

ZIPPY TECHNOLOGY CORP.
10F.,No.50,MINQUAN 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: JAN-27-2015
End Item Title : G1W2 SERIES MTBF
End Item Part Number : G1W2-5760V2V(RoHS)
G1W2-5760V2V(RoHS) MTBF : 154,622
Module Title: ZIPPY TECHNOLOGY CORP
Module Part Number : G1W / MTBF
Power Unit Module : G1W-3762V(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.

$$\text{Total Failure Rate}(F) = M \lambda / (3/2) + B \lambda = 8.551132 / (3/2) + 0.766620 = 6.467375$$

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

$$G1W2-5760V2V(RoHS)(MTBF) = F / 10^6 \text{Hrs} = 6.467375 / 10^6 = 154,622$$

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Date : JAN-27-2015 Time : 10:42:39
End Item Title : G1W SERIES MTBF
End Item Part Number : G1W-3762V (RoHS)
G1W-3762V (RoHS) MTBF : 116,944
Module Title : ZIPPY TECHNOLOGY CORP
Module Part Number : G1W / MTBF
Module Reference Designation : G1W
Environmental Condition : GB
Ambient Temperature: 25°C

G1W-3762V (RoHS)

ITEM #	Part Number	Ref Desig	Qual Level	Quant	Individual Failure Rate (F/10 ⁶ Hrs)	Total Failure Rate (F/10 ⁶ Hrs)
1	B102820030	BOM	NMIL	1	0.220751	0.220751
2	B103210004	BOM	NMIL	1	0.065162	0.065162
3	B103450002	BOM	NMIL	1	0.072499	0.072499
4	B103450005	BOM	NMIL	1	0.074349	0.074349
5	B103680026	BOM	NMIL	1	0.026430	0.026430
6	B104470003	BOM	NMIL	1	0.197783	0.197783
7	B200000001	BOM	SPECIAL	3	0.094935	0.284805
8	B200000080	BOM	SPECIAL	2	0.094935	0.189870
9	B200000144	BOM	SPECIAL	1	0.094935	0.094935
10	B200000252	BOM	SPECIAL	1	0.094935	0.094935
11	B200000268	BOM	SPECIAL	1	0.094935	0.094935
12	B200000364	BOM	SPECIAL	1	0.094935	0.094935
13	B200000443	BOM	SPECIAL	1	0.100631	0.100631
14	B200010009	BOM	NMIL	1	0.000798	0.000798
15	B200010022	BOM	NMIL	2	0.000798	0.001596
16	B200010052	BOM	NMIL	1	0.000798	0.000798
17	B200010067	BOM	NMIL	4	0.000798	0.003192
18	B200010080	BOM	NMIL	3	0.028206	0.084618
19	B200010081	BOM	NMIL	2	0.028206	0.056412
20	B200010083	BOM	NMIL	2	0.000717	0.001434
21	B200010109	BOM	NMIL	3	0.000798	0.002394
22	B200010141	BOM	NMIL	2	0.028206	0.056412
23	B200010143	BOM	NMIL	2	0.028206	0.056412
24	B200020004	BOM	NMIL	14	0.005156	0.072184

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25	B200020021	BOM	NMIL	1	0.005156	0.005156
26	B200030019	BOM	NMIL	1	0.018136	0.018136
27	B200030034	BOM	NMIL	1	0.018136	0.018136
28	B200040012	BOM	NMIL	1	0.005967	0.005967
29	B200040059	BOM	NMIL	1	0.005967	0.005967
30	B200040063	BOM	NMIL	1	0.014473	0.014473
31	B200050039	BOM	NMIL	1	0.005218	0.005218
32	B200050040	BOM	NMIL	5	0.005218	0.026090
33	B200050045	BOM	NMIL	1	0.005218	0.005218
34	B200050063	BOM	NMIL	1	0.079785	0.079785
35	B200060009	BOM	NMIL	1	0.013123	0.013123
36	B200090005	BOM	NMIL	1	0.018095	0.018095
37	B200110035	BOM	NMIL	1	0.004650	0.004650
38	B200110040	BOM	NMIL	3	0.004650	0.013950
39	B200110042	BOM	NMIL	2	0.004650	0.009300
40	B200110046	BOM	NMIL	14	0.004650	0.065100
41	B200110095	BOM	NMIL	1	0.004650	0.004650
42	B200110120	BOM	NMIL	2	0.004650	0.009300
43	B200110123	BOM	NMIL	3	0.004650	0.013950
44	B200110127	BOM	NMIL	3	0.007440	0.022320
45	B200110156	BOM	NMIL	1	0.004650	0.004650
46	B200110172	BOM	NMIL	1	0.004650	0.004650
47	B200110192	BOM	NMIL	1	0.004650	0.004650
48	B200110217	BOM	NMIL	1	0.004650	0.004650
49	B200110227	BOM	NMIL	2	0.004650	0.009300
50	B200110235	BOM	NMIL	1	0.004650	0.004650
51	B200110261	BOM	NMIL	2	0.004650	0.009300
52	B200110270	BOM	NMIL	2	0.004650	0.009300
53	B200110276	BOM	NMIL	1	0.004650	0.004650
54	B200110279	BOM	NMIL	1	0.004650	0.004650
55	B200110282	BOM	NMIL	10	0.004650	0.046500
56	B200110337	BOM	NMIL	4	0.005115	0.020460
57	B200110343	BOM	NMIL	1	0.004650	0.004650
58	B200110348	BOM	NMIL	1	0.004650	0.004650
59	B200110488	BOM	NMIL	1	0.004650	0.004650
60	B200110489	BOM	NMIL	1	0.004650	0.004650
61	B200110490	BOM	NMIL	1	0.004650	0.004650
62	B200110492	BOM	NMIL	1	0.004650	0.004650
63	B200110494	BOM	NMIL	1	0.004650	0.004650
64	B200110503	BOM	NMIL	1	0.005115	0.005115
65	B200110505	BOM	NMIL	1	0.004650	0.004650
66	B200110508	BOM	NMIL	2	0.004650	0.009300
67	B200110510	BOM	NMIL	1	0.004650	0.004650
68	B200110523	BOM	NMIL	1	0.004650	0.004650

