

ZIPPY TECHNOLOGY CORP
10F, No. 50, MIN CHYUAN RD
XINDIAN DIST., NEW TAIPEI CITY, TAIWAN, R.O.C.
RELIABILITY PREDICTION STANDARD REPORT
(Sorted by Part Number)
MIL-HDBK-217F, Notice 2

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

Date: SEP-23-2014
End Item Title : DM1Y2 SERIES MTBF
End Item Part Number : DM1Y2-5150V2H (RoHS)
DM1Y2-5150V2H (RoHS) MTBF : 212,314
Module Title: ZIPPY TECHNOLOGY CORP
Module Part Number : DM1Y / MTBF
Power Unit Module : DM1Y-2152V (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.

$$\text{Total Failure Rate}(F) = M \lambda / (3/2) + B \lambda = 6.023850 / (3/2) + 0.694086 = 4.709986$$

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

$$\text{DM1Y2-5150V2H (RoHS)(MTBF)} = F / 10^6 \text{Hrs} = 4.709986 / 10^6 = 212,314$$

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Date : SEP-23-2014 Time : 10:38:39
End Item Title : DM1Y SERIES MTBF
End Item Part Number : DM1Y-2152V (RoHS)
DM1Y-2152V (RoHS) MTBF : 166,007
Module Title : ZIPPY TECHNOLOGY CORP
Module Part Number : DM1Y / MTBF
Module Reference Designation : DM1Y
Environmental Condition : GB
Ambient Temperature: 25°C

DM1Y-2152V (RoHS)

ITEM #	Part Number	Ref Desig	Qual Level	Quant	Individual Failure Rate (F/10 ⁶ Hrs)	Total Failure Rate (F/10 ⁶ Hrs)
1	B102330004	BOM	NMIL	1	0.069564	0.069564
2	B103210004	BOM	NMIL	1	0.065162	0.065162
3	B104400003	BOM	NMIL	1	0.220943	0.220943
4	B104470003	BOM	NMIL	1	0.197783	0.197783
5	B200000144	BOM	SPECIAL	1	0.094935	0.094935
6	B200000242	BOM	SPECIAL	3	0.094935	0.284805
7	B200000256	BOM	SPECIAL	1	0.094935	0.094935
8	B200000308	BOM	SPECIAL	4	0.094935	0.379740
9	B200000366	BOM	SPECIAL	1	0.094935	0.094935
10	B200000377	BOM	SPECIAL	1	0.094935	0.094935
11	B200000401	BOM	SPECIAL	1	0.094935	0.094935
12	B200000545	BOM	SPECIAL	1	0.094935	0.094935
13	B200010009	BOM	NMIL	1	0.000798	0.000798
14	B200010022	BOM	NMIL	1	0.000798	0.000798
15	B200010052	BOM	NMIL	1	0.000798	0.000798
16	B200010056	BOM	NMIL	5	0.000798	0.003990
17	B200010087	BOM	NMIL	2	0.000798	0.001596
18	B200010088	BOM	NMIL	1	0.029514	0.029514
19	B200010112	BOM	NMIL	2	0.029514	0.059028
20	B200010153	BOM	NMIL	2	0.029514	0.059028
21	B200010161	BOM	NMIL	2	0.029514	0.059028
22	B200010224	BOM	NMIL	4	0.031398	0.125592
23	B200020024	BOM	NMIL	19	0.005156	0.097964
24	B200030069	BOM	NMIL	5	0.007617	0.038085

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25	B200030081	BOM	NMIL	1	0.003446	0.003446
26	B200040015	BOM	NMIL	1	0.005967	0.005967
27	B200040068	BOM	NMIL	1	0.015144	0.015144
28	B200040084	BOM	NMIL	1	0.015144	0.015144
29	B200040117	BOM	NMIL	1	0.005609	0.005609
30	B200050022	BOM	NMIL	2	0.005218	0.010436
31	B200050024	BOM	NMIL	1	0.005218	0.005218
32	B200050027	BOM	NMIL	2	0.005218	0.010436
33	B200050036	BOM	NMIL	3	0.005218	0.015654
34	B200090005	BOM	NMIL	1	0.001518	0.001518
35	B200110001	BOM	NMIL	2	0.004650	0.009300
36	B200110016	BOM	NMIL	1	0.004650	0.004650
37	B200110035	BOM	NMIL	1	0.004650	0.004650
38	B200110042	BOM	NMIL	2	0.004650	0.009300
39	B200110046	BOM	NMIL	4	0.004650	0.018600
40	B200110073	BOM	NMIL	2	0.005115	0.010230
41	B200110087	BOM	NMIL	3	0.004650	0.013950
42	B200110123	BOM	NMIL	4	0.004650	0.018600
43	B200110172	BOM	NMIL	1	0.004650	0.004650
44	B200110190	BOM	NMIL	1	0.004650	0.004650
45	B200110192	BOM	NMIL	1	0.004650	0.004650
46	B200110235	BOM	NMIL	1	0.004650	0.004650
47	B200110279	BOM	NMIL	1	0.004650	0.004650
48	B200110494	BOM	NMIL	1	0.004650	0.004650
49	B200110498	BOM	NMIL	1	0.004650	0.004650
50	B200110508	BOM	NMIL	1	0.004650	0.004650
51	B200110512	BOM	NMIL	2	0.004650	0.009300
52	B200110513	BOM	NMIL	1	0.004650	0.004650
53	B200110523	BOM	NMIL	2	0.004650	0.009300
54	B200110592	BOM	NMIL	3	0.004650	0.013950
55	B200110658	BOM	NMIL	2	0.004650	0.009300
56	B200110729	BOM	NMIL	3	0.004650	0.013950
57	B200110731	BOM	NMIL	3	0.004650	0.013950
58	B200110733	BOM	NMIL	10	0.004650	0.046500
59	B200110735	BOM	NMIL	1	0.004650	0.004650
60	B200110739	BOM	NMIL	3	0.004650	0.013950
61	B200110740	BOM	NMIL	1	0.004650	0.004650
62	B200110743	BOM	NMIL	2	0.004650	0.009300
63	B200110744	BOM	NMIL	3	0.004650	0.013950
64	B200110745	BOM	NMIL	2	0.004650	0.009300
65	B200110746	BOM	NMIL	1	0.004650	0.004650
66	B200110771	BOM	NMIL	1	0.005115	0.005115
67	B200110775	BOM	NMIL	5	0.004650	0.023250
68	B200110776	BOM	NMIL	2	0.004650	0.009300

