



ZIPPY TECHNOLOGY CORP.

Mean Time Between Failures

PREDICTION REPORT

MIL-HDBK-217F, Notice 2

Product : Switching Power Supply

Model/Type : DZRE-1600V2(RoHS)(PMBus WP1.2)

|             |                     |                    |  |
|-------------|---------------------|--------------------|--|
| Approval By | <i>Chacha Ho</i>    | 正式<br>資料<br>用<br>章 |  |
| Prepared By | <i>Lin Huan Lin</i> |                    |  |

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

Date : NOV-29-2019      Time : 10:53:28  
End Item Title : DZRE SERIES MTBF  
End Item Part Number : DZRE-1600V2(RoHS)(PMBus WP1.2)  
DZRE-1600V2(RoHS)(PMBus WP1.2) MTBF : 156,031  
Module Title : ZIPPY TECHNOLOGY CORP  
Module Part Number : DZRE / MTBF  
Module Reference Designation : DZRE  
Environmental Condition : GB  
Ambient Temperature: 25°C

**DZRE-1600V2(RoHS)(PMBus WP1.2)**

| ITEM<br># | Part<br>Number | Ref<br>Desig | Qual<br>Level | Quant | Individual<br>Failure Rate<br>(F/10 <sup>6</sup> Hrs) | Total<br>Failure Rate<br>(F/10 <sup>6</sup> Hrs) |
|-----------|----------------|--------------|---------------|-------|-------------------------------------------------------|--------------------------------------------------|
| 1         | B106550002     | BOM          | SPECIAL       | 1     | 0.285101                                              | 0.285101                                         |
| 2         | B106550003     | BOM          | SPECIAL       | 1     | 0.799745                                              | 0.799745                                         |
| 3         | B106550005     | BOM          | SPECIAL       | 1     | 0.049243                                              | 0.049243                                         |
| 4         | B106550012     | BOM          | SPECIAL       | 1     | 1.709853                                              | 1.709853                                         |
| 5         | B200000066     | BOM          | NMIL          | 1     | 0.006152                                              | 0.006152                                         |
| 6         | B200000357     | BOM          | NMIL          | 1     | 0.013289                                              | 0.013289                                         |
| 7         | B200000628     | BOM          | NMIL          | 1     | 0.006015                                              | 0.006015                                         |
| 8         | B200000640     | BOM          | NMIL          | 3     | 0.006522                                              | 0.019566                                         |
| 9         | B200000641     | BOM          | NMIL          | 2     | 0.008063                                              | 0.016126                                         |
| 10        | B200010022     | BOM          | NMIL          | 1     | 0.000843                                              | 0.000843                                         |
| 11        | B200010190     | BOM          | NMIL          | 1     | 0.004985                                              | 0.004985                                         |
| 12        | B200010192     | BOM          | NMIL          | 1     | 0.009694                                              | 0.009694                                         |
| 13        | B200010238     | BOM          | NMIL          | 2     | 0.055776                                              | 0.111552                                         |
| 14        | B200010262     | BOM          | NMIL          | 1     | 0.072168                                              | 0.072168                                         |
| 15        | B200010268     | BOM          | NMIL          | 6     | 0.049801                                              | 0.298806                                         |
| 16        | B200020024     | BOM          | NMIL          | 2     | 0.000424                                              | 0.000848                                         |
| 17        | B200030083     | BOM          | NMIL          | 1     | 0.000712                                              | 0.000712                                         |
| 18        | B200030107     | BOM          | NMIL          | 4     | 0.001906                                              | 0.007624                                         |
| 19        | B200040120     | BOM          | NMIL          | 1     | 0.011646                                              | 0.011646                                         |
| 20        | B200040133     | BOM          | NMIL          | 9     | 0.011646                                              | 0.104814                                         |
| 21        | B200040139     | BOM          | NMIL          | 2     | 0.012030                                              | 0.024060                                         |
| 22        | B200040141     | BOM          | NMIL          | 1     | 0.000362                                              | 0.000362                                         |
| 23        | B200050036     | BOM          | NMIL          | 2     | 0.003013                                              | 0.006026                                         |
| 24        | B200090055     | BOM          | NMIL          | 1     | 0.001476                                              | 0.001476                                         |