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69	B200110525	BOM	NMIL	1	0.004650	0.004650
70	B200110529	BOM	NMIL	3	0.004650	0.013950
71	B200110531	BOM	NMIL	2	0.004650	0.009300
72	B200110541	BOM	NMIL	1	0.004650	0.004650
73	B200110544	BOM	NMIL	1	0.004650	0.004650
74	B200110550	BOM	NMIL	2	0.004650	0.009300
75	B200110554	BOM	NMIL	12	0.004650	0.055800
76	B200110561	BOM	NMIL	1	0.004650	0.004650
77	B200110564	BOM	NMIL	1	0.004650	0.004650
78	B200110588	BOM	NMIL	1	0.004650	0.004650
79	B200110613	BOM	NMIL	2	0.004650	0.009300
80	B200110626	BOM	NMIL	1	0.004650	0.004650
81	B200110627	BOM	NMIL	1	0.005115	0.005115
82	B200110635	BOM	NMIL	1	0.004650	0.004650
83	B200120015	BOM	NMIL	1	0.008509	0.008509
84	B200120154	BOM	NMIL	1	0.008509	0.008509
85	B200120160	BOM	NMIL	1	0.008705	0.008705
86	B200160011	BOM	NMIL	1	0.065000	0.065000
87	B200160017	BOM	NMIL	1	0.065000	0.065000
88	B200170029	BOM	NMIL	2	0.005156	0.010312
89	B200170032	BOM	NMIL	3	0.005156	0.015468
90	B200170035	BOM	NMIL	4	0.005156	0.020624
91	B200180075	BOM	N/A	4	0.008923	0.035692
92	B200190022	BOM	N/A	1	0.015889	0.015889
93	B200190033	BOM	N/A	1	0.013308	0.013308
94	B200200021	BOM	N/A	3	0.015274	0.045822
95	B200200022	BOM	N/A	2	0.015274	0.030548
96	B200200060	BOM	N/A	1	0.012930	0.012930
97	B200200061	BOM	N/A	4	0.008470	0.033880
98	B200200064	BOM	N/A	1	0.008470	0.008470
99	B200200066	BOM	N/A	1	0.006575	0.006575
100	B200200071	BOM	N/A	1	0.006048	0.006048
101	B200200083	BOM	N/A	2	0.007144	0.014288
102	B200200153	BOM	N/A	3	0.009203	0.027609
103	B200200156	BOM	N/A	5	0.011856	0.059280
104	B200200158	BOM	N/A	1	0.007791	0.007791
105	B200220018	BOM	N/A	3	0.002416	0.007248
106	B200220020	BOM	N/A	1	0.002337	0.002337
107	B200220053	BOM	N/A	1	0.002537	0.002537
108	B200230057	BOM	N/A	1	0.028382	0.028382
109	B200230198	BOM	N/A	6	0.052293	0.313758
110	B200230210	BOM	N/A	2	0.045374	0.090748
111	B200230277	BOM	N/A	3	0.037275	0.111825
112	B200230288	BOM	N/A	2	0.017289	0.034578

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113	B200230302	BOM	N/A	2	0.150223	0.300446
114	B200230338	BOM	N/A	3	0.026169	0.078507
115	B200250009	BOM	NMIL	1	0.074436	0.074436
116	B200260195	BOM	NMIL	1	0.079101	0.079101
117	B200260246	BOM	NMIL	1	0.079101	0.079101
118	B200260251	BOM	NMIL	1	0.079101	0.079101
119	B200260291	BOM	NMIL	1	0.079101	0.079101
120	B200280012	BOM	NMIL	3	0.015958	0.047874
121	B200300219	BOM	NMIL	1	0.003454	0.003454
122	B200300236	BOM	NMIL	1	0.003454	0.003454
123	B200300273	BOM	NMIL	1	0.023487	0.023487
124	B200300274	BOM	NMIL	1	0.003454	0.003454
125	B200310003	BOM	NMIL	1	0.027490	0.027490
126	B210140029	BOM	KNOWNFR	2	1.947362	3.894724
127	B210160025	BOM	N/A	1	0.010000	0.010000
128	B210191847	N/A	STANDARD	1	0.020588	0.020588

Total Failure Rate (F/10 ⁶ Hrs) :	8.551132
Mean Time (in hours) Between Failures (MTBF) :	116,944