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69	B200110800	BOM	NMIL	2	0.004650	0.009300
70	B200110807	BOM	NMIL	1	0.004650	0.004650
71	B200110811	BOM	NMIL	1	0.004650	0.004650
72	B200110812	BOM	NMIL	1	0.004650	0.004650
73	B200110831	BOM	NMIL	1	0.004650	0.004650
74	B200110834	BOM	NMIL	1	0.004650	0.004650
75	B200110835	BOM	NMIL	1	0.004650	0.004650
76	B200110841	BOM	NMIL	2	0.004650	0.009300
77	B200110845	BOM	NMIL	2	0.004650	0.009300
78	B200110848	BOM	NMIL	1	0.004650	0.004650
79	B200110849	BOM	NMIL	1	0.005115	0.005115
80	B200110866	BOM	NMIL	1	0.004650	0.004650
81	B200110905	BOM	NMIL	1	0.004650	0.004650
82	B200110949	BOM	NMIL	1	0.005115	0.005115
83	B200111003	BOM	NMIL	1	0.004650	0.004650
84	B200120015	BOM	NMIL	1	0.007557	0.007557
85	B200120113	BOM	NMIL	1	0.005425	0.005425
86	B200120174	BOM	NMIL	1	0.004820	0.004820
87	B200160017	BOM	NMIL	1	0.065000	0.065000
88	B200160034	BOM	NMIL	1	0.065000	0.065000
89	B200170029	BOM	NMIL	3	0.004875	0.014625
90	B200170043	BOM	NMIL	2	0.003285	0.006570
91	B200200057	BOM	N/A	1	0.018108	0.018108
92	B200200061	BOM	N/A	3	0.008470	0.025410
93	B200200066	BOM	N/A	1	0.010911	0.010911
94	B200200113	BOM	N/A	3	0.009203	0.027609
95	B200200114	BOM	N/A	8	0.011856	0.094848
96	B200200116	BOM	N/A	1	0.007144	0.007144
97	B200200118	BOM	N/A	3	0.015274	0.045822
98	B200200120	BOM	N/A	1	0.010911	0.010911
99	B200200121	BOM	N/A	1	0.012930	0.012930
100	B200200125	BOM	N/A	2	0.006575	0.013150
101	B200200179	BOM	N/A	1	0.005798	0.005798
102	B200220020	BOM	N/A	1	0.002337	0.002337
103	B200220028	BOM	N/A	3	0.013891	0.041673
104	B200230198	BOM	N/A	4	0.054717	0.218868
105	B200230210	BOM	N/A	1	0.047478	0.047478
106	B200230277	BOM	N/A	1	0.039003	0.039003
107	B200230338	BOM	N/A	2	0.027382	0.054764
108	B200230347	BOM	N/A	2	0.018091	0.036182
109	B200230377	BOM	N/A	2	0.026870	0.053740
110	B200230387	BOM	N/A	1	0.049061	0.049061
111	B200230415	BOM	N/A	1	0.042772	0.042772
112	B200250009	BOM	NMIL	1	0.021770	0.021770

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113	B200260046	BOM	NMIL	1	0.025794	0.025794
114	B200260271	BOM	NMIL	1	0.025794	0.025794
115	B200260280	BOM	NMIL	1	0.025794	0.025794
116	B200260363	BOM	NMIL	1	0.025794	0.025794
117	B200300236	BOM	NMIL	1	0.003614	0.003614
118	B200300418	BOM	NMIL	1	0.003614	0.003614
119	B200300419	BOM	NMIL	1	0.024575	0.024575
120	B210090197	BOM	KNOWNFR	1	2.030495	2.030495
121	B210160069	BOM	N/A	1	0.010000	0.010000
122	B210192103	N/A	STANDARD	1	0.016567	0.016567

Total Failure Rate (F/10 ⁶ Hrs) :	6.023850
Mean Time (in hours) Between Failures (MTBF) :	166,007