

# 15 WATT AC-DC CONVERTER ERM-SB SERIES

| Specifications<AC/DC>                        | Model  |         |         |         |         |
|--|--|---------|---------|---------|---------|
| ERM**SB<br>15WATTS/SINGLE                    | ERM05SB  | ERM12SB | ERM15SB | ERM24SB | ERM48SB |
| <b>Input Characteristic</b>                  |  |         |         |         |         |
| Input Voltage                                | AC200V(DC260V)   |         |         |         |         |
| Input Range                                  | AC170-264V(DC220-350V)   |         |         |         |         |
| Input Frequency                              | 50/60Hz  |         |         |         |         |
| Input Frequency Range                        | 47-440Hz   |         |         |         |         |
| Phase  | Single   |         |         |         |         |
| Inrush Current *1                            | 25A(maximum)at AC200V  |         |         |         |         |
| Efficiency [%] (typical) *2                  | 76   | 78      | 83      | 84      | 84      |
| <b>Output Characteristic</b>                 |  |         |         |         |         |
| Output Voltage [V]                           | 5  | 12      | 15      | 24      | 48      |
| Output Current [A]                           | 3.0  | 1.3     | 1.0     | 0.7     | 0.35    |
| Voltage Adjust Range                         | +/- 5% of Rated Output Voltage(at no load within the input range)  |         |         |         |         |
| Ripple and Noise [mVp-p](maximum) *3         | 100  | 170     | 200     | 290     | 530     |
| <b>Regulation</b>                            |  |         |         |         |         |
| a.Statistic Line Regulation [mV](maximum)    | 25   | 60      | 75      | 120     | 240     |
| b.Statistic Load Regulation [mV](maximum)    | 50   | 120     | 150     | 240     | 480     |
| c.Temperature Coefficient *4                 | 0.03%/°C   |         |         |         |         |
| d.Drift[mV](maximum) *5                      | 40   | 75      | 90      | 135     | 255     |
| e.Dynamic Load Regulation [mV](typical) *6   | not specified  |         |         |         |         |
| f.Recovery Time *6                           | not specified  |         |         |         |         |
| Rise up time                                 | 200mS(maximum) at 25°C and rated input/output  |         |         |         |         |
| Hold up time                                 | 20mS(minimum) at 25°C and rated input/output   |         |         |         |         |
| <b>Functions</b>                             |  |         |         |         |         |
| Overcurrent Protection $\geq 105\%$ of Rated | Current Limiting with automatic recovery   |         |         |         |         |
| Output Current[A]                            | 3.15   | 1.37    | 1.05    | 0.74    | 0.37    |
| Overvoltage Protection $\geq 115\%$ of Rated | Zener diode clamping   |         |         |         |         |
| Output Voltage[V]                            | 5.75   | 13.8    | 17.25   | 27.6    | 55.2    |
| Remote Sense                                 | not available  |         |         |         |         |
| Remote On/Off                                | not available  |         |         |         |         |
| <b>Environmental</b>                         |  |         |         |         |         |
| Operating Temperature                        | -5 to +50°C  |         |         |         |         |
| Operating Humidity                           | 85%RH(non-condensing)  |         |         |         |         |
| Storage Temperature                          | -20 to +85°C   |         |         |         |         |
| Storage Humidity                             | 85%RH(non-condensing)  |         |         |         |         |
| Withstanding Voltage                         | Primary-Secondary AC2,500V for 1minute<br>Primary-Frame Ground AC2,500V for 1minute<br>Secondary-Frame Ground AC500V for 1minute |         |         |         |         |
| Isolation Resistance                         | Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester   |         |         |         |         |
| Vibration                                    | 5-10Hz:10mm double amplitude,10-55Hz:19.6m/s <sup>2</sup> ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)  |         |         |         |         |
| Shock  | 294m/s <sup>2</sup>  |         |         |         |         |
| Cooling                                      | Convection   |         |         |         |         |
| ? Leakage Current                            | 1mA(maximum) at 25°C,rated input/output and rated input frequency  |         |         |         |         |
| ? Line Conducted Noise                       | Built to meet FCC Part15-B Class B   |         |         |         |         |
| ? Safety                                     |  |         |         |         |         |
| ? Weight (typical)                           | 220g/enclosed type:270g  |         |         |         |         |
| ? MTBF [H]                                   | 950,000  |         |         |         |         |
| ? Switching Frequency[kHz](typical) *7       | 30   |         |         |         |         |

Conditions:

\*1 at cold start

\*2 at DC260V input and rated output

\*3 measured by a bayonet probe at output connector at 0 to 100MHz bandwidth

\*4 at -5 to +50°C

\*5 for 7hour period after 1hour warm-up at 25°C and rated input/output

\*6 when output current changed from 25% to 75% of rated output current rapidly at AC200V input

\*7 variable on input voltage and load conditions

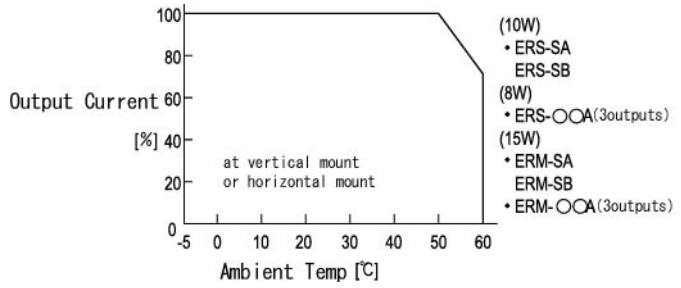
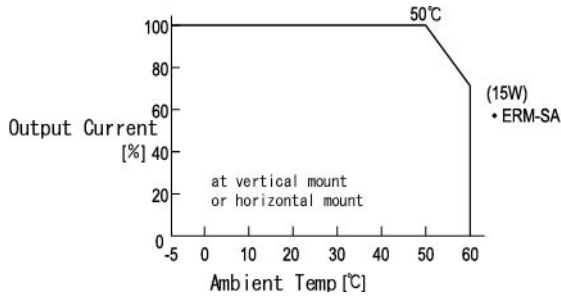


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### Derating Curve



### OCP Curve