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| ITEM<br># | Part<br>Number | Ref<br>Desig | Qual<br>Level | Quant | Individual<br>Failure Rate<br>(F/10 <sup>6</sup> Hrs) | Total<br>Failure Rate<br>(F/10 <sup>6</sup> Hrs) |
|-----------|----------------|--------------|---------------|-------|-------------------------------------------------------|--------------------------------------------------|
| 25        | B200110001     | BOM          | NMIL          | 1     | 0.002896                                              | 0.002896                                         |
| 26        | B200110016     | BOM          | NMIL          | 1     | 0.002896                                              | 0.002896                                         |
| 27        | B200110042     | BOM          | NMIL          | 1     | 0.002210                                              | 0.002210                                         |
| 28        | B200110046     | BOM          | NMIL          | 1     | 0.002896                                              | 0.002896                                         |
| 29        | B200110054     | BOM          | NMIL          | 1     | 0.003039                                              | 0.003039                                         |
| 30        | B200110120     | BOM          | NMIL          | 1     | 0.002896                                              | 0.002896                                         |
| 31        | B200110198     | BOM          | NMIL          | 1     | 0.002896                                              | 0.002896                                         |
| 32        | B200110279     | BOM          | NMIL          | 1     | 0.002210                                              | 0.002210                                         |
| 33        | B200110357     | BOM          | NMIL          | 2     | 0.002896                                              | 0.005792                                         |
| 34        | B200110488     | BOM          | NMIL          | 1     | 0.002210                                              | 0.002210                                         |
| 35        | B200110503     | BOM          | NMIL          | 1     | 0.002210                                              | 0.002210                                         |
| 36        | B200110505     | BOM          | NMIL          | 7     | 0.002210                                              | 0.015470                                         |
| 37        | B200110520     | BOM          | NMIL          | 1     | 0.002210                                              | 0.002210                                         |
| 38        | B200110555     | BOM          | NMIL          | 2     | 0.002210                                              | 0.004420                                         |
| 39        | B200110564     | BOM          | NMIL          | 2     | 0.002210                                              | 0.004420                                         |
| 40        | B200110627     | BOM          | NMIL          | 3     | 0.002319                                              | 0.006957                                         |
| 41        | B200110691     | BOM          | NMIL          | 4     | 0.002210                                              | 0.008840                                         |
| 42        | B200110709     | BOM          | NMIL          | 2     | 0.002026                                              | 0.004052                                         |
| 43        | B200110729     | BOM          | NMIL          | 1     | 0.002026                                              | 0.002026                                         |
| 44        | B200110733     | BOM          | NMIL          | 14    | 0.002026                                              | 0.028364                                         |
| 45        | B200110737     | BOM          | NMIL          | 2     | 0.002210                                              | 0.004420                                         |
| 46        | B200110739     | BOM          | NMIL          | 7     | 0.002026                                              | 0.014182                                         |
| 47        | B200110740     | BOM          | NMIL          | 2     | 0.002026                                              | 0.004052                                         |
| 48        | B200110743     | BOM          | NMIL          | 1     | 0.002026                                              | 0.002026                                         |
| 49        | B200110744     | BOM          | NMIL          | 2     | 0.002026                                              | 0.004052                                         |
| 50        | B200110746     | BOM          | NMIL          | 2     | 0.002026                                              | 0.004052                                         |
| 51        | B200110771     | BOM          | NMIL          | 2     | 0.002026                                              | 0.004052                                         |
| 52        | B200110775     | BOM          | NMIL          | 1     | 0.002026                                              | 0.002026                                         |
| 53        | B200110789     | BOM          | NMIL          | 1     | 0.002210                                              | 0.002210                                         |
| 54        | B200110821     | BOM          | NMIL          | 1     | 0.002126                                              | 0.002126                                         |
| 55        | B200110865     | BOM          | NMIL          | 1     | 0.002026                                              | 0.002026                                         |
| 56        | B200111009     | BOM          | NMIL          | 3     | 0.002319                                              | 0.006957                                         |
| 57        | B200120174     | BOM          | NMIL          | 1     | 0.004868                                              | 0.004868                                         |
| 58        | B200160034     | BOM          | NMIL          | 1     | 0.029693                                              | 0.029693                                         |
| 59        | B200160054     | BOM          | NMIL          | 1     | 0.002852                                              | 0.002852                                         |
| 60        | B200170023     | BOM          | NMIL          | 2     | 0.003466                                              | 0.006932                                         |
| 61        | B200170073     | BOM          | NMIL          | 1     | 0.002424                                              | 0.002424                                         |
| 62        | B200170074     | BOM          | NMIL          | 4     | 0.002840                                              | 0.011360                                         |
| 63        | B200190031     | BOM          | NMIL          | 1     | 0.013460                                              | 0.013460                                         |
| 64        | B200200082     | BOM          | NMIL          | 10    | 0.008395                                              | 0.083950                                         |

