uF @ 25V	TAJA225K025S	Tantalum cap / A package	AVX (See Note 1)
37	C34	10uF @ 16V	TAJC106K016S	Tantalum cap / C package	AVX (See Note 1)
38	C35	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
39	C37	10uF @ 16V	TAJC106K016S	Tantalum cap / C package	AVX (See Note 1)
40	C38	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
41	C40	omit			
42	C41	6800pF @ 25V	06033C682JAT2A	SM/C_0603	AVX
43	C42	omit			
44	C101	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX

45	C102	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
46	C103	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
47	C104	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
48	C105	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
49	C106	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
50	C107	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
51	C108	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
52	C109	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
53	C110	0.1uF @ 16V	0402YG104ZAT2A	SM/C_0402	AVX
54	C111	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
55	C201	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
56	C202	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
57	C203	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
58	C204	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
59	C205	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
60	C206	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
61	C207	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
62	C208	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
63	C209	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
64	C210	0.1uF @ 16V	0402YG104ZAT2A	SM/C_0402	AVX
65	C211	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
66	C301	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
67	C302	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
68	C303	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
69	C304	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
70	C305	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
71	C306	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
72	C307	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
73	C308	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
74	C309	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
75	C310	0.1uF @ 16V	0402YG104ZAT2A	SM/C_0402	AVX
76	C311	0.1uF @ 25V	06033G104ZAT2A	SM/C_0603	AVX
77	D1	Schottky diode	BAS81 (or LL5711)	SOD80 mini-MELF	Vishay
78	F1	1.5A 420 Series	4201150000	SMQ SMT fuse, 2410 pad size	Wickmann
79	F2	1.5A 420 Series	4201150000	SMQ SMT fuse, 2410 pad size	Wickmann
80	J4	AMPMODU System 50	147377-4	40 Pin SMT connector w/ shroud	AMP
81	J5	omit			
82	JP8	16 pin socket	SSM-108-L-DV	.1" pitch, surface mount	Samtec
83	JP9	16 pin socket	SSM-108-L-DV	.1" pitch, surface mount	
84	JP10	16 pin socket	SSM-108-L-DV	.1" pitch, surface mount	
85	JP13	16 pin socket (see note 2)	SSM-108-L-DV	.1" pitch, surface mount	See note 2
86	PR1	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	See note 4
87	PR2	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
88	PR3	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
89	PR4	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
90	PR5	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
91	PR6	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
92	PR7	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
93	PR8	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
94	PR9	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
95	PR10	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	

96	PR11	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
97	PR12	(6) 20ohm 0805 resistor	(4) BAV99 Diodes (Vishay)	(2) 0.1uF 0805 capacitor	
98	R1	omit			
99	R2	omit			
100	R3	33 ohm	RK73B1JL330J	SM/R_0603	
101	R4	33 ohm	RK73B1JL330J	SM/R_0603	
102	R5	43 ohm	RK73B1JL430J	SM/R_0603	
103	R6	33 ohm	RK73B1JL330J	SM/R_0603	
104	R7	33 ohm	RK73B1JL330J	SM/R_0603	
105	R8	100 ohm 1%	RK73H1JL1000F	SM/R_0603	
106	R9	10K 1%	RK73H1JL1002F	SM/R_0603	
107	R10	100 ohm 1%	RK73H1JL1000F	SM/R_0603	
108	R11	22 ohm	RK73B1JL220J	SM/R_0603	
109	R12	22 ohm	RK73B1JL220J	SM/R_0603	
110	R13	1K 1%	RK73H1JL1001F	SM/R_0603	
111	R14	1K 1%	RK73H1JL1001F	SM/R_0603	
112	R15	1K 1%	RK73H1JL1001F	SM/R_0603	
113	R16	1K 1%	RK73H1JL1001F	SM/R_0603	
114	R17	1K 1%	RK73H1JL1001F	SM/R_0603	
115	R18	1K 1%	RK73H1JL1001F	SM/R_0603	
116	R19	10K 1%	RK73H1JL1002F	SM/R_0603	
117	R20	100 ohm 1%	RK73H1JL1000F	SM/R_0603	
118	R21	100 ohm 1%	RK73H1JL1000F	SM/R_0603	
119	R22	100 ohm 1%	RK73H1JL1000F	SM/R_0603	
120	R40	omit			
121	R41	510 ohm	RK73B1JL511J	SM/R_0603	
122	R101	omit			
123	R105	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
124	R106	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
125	R107	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
126	R108	omit			
127	R109	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
128	R201	omit			
129	R205	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
130	R206	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
131	R207	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
132	R208	omit			
133	R209	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
134	R301	omit			
135	R305	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
136	R306	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
137	R307	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
138	R308	omit			
139	R309	2.2 ohm	RK73B1JL2R2J	SM/R_0603	
140	TMP1	TMP36	TMP36FS	TMP36GS - 2nd choice	Analog Devices
141	U1	LP3964 - 3.3V	LP3964EMPX-3.3	SM/SOT223_5	National Semiconductor
142	U2	LP3964 - 3.3V	LP3964EMPX-3.3	SM/SOT223_5	
143	U3	AMT3	AMT3_0		KEK/Harvard
144	U5	Driver/Receiver	SN65LVDS179DGG	SN65LVDS179DGG	Texas Instruments

