

RELIABILITY PREDICTION STANDARD REPORT

(Sorted by Part Number)

MIL-HDBK-217F, Notice 2

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

Date: JUN-21-2011

End Item Title : DR2G SERIES MTBF

End Item Part Number : DR2G-5800V (RoHS)

DR2G-5800V (RoHS) MTBF : 189,467

Module Title: ZIPPY TECHNOLOGY CORP

Module Part Number : DGIN/MTBF

Power Unit Module : DGIN-3800V (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.

$$\begin{aligned}\text{Total Failure Rate}(F) &= M \lambda / (3/2) + B \lambda \\ &= 6.923625 / (3/2) + 0.662208 = 5.277958\end{aligned}$$

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

$$\begin{aligned}\text{DR2G-5800V (RoHS)(MTBF)} &= F / 10^6 \text{Hrs} = 5.277958 / 10^6 \\ &= 189,467\end{aligned}$$

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 : JUN-21-2011 Time : 15:28:32						
End Item Title : DGIN SERIES MTBF						
End Item Part Number : DGIN-3800V (RoHS)						
Module Title : ZIPPY TECHNOLOGY CORP						
Module Part Number : DGIN / MTBF						
Module Reference Designation : DGIN						
Environmental Condition : GB						
Ambient Temperature: 25°C						
<u>DGIN-3800V (RoHS)</u>						
ITEM	Part	Ref	Qual	Quant	Individual	Total
#	Number	Desig	Level		Failure Rate	Failure Rate
					(F/10 ⁶ Hrs)	(F/10 ⁶ Hrs)
1	B102720003	BOM	NMIL	1	0.202377	0.202377
2	B102720004	BOM	NMIL	1	0.069564	0.069564
3	B102970002	BOM	NMIL	1	0.074349	0.074349
4	B102970003	BOM	NMIL	1	0.339591	0.339591
5	B200000001	BOM	SPECIAL	4	0.094935	0.379740
6	B200000058	BOM	SPECIAL	1	0.094935	0.094935
7	B200000080	BOM	SPECIAL	1	0.094935	0.094935
8	B200000092	BOM	SPECIAL	1	0.094935	0.094935
9	B200000144	BOM	SPECIAL	1	0.094935	0.094935
10	B200000242	BOM	SPECIAL	2	0.094935	0.189870
11	B200000252	BOM	SPECIAL	1	0.094935	0.094935
12	B200000257	BOM	SPECIAL	1	0.094935	0.094935
13	B200000268	BOM	SPECIAL	1	0.094935	0.094935
14	B200000316	BOM	SPECIAL	1	0.094935	0.094935
15	B200010009	BOM	NMIL	3	0.000798	0.002394
16	B200010014	BOM	NMIL	1	0.000798	0.000798
17	B200010022	BOM	NMIL	2	0.000798	0.001596
18	B200010056	BOM	NMIL	1	0.000798	0.000798
19	B200010066	BOM	NMIL	2	0.031398	0.062796
20	B200010067	BOM	NMIL	2	0.000798	0.001596
21	B200010080	BOM	NMIL	7	0.031398	0.219786
22	B200010088	BOM	NMIL	1	0.031398	0.031398
23	B200010123	BOM	NMIL	2	0.031398	0.062796
24	B200010162	BOM	NMIL	1	0.031398	0.031398
25	B200020004	BOM	NMIL	15	0.005156	0.077340

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26	B200020010	BOM	NMIL	2	0.006751	0.013502
27	B200040006	BOM	NMIL	1	0.007909	0.007909
28	B200040012	BOM	NMIL	1	0.005967	0.005967
29	B200040059	BOM	NMIL	1	0.005967	0.005967
30	B200040063	BOM	NMIL	1	0.016111	0.016111
31	B200050024	BOM	NMIL	1	0.005218	0.005218
32	B200050039	BOM	NMIL	1	0.005218	0.005218
33	B200050040	BOM	NMIL	4	0.005218	0.020872
34	B200090006	BOM	NMIL	1	0.001518	0.001518
35	B200110001	BOM	NMIL	1	0.004650	0.004650
36	B200110040	BOM	NMIL	1	0.004650	0.004650
37	B200110042	BOM	NMIL	8	0.004650	0.037200
38	B200110046	BOM	NMIL	9	0.004650	0.041850
39	B200110120	BOM	NMIL	1	0.004650	0.004650
40	B200110123	BOM	NMIL	7	0.004650	0.032550
41	B200110172	BOM	NMIL	2	0.004650	0.009300
42	B200110192	BOM	NMIL	1	0.004650	0.004650
43	B200110227	BOM	NMIL	2	0.004650	0.009300
44	B200110261	BOM	NMIL	1	0.004650	0.004650
45	B200110270	BOM	NMIL	2	0.004650	0.009300
46	B200110276	BOM	NMIL	3	0.004650	0.013950
47	B200110302	BOM	NMIL	1	0.005115	0.005115
48	B200110317	BOM	NMIL	2	0.004650	0.009300
49	B200110343	BOM	NMIL	1	0.004650	0.004650
50	B200110492	BOM	NMIL	1	0.004650	0.004650
51	B200110493	BOM	NMIL	1	0.005115	0.005115
52	B200110494	BOM	NMIL	2	0.004650	0.009300
53	B200110501	BOM	NMIL	1	0.004650	0.004650
54	B200110505	BOM	NMIL	1	0.004650	0.004650
55	B200110506	BOM	NMIL	1	0.004650	0.004650
56	B200110508	BOM	NMIL	1	0.004650	0.004650
57	B200110510	BOM	NMIL	2	0.004650	0.009300
58	B200110512	BOM	NMIL	6	0.004650	0.027900
59	B200110520	BOM	NMIL	2	0.004650	0.009300
60	B200110523	BOM	NMIL	1	0.004650	0.004650
61	B200110524	BOM	NMIL	2	0.004650	0.009300
62	B200110531	BOM	NMIL	1	0.004650	0.004650
63	B200110542	BOM	NMIL	1	0.004650	0.004650
64	B200110543	BOM	NMIL	1	0.004650	0.004650
65	B200110544	BOM	NMIL	1	0.004650	0.004650
66	B200110551	BOM	NMIL	3	0.004650	0.013950
67	B200110554	BOM	NMIL	12	0.004650	0.055800
68	B200110561	BOM	NMIL	1	0.004650	0.004650
69	B200110565	BOM	NMIL	1	0.004650	0.004650

