

RELIABILITY PREDICTION STANDARD REPORT

(Sorted by Part Number)

MIL-HDBK-217F, Notice 2

PRED-FIRST (c) Reliability Prediction Program, BJM Engineering Services

Date: APR-01-2010

End Item Title : DM1U2 SERIES MTBF

End Item Part Number : DM1U2-5750V4H (RoHS)

DM1U2-5750V4H (RoHS) MTBF : 193,303

Module Title: ZIPPY TECHNOLOGY CORP

Module Part Number : DM1U/MTBF

Power Unit Module : DM1U-2750V (RoHS)

Environmental Condition: GB

Ambient Temperature: 25°C

RELIABILITY MODELING OF REDUNDANT UNITS

Two Redundant Units:

Two identical units may be connected in parallel, each capable of supplying the total required output. If one unit fails and can be removed from the system (does not interfere with the operation of the other unit), then the other unit supplies the required output. Using a constant failure rate, the following relations apply.

$$\begin{aligned}\text{Total Failure Rate}(F) &= M \lambda / (3/2) + B \lambda \\ &= 7.252684 / (3/2) + 0.338102 = 5.173225\end{aligned}$$

$M \lambda$ = Main power failure rate , $B \lambda$ = Back plane failure rate

$$\begin{aligned}\text{DM1U2-5750V4H (RoHS)(MTBF)} &= F / 10^6 \text{Hrs} = 5.173225 / 10^6 \\ &= 193,303\end{aligned}$$

ZIPPY TECHNOLOGY CORP
10F, No.50, MIN CHYUAN RD
SHIN-TIEN, TAIPEI HSIEN, TAIWAN, R.O.C.

	RELIABILITY PREDICTION STANDARD REPORT					
		(Sorted by Part Number)				
		MIL - HDBK - 217F, Notice 2				
Date : MAR-30-2010 Time : 14:53:28						
End Item Title : DM1U SERIES MTBF						
End Item Part Number : DM1U-2750V (RoHS)						
Module Title : ZIPPY TECHNOLOGY CORP						
Module Part Number : DM1U/MTBF						
Module Reference Designation : DM1U						
Environmental Condition : GB						
Ambient Temperature: 25°C						
<u>DM1U-2750V (RoHS)</u>						
ITEM	Part	Ref	Qual	Quant	Individual	Total
#	Number	Desig	Level		Failure Rate	Failure Rate
					(F/10^6Hrs)	(F/10^6Hrs)
1	B102330003	BOM	NMIL	1	0.132621	0.132621
2	B102330004	BOM	NMIL	1	0.069564	0.069564
3	B102330005	BOM	NMIL	1	0.125731	0.125731
4	B103160002	BOM	NMIL	1	0.206970	0.206970
5	B103160003	BOM	NMIL	1	0.130324	0.130324
6	B103160004	BOM	NMIL	1	0.008316	0.008316
7	B103160005	BOM	NMIL	1	1.222003	1.222003
8	B103180007	BOM	NMIL	1	0.044939	0.044939
9	B200000001	BOM	SPECIAL	1	0.094935	0.094935
10	B200000296	BOM	SPECIAL	1	0.094935	0.094935
11	B200000316	BOM	SPECIAL	1	0.094935	0.094935
12	B200000332	BOM	SPECIAL	2	0.094935	0.189870
13	B200000333	BOM	SPECIAL	1	0.094935	0.094935
14	B200000357	BOM	SPECIAL	1	0.094935	0.094935
15	B200000364	BOM	SPECIAL	1	0.094935	0.094935
16	B200010052	BOM	NMIL	2	0.000798	0.001596
17	B200010109	BOM	NMIL	6	0.000798	0.004788
18	B200010112	BOM	NMIL	4	0.032654	0.130616
19	B200010116	BOM	NMIL	8	0.032654	0.261232
20	B200010125	BOM	NMIL	1	0.000830	0.000830
21	B200010140	BOM	NMIL	1	0.032654	0.032654

