



SCHOTTKY BARRIER SOLAR RECTIFIER

VOLTAGE 45 Volts CURRENT 16 Amperes

FEATURES

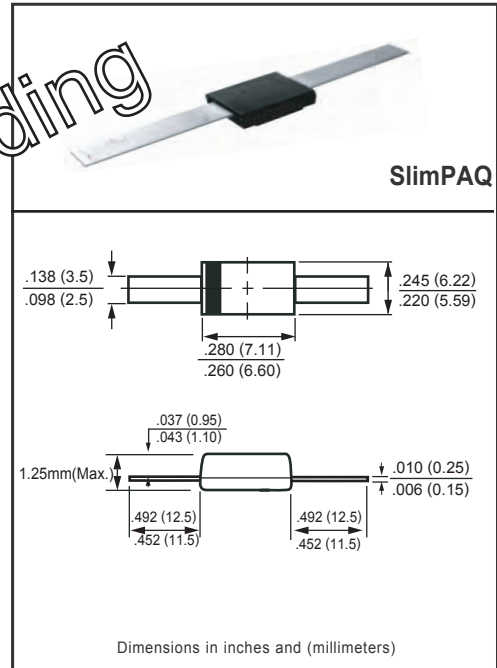
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High surge capability
- * High reliability
- * ideal for solar panel PV application such as By-Pass diode

MECHANICAL DATA

- * Case: Slim PAQ
- * Epoxy: Device has UL flame (UL) classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.



MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

| RATINGS | SYMBOL | SPKC1645F | UNITS |
|---|------------------|--|------------------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 45 | Volts |
| Maximum RMS Voltage | V _{RMS} | 31.5 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 45 | Volts |
| Maximum DC Forward Current @TL=125°C(Note 1) | I _O | 16 | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 300 | Amps |
| Typical Current Square Time | I ² T | 373.3 | A ² S |
| Typical Thermal Resistance | R _{θJA} | 6.3 | °C/W |
| | R _{θJC} | 3.1 | |
| | R _{θJL} | 1.6 | |
| Operating Temperature Range | T _J | 175(T _J ≤200C in Bypass Mode) | °C |
| Storage Temperature Range | T _{STG} | -55 to + 175 | °C |

ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | SPKC1645F | UNITS |
|--|----------------|------------------------|-------|
| Maximum Instantaneous Forward Voltage at 16 A DC | V _F | @T _A = 25°C | .54 |
| | | @T _A = 75°C | .47 |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | I _R | @T _A = 25°C | 100 |
| | | @T _A = 75°C | 2.5 |

- NOTES : 1. Heat-sink mounted 10mm max from body
 2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
 3. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

RATING AND CHARACTERISTICS CURVES (SPKC1645F)

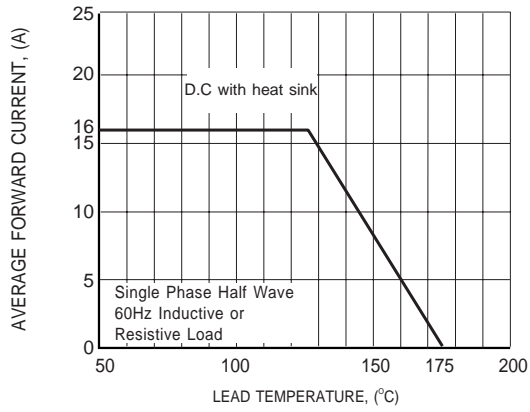


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

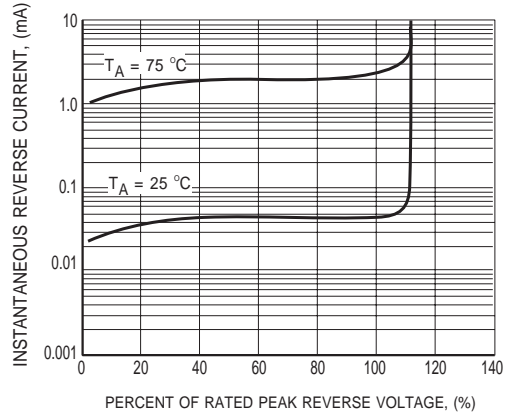


FIG.2 TYPICAL REVERSE CHARACTERISTICS

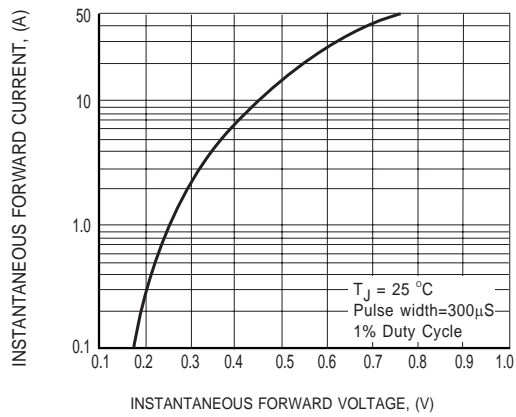


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

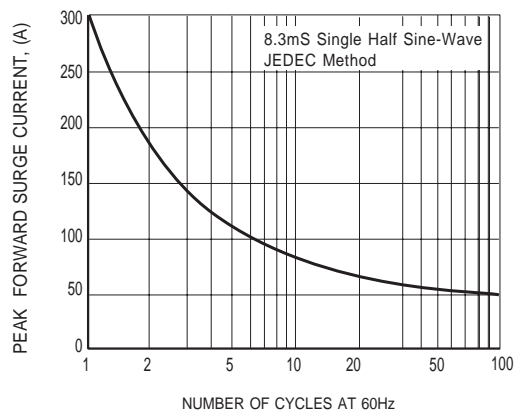


FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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