

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-21-2015
End Item Title : DG1X2 SERIES MTBF
End Item Part Number : DG1X2-1060V12(RoHS)
DG1X2-1060V12(RoHS) MTBF : 720,632
Module Title: ZIPPY TECHNOLOGY CORP
Module Part Number : DG1X / MTBF
Power Unit Module : DG1X-1060V12(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.

$$\text{Total Failure Rate}(F) = M \lambda / (3/2) + B \lambda = 1.226629 / (3/2) + 0.569916 = 1.387669$$

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

$$\text{DG1X2-1060V12(RoHS)}(\text{MTBF}) = F / 10^6 \text{Hrs} = 1.387669 / 10^6 = 720,632$$

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MIL-HDBK-217F, Notice 2

Date : JAN-21-2015 Time : 16:43:52
End Item Title : DG1X SERIES MTBF
End Item Part Number : DG1X-1060V12(RoHS)
DG1X-1060V12(RoHS) MTBF : 815,242
Module Title : ZIPPY TECHNOLOGY CORP
Module Part Number : DG1X / MTBF
Module Reference Designation : DG1X
Environmental Condition : GB
Ambient Temperature: 25°C

DG1X-1060V12(RoHS)

ITEM #	Part Number	Ref Desig	Qual Level	Quant	Individual Failure Rate (F/10 ⁶ Hrs)	Total Failure Rate (F/10 ⁶ Hrs)
1	B104350002	BOM	SPECIAL	1	0.190893	0.190893
2	B200000001	BOM	NMIL	1	0.029860	0.029860
3	B200000296	BOM	NMIL	1	0.030234	0.030234
4	B200000395	BOM	NMIL	1	0.033691	0.033691
5	B200010161	BOM	NMIL	1	0.031875	0.031875
6	B200020024	BOM	NMIL	2	0.005156	0.010312
7	B200030056	BOM	NMIL	1	0.005259	0.005259
8	B200040099	BOM	NMIL	1	0.016111	0.016111
9	B200050024	BOM	NMIL	1	0.005218	0.005218
10	B200050032	BOM	NMIL	1	0.005218	0.005218
11	B200070009	BOM	NMIL	1	0.000754	0.000754
12	B200090005	BOM	NMIL	1	0.001265	0.001265
13	B200110001	BOM	NMIL	1	0.004650	0.004650
14	B200110040	BOM	NMIL	2	0.004650	0.009300
15	B200110042	BOM	NMIL	1	0.004650	0.004650
16	B200110046	BOM	NMIL	1	0.004650	0.004650
17	B200110095	BOM	NMIL	1	0.004650	0.004650
18	B200110120	BOM	NMIL	5	0.004650	0.023250
19	B200110123	BOM	NMIL	2	0.004650	0.009300
20	B200110172	BOM	NMIL	1	0.004650	0.004650
21	B200110192	BOM	NMIL	1	0.004650	0.004650
22	B200110235	BOM	NMIL	2	0.004650	0.009300
23	B200110259	BOM	NMIL	1	0.004650	0.004650
24	B200110276	BOM	NMIL	2	0.004650	0.009300

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25	B200110311	BOM	NMIL	1	0.004650	0.004650
26	B200110491	BOM	NMIL	1	0.004650	0.004650
27	B200110504	BOM	NMIL	3	0.005115	0.015345
28	B200110527	BOM	NMIL	1	0.004650	0.004650
29	B200110554	BOM	NMIL	1	0.004650	0.004650
30	B200110661	BOM	NMIL	1	0.004650	0.004650
31	B200120073	BOM	NMIL	1	0.004820	0.004820
32	B200120090	BOM	NMIL	1	0.006870	0.006870
33	B200140053	BOM	NMIL	1	0.067385	0.067385
34	B200200022	BOM	NMIL	1	0.015274	0.015274
35	B200200064	BOM	NMIL	1	0.008470	0.008470
36	B200200066	BOM	NMIL	1	0.010911	0.010911
37	B200200069	BOM	NMIL	1	0.006575	0.006575
38	B200200082	BOM	NMIL	2	0.016657	0.033314
39	B200200083	BOM	NMIL	1	0.007144	0.007144
40	B200200153	BOM	NMIL	1	0.009203	0.009203
41	B200200156	BOM	NMIL	5	0.011856	0.059280
42	B200220018	BOM	NMIL	4	0.012681	0.050724
43	B200220038	BOM	NMIL	1	0.015208	0.015208
44	B200220054	BOM	NMIL	1	0.004262	0.004262
45	B200220063	BOM	NMIL	1	0.012681	0.012681
46	B200230198	BOM	NMIL	3	0.058210	0.174630
47	B200230417	BOM	NMIL	1	0.032978	0.032978
48	B200230425	BOM	NMIL	2	0.041371	0.082742
49	B200260290	BOM	NMIL	1	0.027440	0.027440
50	B200280017	BOM	NMIL	1	0.015958	0.015958
51	B200290016	BOM	NMIL	2	0.013740	0.027480
52	B200300350	BOM	NMIL	1	0.026144	0.026144
53	B210150023	BOM	NMIL	1	0.010000	0.010000
54	B210192175	BOM	NMIL	1	0.024851	0.024851

Total Failure Rate (F/10⁶Hrs) : 1.226629
Mean Time (in hours) Between Failures (MTBF) : 815,242