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70	B200110574	BOM	NMIL	1	0.005115	0.005115
71	B200110576	BOM	NMIL	1	0.004650	0.004650
72	B200110623	BOM	NMIL	1	0.004650	0.004650
73	B200110626	BOM	NMIL	1	0.004650	0.004650
74	B200110646	BOM	NMIL	1	0.004650	0.004650
75	B200110662	BOM	NMIL	1	0.004650	0.004650
76	B200110674	BOM	NMIL	3	0.004650	0.013950
77	B200120012	BOM	NMIL	4	0.007735	0.030940
78	B200120032	BOM	NMIL	1	0.006870	0.006870
79	B200120109	BOM	NMIL	1	0.005425	0.005425
80	B200160017	BOM	NMIL	1	0.065000	0.065000
81	B200170013	BOM	NMIL	3	0.002280	0.006840
82	B200170027	BOM	NMIL	3	0.002280	0.006840
83	B200190031	BOM	N/A	1	0.017894	0.017894
84	B200200006	BOM	N/A	4	0.007144	0.028576
85	B200200012	BOM	N/A	5	0.009203	0.046015
86	B200200017	BOM	N/A	9	0.011856	0.106704
87	B200200021	BOM	N/A	2	0.015274	0.030548
88	B200200053	BOM	N/A	2	0.014056	0.028112
89	B200200061	BOM	N/A	6	0.008470	0.050820
90	B200200062	BOM	N/A	2	0.007791	0.015582
91	B200200082	BOM	N/A	4	0.016657	0.066628
92	B200200089	BOM	N/A	2	0.016657	0.033314
93	B200200101	BOM	N/A	1	0.016657	0.016657
94	B200220036	BOM	N/A	2	0.002647	0.005294
95	B200220038	BOM	N/A	1	0.002898	0.002898
96	B200230198	BOM	N/A	6	0.058210	0.349260
97	B200230210	BOM	N/A	1	0.050508	0.050508
98	B200230277	BOM	N/A	2	0.041493	0.082986
99	B200230288	BOM	N/A	2	0.019246	0.038492
100	B200230308	BOM	N/A	1	0.044090	0.044090
101	B200230336	BOM	N/A	1	0.025409	0.025409
102	B200230338	BOM	N/A	4	0.029130	0.116520
103	B200230377	BOM	N/A	2	0.028585	0.057170
104	B200230379	BOM	N/A	7	0.036547	0.255829
105	B200240005	BOM	N/A	1	0.067034	0.067034
106	B200250009	BOM	NMIL	1	0.023160	0.023160
107	B200260046	BOM	NMIL	1	0.027440	0.027440
108	B200260250	BOM	NMIL	1	0.027440	0.027440
109	B200260252	BOM	NMIL	1	0.027440	0.027440
110	B200260261	BOM	NMIL	1	0.027440	0.027440
111	B200290007	BOM	NMIL	1	0.013740	0.013740
112	B200300236	BOM	NMIL	1	0.003845	0.003845
113	B200300269	BOM	NMIL	1	0.003845	0.003845

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114	B200300275	BOM	NMIL	1	0.026144	0.026144
115	B210090111	BOM	KNOWNFR	1	2.030495	2.030495
116	B210160043	BOM	N/A	1	0.010000	0.010000
117	B210190892	N/A	STANDARD	1	0.020588	0.020588
			Total Failure Rate (F/10^6Hrs) :			6.923625
		Mean Time (in hours) Between Failures (MTBF) :				144,433