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| ITEM<br># | Part<br>Number | Ref<br>Desig | Qual<br>Level | Quant | Individual<br>Failure Rate<br>(F/10 <sup>6</sup> Hrs) | Total<br>Failure Rate<br>(F/10 <sup>6</sup> Hrs) |
|-----------|----------------|--------------|---------------|-------|-------------------------------------------------------|--------------------------------------------------|
| 65        | B200200085     | BOM          | NMIL          | 1     | 0.007553                                              | 0.007553                                         |
| 66        | B200200119     | BOM          | NMIL          | 1     | 0.004827                                              | 0.004827                                         |
| 67        | B200200123     | BOM          | NMIL          | 6     | 0.003413                                              | 0.020478                                         |
| 68        | B200200126     | BOM          | NMIL          | 3     | 0.010356                                              | 0.031068                                         |
| 69        | B200200155     | BOM          | NMIL          | 3     | 0.005166                                              | 0.015498                                         |
| 70        | B200200156     | BOM          | NMIL          | 5     | 0.006356                                              | 0.031780                                         |
| 71        | B200200186     | BOM          | NMIL          | 1     | 0.003189                                              | 0.003189                                         |
| 72        | B200200199     | BOM          | NMIL          | 1     | 0.005546                                              | 0.005546                                         |
| 73        | B200200205     | BOM          | NMIL          | 6     | 0.007820                                              | 0.046920                                         |
| 74        | B200200207     | BOM          | NMIL          | 1     | 0.005166                                              | 0.005166                                         |
| 75        | B200220010     | BOM          | NMIL          | 1     | 0.003943                                              | 0.003943                                         |
| 76        | B200220084     | BOM          | NMIL          | 2     | 0.001294                                              | 0.002588                                         |
| 77        | B200220090     | BOM          | NMIL          | 3     | 0.001385                                              | 0.004155                                         |
| 78        | B200230376     | BOM          | NMIL          | 2     | 0.005493                                              | 0.010986                                         |
| 79        | B200230377     | BOM          | NMIL          | 2     | 0.010124                                              | 0.020248                                         |
| 80        | B200230379     | BOM          | NMIL          | 3     | 0.012388                                              | 0.037164                                         |
| 81        | B200230388     | BOM          | NMIL          | 2     | 0.009275                                              | 0.018550                                         |
| 82        | B200260458     | BOM          | NMIL          | 1     | 0.000191                                              | 0.000191                                         |
| 83        | B200260459     | BOM          | NMIL          | 1     | 0.000176                                              | 0.000176                                         |
| 84        | B200260460     | BOM          | NMIL          | 1     | 0.000191                                              | 0.000191                                         |
| 85        | B200260461     | BOM          | NMIL          | 1     | 0.000191                                              | 0.000191                                         |
| 86        | B200270020     | BOM          | NMIL          | 1     | 0.000173                                              | 0.000173                                         |
| 87        | B200280017     | BOM          | NMIL          | 1     | 0.000623                                              | 0.000623                                         |
| 88        | B200290024     | BOM          | NMIL          | 2     | 0.011159                                              | 0.022318                                         |
| 89        | B200360083     | BOM          | NMIL          | 1     | 0.002189                                              | 0.002189                                         |
| 90        | B210000120     | BOM          | NMIL          | 2     | 0.002450                                              | 0.004900                                         |
| 91        | B210090242     | BOM          | SPECIAL       | 1     | 2.182912                                              | 2.182912                                         |
| 92        | B210160091     | BOM          | NMIL          | 2     | 0.010000                                              | 0.020000                                         |
| 93        | B210193017     | BOM          | NMIL          | 1     | 0.003870                                              | 0.003870                                         |
| 94        | B210193078     | BOM          | NMIL          | 1     | 0.024248                                              | 0.024248                                         |

Total Failure Rate (F/10<sup>6</sup>Hrs) : 6.408977  
Mean Time (in hours) Between Failures (MTBF) : 156,031