

**Silicon Power Diode**

**PSM/PSMR 300K**

**PSMF/PSMFR 300K**

$$I_{F(AV)} = 300 \text{ A}$$

$$V_{RRM} = 100 - 1600 \text{ V}$$

Preliminary Data Sheet

| $V_{RRM}$<br>max. repetitive<br>peak voltage<br>(V) | $V_{R(RMS)}$<br>max. RMS<br>reverse voltage<br>(V) | $V_R$<br>max. DC<br>blocking voltage<br>(V) | recommended<br>RMS working<br>voltage<br>(V) | Type             |                    |
|---|--|---|--|------------------|--------------------|
|   |  |   |  |                  | with terminal lead |
| 100   | 70   | 100   | 40   | PSM/PSMR 300/01K | PSMF/PSMFR 300/01K |
| 200   | 140  | 200   | 80   | PSM/PSMR 300/02K | PSMF/PSMFR 300/02K |
| 400   | 280  | 400   | 160  | PSM/PSMR 300/04K | PSMF/PSMFR 300/04K |
| 600   | 420  | 600   | 240  | PSM/PSMR 300/06K | PSMF/PSMFR 300/06K |
| 800   | 560  | 800   | 320  | PSM/PSMR 300/08K | PSMF/PSMFR 300/08K |
| 1000  | 700  | 1000  | 400  | PSM/PSMR 300/10K | PSMF/PSMFR 300/10K |
| 1200  | 840  | 1200  | 480  | PSM/PSMR 300/12K | PSMF/PSMFR 300/12K |
| 1400  | 980  | 1400  | 560  | PSM/PSMR 300/14K | PSMF/PSMFR 300/14K |
| 1600  | 1120   | 1600  | 640  | PSM/PSMR 300/16K | PSMF/PSMFR 300/16K |

| Symbol        | Conditions   | Maximum Ratings               |
|---------------|--|-------------------------------|
| $I_{F(AV)}$   | $T_C = 125^\circ\text{C}$  | 300 A                         |
| $I_{FSM}$     | $T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$                              | 5000 A                        |
| $I_{FRM}$     | max. peak cycle repetitive surge current                                     | 1400 A                        |
| $I^2t$        | max. $I^2t$ rating (non-rep.) for 5 to 10 ms                                 | 150000 A <sup>2</sup> s       |
| $I_{R(AV)}$   | max. average reverse leakage current at $V_{RRM}$ ; $T_C = 25^\circ\text{C}$ | 3 $\mu\text{A}$               |
| $V_{FM}$      | max. peak forward voltage drop @ rated $I_{F(AV)}$                           | 1.35 V                        |
| $R_{thJC}$    | max. thermal resistance junction to case                                     | 0.18 K/W                      |
| $T_{VJ}$      | operating junction temperature   | -65... + 150 $^\circ\text{C}$ |
| $T_{VJM}$     | max. virtual junction temperature  | 150 $^\circ\text{C}$          |
| $T_{stg}$     | storage temperature  | -65... + 200 $^\circ\text{C}$ |
| $M_d$         | mounting torque  | min. 3.2 mkg<br>max. 3.7 mkg  |
| <b>Weight</b> | typ.   | 260 g                         |

**DO - 9**

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