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22	B200020016	BOM	NMIL	1	0.005156	0.005156
23	B200020017	BOM	NMIL	3	0.005156	0.015468
24	B200030019	BOM	NMIL	4	0.001995	0.007980
25	B200030029	BOM	NMIL	1	0.007617	0.007617
26	B200030037	BOM	NMIL	2	0.007617	0.015234
27	B200040053	BOM	NMIL	1	0.016755	0.016755
28	B200040065	BOM	NMIL	1	0.005967	0.005967
29	B200040073	BOM	NMIL	12	0.005967	0.071604
30	B200040083	BOM	NMIL	1	0.016755	0.016755
31	B200040084	BOM	NMIL	1	0.008225	0.008225
32	B200050024	BOM	NMIL	1	0.005218	0.005218
33	B200050037	BOM	NMIL	5	0.005218	0.026090
34	B200050070	BOM	NMIL	6	0.005218	0.031308
35	B200090005	BOM	NMIL	1	0.001518	0.001518
36	B200110006	BOM	NMIL	1	0.004650	0.004650
37	B200110042	BOM	NMIL	10	0.004650	0.046500
38	B200110046	BOM	NMIL	4	0.004650	0.018600
39	B200110095	BOM	NMIL	10	0.004650	0.046500
40	B200110120	BOM	NMIL	1	0.004650	0.004650
41	B200110123	BOM	NMIL	2	0.004650	0.009300
42	B200110172	BOM	NMIL	1	0.004650	0.004650
43	B200110177	BOM	NMIL	3	0.004650	0.013950
44	B200110192	BOM	NMIL	1	0.004650	0.004650
45	B200110202	BOM	NMIL	3	0.004650	0.013950
46	B200110227	BOM	NMIL	5	0.004650	0.023250
47	B200110235	BOM	NMIL	3	0.004650	0.013950
48	B200110311	BOM	NMIL	1	0.004650	0.004650
49	B200110313	BOM	NMIL	1	0.004650	0.004650
50	B200110357	BOM	NMIL	2	0.004650	0.009300
51	B200110488	BOM	NMIL	2	0.004650	0.009300
52	B200110489	BOM	NMIL	1	0.004650	0.004650
53	B200110490	BOM	NMIL	1	0.004650	0.004650
54	B200110491	BOM	NMIL	1	0.004650	0.004650
55	B200110503	BOM	NMIL	4	0.005115	0.020460
56	B200110506	BOM	NMIL	1	0.004650	0.004650
57	B200110512	BOM	NMIL	1	0.004650	0.004650
58	B200110523	BOM	NMIL	1	0.004650	0.004650
59	B200110524	BOM	NMIL	1	0.004650	0.004650
60	B200110541	BOM	NMIL	1	0.004650	0.004650
61	B200110551	BOM	NMIL	1	0.004650	0.004650

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62	B200110571	BOM	NMIL	2	0.004650	0.009300
63	B200110581	BOM	NMIL	3	0.004650	0.013950
64	B200110584	BOM	NMIL	3	0.004650	0.013950
65	B200110613	BOM	NMIL	1	0.004650	0.004650
66	B200110627	BOM	NMIL	2	0.005115	0.010230
67	B200110638	BOM	NMIL	1	0.005115	0.005115
68	B200120172	BOM	NMIL	1	0.008705	0.008705
69	B200120173	BOM	NMIL	1	0.006870	0.006870
70	B200120174	BOM	NMIL	1	0.008705	0.008705
71	B200160034	BOM	NMIL	1	0.105000	0.105000
72	B200170015	BOM	NMIL	2	0.008810	0.017620
73	B200190065	BOM	N/A	1	0.014104	0.014104
74	B200200012	BOM	N/A	4	0.009203	0.036812
75	B200200017	BOM	N/A	6	0.011856	0.071136
76	B200200021	BOM	N/A	2	0.015274	0.030548
77	B200200053	BOM	N/A	3	0.014056	0.042168
78	B200200057	BOM	N/A	1	0.018108	0.018108
79	B200200060	BOM	N/A	2	0.012930	0.025860
80	B200200062	BOM	N/A	1	0.007791	0.007791
81	B200200069	BOM	N/A	1	0.006575	0.006575
82	B200200082	BOM	N/A	7	0.016657	0.116599
83	B200200096	BOM	N/A	2	0.008147	0.016294
84	B200220010	BOM	N/A	3	0.002761	0.008283
85	B200220036	BOM	N/A	4	0.002647	0.010588
86	B200220048	BOM	N/A	1	0.002647	0.002647
87	B200230226	BOM	N/A	2	0.023122	0.046244
88	B200230277	BOM	N/A	1	0.043153	0.043153
89	B200230337	BOM	N/A	1	0.022929	0.022929
90	B200230338	BOM	N/A	1	0.030295	0.030295
91	B200230356	BOM	N/A	3	0.045854	0.137562
92	B200230381	BOM	N/A	2	0.049006	0.098012
93	B200230387	BOM	N/A	2	0.054281	0.108562
94	B200230388	BOM	N/A	2	0.033487	0.066974
95	B200260269	BOM	NMIL	2	0.045718	0.091436
96	B200260274	BOM	NMIL	1	0.045718	0.045718
97	B200260275	BOM	NMIL	1	0.045718	0.045718
98	B200260276	BOM	NMIL	1	0.045718	0.045718
99	B200260277	BOM	NMIL	1	0.045718	0.045718
100	B200280017	BOM	NMIL	2	0.015958	0.031916
101	B200290011	BOM	NMIL	2	0.013740	0.027480

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102	B200300295	BOM	NMIL	1	0.027190	0.027190
103	B200300311	BOM	NMIL	1	0.003999	0.003999
104	B210090090	BOM	KNOWNFR	1	2.030495	2.030495
105	B210160043	BOM	N/A	1	0.010000	0.010000
106	B210191265	N/A	STANDARD	1	0.020588	0.020588
			Total Failure Rate (F/10 ⁶ Hrs) :			7.252684
			Mean Time (in hours) Between Failures (MTBF) :			137,880