Note 1 Prior approval is required for vendor substitution of all tantalum capacitors

Note 2	For MDT446 & MDT436 only. Omit on MDT316
Note 4	Each instance of PRx consists of 12 components, 6 on top layer, 6 on bottom layer. Components on top layer are : 3x 200ohm 0805 resistors, 2x BAV99 diodes, 1x 0.1uf 0805 capacitor. Same configuration on bottom layer.
	For MDT 316 see TopProtXY-316.txt and BotProtXY-316.txt for X-Y coordinates of component placement.
	For MDT436 see TopProtXY-435.txt and BotProtXY-435.txt for X-Y coordinates of component placement.
	For MDT446 see TopProtXY-445.txt and BotProtXY-445.txt for X-Y coordinates of component placement.

Compiled parts list

Quantity/board		Description	Part Number	Manufacturer/Distributor
MDT316	MDT436/MDT446			
1	1	AMT3	AMT3	KEK/Harvard
3	3	MDT-ASD	MDT-ASD	Harvard
2	2	LP3964 - 3.3V	LP3964EMPX-3.3	National Instruments
1	1	BAS81 Shottky diode	BAS81 (or LL5711)	Vishay
2	2	SMQ SMT fuse	4201150000	Wickmann
1	1	AMPMODU System 50 - 40 pos connector	147377-4	Amp/Tyco
3	4	16 pin hedgehog connector	SSM-108-L-DV	Samtec (See Note 3)
1	1	TMP36 Temperature Sensor	TMP36FS or -GS	Analog Devices
1	1	LVDS Driver/Receiver	SN65LVDS179DGK	Texas Instruments
1	1	27pF @ 25V 0603pkg NPO +/- 5%	06033A270JAT2A	AVX
1	1	6800pF @ 25V 0603pkg X7R +/- 5%	06033C682JAT2A	AVX
55	55	0.1 uF @ 25V 0603pkg +80% -20%	06033G104ZAT2A	AVX
3	3	0.1uF @ 16V 0402pkg +80% -20%	0402F104Z160BT	AVX
3	3	2.2uF @ 25V A pkg +/-10%	TAJA225K025S	AVX (See Note 1)
3	3	10uF @ 16V C pkg +/-10%	TAJ106K016R	AVX (See Note 1)
4	4	100uF @ 16V D pkg +/-10%	TAJD107K016R	AVX (See Note 1)
12	12	2.2 ohm 5% 0603pkg	RK73B1JL2R2J	KOA
2	2	22 ohm 5% 0603pkg	RK73B1JL220J	KOA
4	4	33 ohm 5% 0603pkg	RK73B1JL330J	KOA
1	1	43 ohm 5% 0603pkg	RK73B1JL430J	KOA
5	5	100 ohm 1% 0603pkg	RK73H1JL1000F	KOA
1	1	510 ohm 5% 0603pkg	RK73B1JL511J	KOA
6	6	1K 1% 0603pkg	RK73H1JL1001F	KOA
2	2	10K 1% 0603pkg	RK73H1JL1002F	KOA
72	72	20 ohm 0805pkg	RK73B2AL200J	KOA
48	48	BAV99 diode SOT23 diode	BAV99	Vishay
24	24	0.1 uF @ 25V 0805pkg +80% -20%	08053G104ZAT2A	AVX
Total count	262	263		

Note 3	These two parts lists differ only in the number of these connectors ; 3 on the MDT316 and 4 on the MDT436 or MDT446
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