

RELIABILITY PREDICTION STANDARD REPORT

(Sorted by Part Number)

MIL-HDBK-217F, Notice 2

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

Date: MAR-09-2009

End Item Title : R1S SERIES MTBF

End Item Part Number : R1S2-5300V4V (RoHS)

R1S2-5300V4V (RoHS) MTBF : 225,551

Module Title: ZIPPY TECHNOLOGY CORP

Module Part Number : P1S / MTBF

Power Unit Module : P1S-2300V-R (RoHS)

Environmental Condition: GB

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.

$$\begin{aligned} \text{Total Failure Rate(F)} &= M / (3 / 2) + B \\ &= 5.632109 / (3 / 2) + 0.678840 = 4.433579 \end{aligned}$$

M = Main power failure rate , B = Back plane failure rate

$$\begin{aligned} \text{R1S2-5300V4V (RoHS)(MTBF)} &= F / 10^6 \text{Hrs} = 4.433579 / 10^6 \\ &= 225,551 \end{aligned}$$

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 : MAR-06-2009 Time : 08:39:23 | | | | | | |
| End Item Title : P1S SERIES MTBF | | | | | | |
| End Item Part Number : P1S-2300V-R (RoHS) | | | | | | |
| Module Title : ZIPPY TECHNOLOGY CORP | | | | | | |
| Module Part Number : P1S/MTBF | | | | | | |
| Module Reference Designation : P1S | | | | | | |
| Environmental Condition : GB | | | | | | |
| | | | | | | |
| | | | | | | |
| <u>P1S-2300V-R (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 | B103120002 | BOM | NMIL | 1 | 0.290448 | 0.290448 |
| 2 | B103120007 | BOM | NMIL | 1 | 0.220943 | 0.220943 |
| 3 | B200000001 | BOM | SPECIAL | 3 | 0.094935 | 0.284805 |
| 4 | B200000092 | BOM | SPECIAL | 1 | 0.091138 | 0.091138 |
| 5 | B200000144 | BOM | SPECIAL | 1 | 0.094935 | 0.094935 |
| 6 | B200000242 | BOM | SPECIAL | 2 | 0.094935 | 0.189870 |
| 7 | B200000272 | BOM | SPECIAL | 1 | 0.094935 | 0.094935 |
| 8 | B200000276 | BOM | SPECIAL | 1 | 0.094935 | 0.094935 |
| 9 | B200010057 | BOM | NMIL | 4 | 0.030142 | 0.120568 |
| 10 | B200010067 | BOM | NMIL | 1 | 0.000798 | 0.000798 |
| 11 | B200010083 | BOM | NMIL | 1 | 0.000766 | 0.000766 |
| 12 | B200020004 | BOM | NMIL | 8 | 0.005156 | 0.041248 |
| 13 | B200030018 | BOM | NMIL | 2 | 0.018136 | 0.036272 |
| 14 | B200030019 | BOM | NMIL | 1 | 0.018136 | 0.018136 |
| 15 | B200040029 | BOM | NMIL | 1 | 0.005967 | 0.005967 |
| 16 | B200050036 | BOM | NMIL | 1 | 0.005218 | 0.005218 |
| 17 | B200050040 | BOM | NMIL | 1 | 0.005218 | 0.005218 |
| 18 | B200050045 | BOM | NMIL | 3 | 0.005218 | 0.015654 |
| 19 | B200050054 | BOM | NMIL | 1 | 0.074906 | 0.074906 |
| 20 | B200060007 | BOM | NMIL | 1 | 0.012450 | 0.012450 |
| 21 | B200110001 | BOM | NMIL | 1 | 0.004650 | 0.004650 |

ZIPPY TECHNOLOGY CORP
10F, No.50, MIN CHYUAN RD
SHIN-TIEN, TAIPEI HSIEN, TAIWAN, R.O.C.

| | | | | | | |
|----|------------|-----|------|---|----------|----------|
| 22 | B200110035 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 23 | B200110042 | BOM | NMIL | 3 | 0.004650 | 0.013950 |
| 24 | B200110046 | BOM | NMIL | 6 | 0.004650 | 0.027900 |
| 25 | B200110073 | BOM | NMIL | 2 | 0.005115 | 0.010230 |
| 26 | B200110087 | BOM | NMIL | 5 | 0.004650 | 0.023250 |
| 27 | B200110120 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 28 | B200110123 | BOM | NMIL | 3 | 0.004650 | 0.013950 |
| 29 | B200110172 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 30 | B200110192 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 31 | B200110261 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 32 | B200110282 | BOM | NMIL | 4 | 0.004650 | 0.018600 |
| 33 | B200110311 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 34 | B200110340 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 35 | B200110343 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 36 | B200110489 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 37 | B200110494 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 38 | B200110498 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 39 | B200110503 | BOM | NMIL | 1 | 0.005115 | 0.005115 |
| 40 | B200110506 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 41 | B200110510 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 42 | B200110519 | BOM | NMIL | 3 | 0.004650 | 0.013950 |
| 43 | B200110520 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 44 | B200110521 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 45 | B200110523 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 46 | B200110524 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 47 | B200110544 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 48 | B200110549 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 49 | B200110550 | BOM | NMIL | 2 | 0.004650 | 0.009300 |
| 50 | B200110561 | BOM | NMIL | 4 | 0.004650 | 0.018600 |
| 51 | B200110588 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 52 | B200110594 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 53 | B200110598 | BOM | NMIL | 2 | 0.004650 | 0.009300 |
| 54 | B200110599 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 55 | B200110659 | BOM | NMIL | 1 | 0.004650 | 0.004650 |
| 56 | B200120015 | BOM | NMIL | 1 | 0.008509 | 0.008509 |
| 57 | B200120017 | BOM | NMIL | 1 | 0.009576 | 0.009576 |
| 58 | B200120102 | BOM | NMIL | 1 | 0.007735 | 0.007735 |
| 59 | B200120156 | BOM | NMIL | 1 | 0.006870 | 0.006870 |
| 60 | B200140018 | BOM | NMIL | 1 | 0.035297 | 0.035297 |
| 61 | B200160011 | BOM | NMIL | 1 | 0.065000 | 0.065000 |

