

RELIABILITY PREDICTION STANDARD REPORT

(Sorted by Part Number)

MIL-HDBK-217F, Notice 2

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

Date: MAY-12-2011

End Item Title : G1X2 SERIES MTBF

End Item Part Number : G1X2-5060V (RoHS)

G1X2-5060V (RoHS) MTBF : 486,131

Module Title: ZIPPY TECHNOLOGY CORP

Module Part Number : G1X/MTBF

Power Unit Module : G1X-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.

$$\begin{aligned}\text{Total Failure Rate}(F) &= M \lambda / (3/2) + B \lambda \\ &= 1.466310 / (3/2) + 1.079517 = 2.057057\end{aligned}$$

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

$$\begin{aligned}\text{G1X2-5060V (RoHS)(MTBF)} &= F / 10^6 \text{Hrs} = 2.057057 / 10^6 \\ &= 486,131\end{aligned}$$

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 : MAY-12-2011 Time : 10:43:02						
End Item Title : G1X SERIES MTBF						
End Item Part Number : G1X-1060V12 (RoHS)						
Module Title : ZIPPY TECHNOLOGY CORP						
Module Part Number : G1X/MTBF						
Module Reference Designation : G1X						
Environmental Condition : GB						
Ambient Temperature: 25°C						
<u>G1X-1060V12 (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	B200000001	BOM	SPECIAL	1	0.094935	0.094935
2	B200000394	BOM	SPECIAL	1	0.094935	0.094935
3	B200000395	BOM	SPECIAL	1	0.094935	0.094935
4	B200010159	BOM	NMIL	1	0.000798	0.000798
5	B200020004	BOM	NMIL	2	0.005156	0.010312
6	B200030023	BOM	NMIL	1	0.007617	0.007617
7	B200030043	BOM	NMIL	1	0.007617	0.007617
8	B200040098	BOM	NMIL	2	0.007909	0.015818
9	B200040099	BOM	NMIL	1	0.007909	0.007909
10	B200050024	BOM	NMIL	1	0.005218	0.005218
11	B200050032	BOM	NMIL	1	0.005218	0.005218
12	B200060016	BOM	NMIL	1	0.014607	0.014607
13	B200070009	BOM	NMIL	1	0.000754	0.000754
14	B200090005	BOM	NMIL	1	0.001518	0.001518
15	B200110001	BOM	NMIL	1	0.004650	0.004650
16	B200110042	BOM	NMIL	1	0.004650	0.004650
17	B200110046	BOM	NMIL	1	0.004650	0.004650
18	B200110120	BOM	NMIL	6	0.004650	0.027900
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
25	B200110303	BOM	NMIL	2	0.005115	0.010230

ZIPPY TECHNOLOGY CORP
10F, No.50, MIN CHYUAN RD
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26	B200110311	BOM	NMIL	1	0.004650	0.004650
27	B200110317	BOM	NMIL	1	0.004650	0.004650
28	B200110491	BOM	NMIL	1	0.004650	0.004650
29	B200110497	BOM	NMIL	3	0.005115	0.015345
30	B200110527	BOM	NMIL	1	0.004650	0.004650
31	B200110554	BOM	NMIL	1	0.004650	0.004650
32	B200110661	BOM	NMIL	1	0.004650	0.004650
33	B200120111	BOM	NMIL	1	0.005425	0.005425
34	B200120161	BOM	NMIL	1	0.005425	0.005425
35	B200140053	BOM	NMIL	1	0.067385	0.067385
36	B200160006	BOM	NMIL	1	0.065000	0.065000
37	B200180003	BOM	N/A	2	0.007411	0.014822
38	B200200012	BOM	N/A	1	0.009203	0.009203
39	B200200017	BOM	N/A	5	0.011856	0.059280
40	B200200022	BOM	N/A	1	0.015274	0.015274
41	B200200064	BOM	N/A	1	0.008470	0.008470
42	B200200066	BOM	N/A	1	0.010911	0.010911
43	B200200069	BOM	N/A	1	0.006575	0.006575
44	B200220018	BOM	N/A	3	0.002416	0.007248
45	B200220031	BOM	N/A	1	0.002541	0.002541
46	B200220038	BOM	N/A	1	0.002898	0.002898
47	B200230198	BOM	N/A	3	0.058210	0.174630
48	B200230416	BOM	N/A	2	0.174910	0.349820
49	B200230417	BOM	N/A	1	0.032978	0.032978
50	B200260290	BOM	NMIL	2	0.027440	0.054880
51	B200280012	BOM	NMIL	1	0.015958	0.015958
52	B200300349	BOM	NMIL	1	0.026144	0.026144
53	B210160065	BOM	N/A	1	0.010000	0.010000
54	B210191450	N/A	STANDARD	1	0.022077	0.022077
			Total Failure Rate (F/10^6Hrs) :			1.466310
			Mean Time (in hours) Between Failures (MTBF) :			681,984