

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: FEB-06-2012
End Item Title : R1S2 SERIES MTBF
End Item Part Number : R1S2-5120V0H (RoHS)
R1S2-5120V0H (RoHS) MTBF : 299,044
Module Title: ZIPPY TECHNOLOGY CORP
Module Part Number : R1S/MTBF
Power Unit Module : R1S-1120V (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.

$$\text{Total Failure Rate}(F) = M \lambda / (3/2) + B \lambda = 3.974851 / (3/2) + 0.694086 = 3.343987$$

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

$$R1S2-5120V0H (RoHS)(MTBF) = F / 10^6 \text{Hrs} = 3.343987 / 10^6 = 299,044$$

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Date : FEB-06-2012 Time : 14:18:41
End Item Title : R1S SERIES MTBF
End Item Part Number : R1S-1120V (RoHS)
R1S-1120V (RoHS) MTBF : 251,582
Module Title : ZIPPY TECHNOLOGY CORP
Module Part Number : R1S / MTBF
Module Reference Designation : R1S
Environmental Condition : GB
Ambient Temperature: 25°C

R1S-1120V (RoHS)

ITEM #	Part Number	Ref Desig	Qual Level	Quant	Individual Failure Rate (F/10 ⁶ Hrs)	Total Failure Rate (F/10 ⁶ Hrs)
1	B102330005	BOM	NMIL	1	0.125731	0.125731
2	B104380002	BOM	NMIL	1	0.400160	0.400160
3	B104380003	BOM	NMIL	1	0.065162	0.065162
4	B104380004	BOM	NMIL	1	0.066630	0.066630
5	B200000327	BOM	SPECIAL	1	0.094935	0.094935
6	B200010109	BOM	NMIL	2	0.000121	0.000242
7	B200010134	BOM	NMIL	1	0.041400	0.041400
8	B200010172	BOM	NMIL	1	0.041400	0.041400
9	B200010173	BOM	NMIL	1	0.041400	0.041400
10	B200020004	BOM	NMIL	1	0.005156	0.005156
11	B200020014	BOM	NMIL	1	0.006751	0.006751
12	B200020021	BOM	NMIL	1	0.006751	0.006751
13	B200040073	BOM	NMIL	2	0.005967	0.011934
14	B200050032	BOM	NMIL	2	0.005218	0.010436
15	B200050059	BOM	NMIL	1	0.088813	0.088813
16	B200050070	BOM	NMIL	1	0.005218	0.005218
17	B200050079	BOM	NMIL	1	0.005218	0.005218
18	B200060018	BOM	NMIL	1	0.014607	0.014607
19	B200090005	BOM	NMIL	1	0.001518	0.001518
20	B200110042	BOM	NMIL	4	0.004650	0.018600
21	B200110046	BOM	NMIL	2	0.004650	0.009300
22	B200110120	BOM	NMIL	2	0.004650	0.009300
23	B200110127	BOM	NMIL	2	0.007440	0.014880
24	B200110156	BOM	NMIL	3	0.004650	0.013950

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25	B200110276	BOM	NMIL	1	0.004650	0.004650
26	B200110346	BOM	NMIL	1	0.004650	0.004650
27	B200110348	BOM	NMIL	1	0.004650	0.004650
28	B200110473	BOM	NMIL	1	0.004650	0.004650
29	B200110583	BOM	NMIL	2	0.004650	0.009300
30	B200110608	BOM	NMIL	9	0.007440	0.066960
31	B200110636	BOM	NMIL	1	0.005115	0.005115
32	B200120161	BOM	NMIL	2	0.005425	0.010850
33	B200160006	BOM	NMIL	1	0.065000	0.065000
34	B200170026	BOM	NMIL	1	0.004875	0.004875
35	B200170042	BOM	NMIL	2	0.003285	0.006570
36	B200180075	BOM	N/A	1	0.008923	0.008923
37	B200190070	BOM	N/A	1	0.015889	0.015889
38	B200190071	BOM	N/A	1	0.014104	0.014104
39	B200190072	BOM	N/A	1	0.014987	0.014987
40	B200200087	BOM	N/A	1	0.014056	0.014056
41	B200200096	BOM	N/A	1	0.008147	0.008147
42	B200200157	BOM	N/A	1	0.011856	0.011856
43	B200220028	BOM	N/A	2	0.002647	0.005294
44	B200220054	BOM	N/A	2	0.003478	0.006956
45	B200220063	BOM	N/A	1	0.002416	0.002416
46	B200230198	BOM	N/A	1	0.058210	0.058210
47	B200230336	BOM	N/A	1	0.025409	0.025409
48	B200230337	BOM	N/A	1	0.022047	0.022047
49	B200230348	BOM	N/A	1	0.033370	0.033370
50	B200230350	BOM	N/A	1	0.144509	0.144509
51	B200230429	BOM	N/A	2	0.048735	0.097470
52	B200250016	BOM	NMIL	1	0.023160	0.023160
53	B200260174	BOM	NMIL	1	0.027440	0.027440
54	B200260208	BOM	NMIL	1	0.027440	0.027440
55	B200280012	BOM	NMIL	1	0.015958	0.015958
56	B200300351	BOM	NMIL	1	0.026144	0.026144
57	B200300352	BOM	NMIL	1	0.026144	0.026144
58	B210090161	BOM	KNOWNFR	1	2.027572	2.027572
59	B210160065	BOM	N/A	1	0.010000	0.010000
60	B210191598	N/A	STANDARD	1	0.020588	0.020588

Total Failure Rate (F/10⁶Hrs) : 3.974851
Mean Time (in hours) Between Failures (MTBF) : **251,582**