



SCHOTTKY BARRIER SOLAR RECTIFIER

VOLTAGE 45 Volts CURRENT 16 Amperes

FEATURES

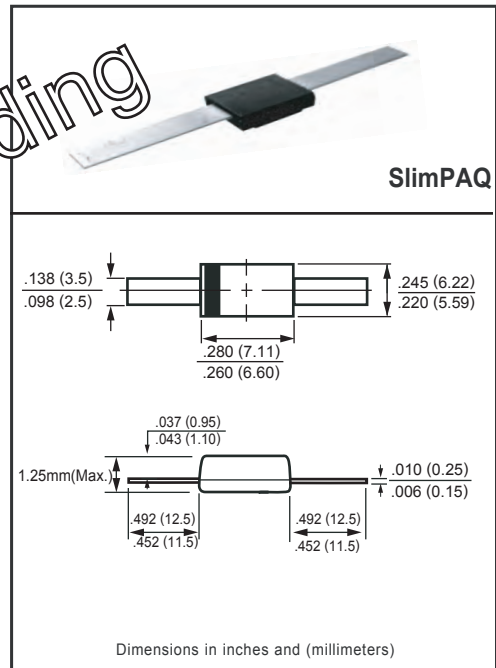
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High surge capability
- * High reliability
- * ideal for solar panel PV application such as By-Pass diode

MECHANICAL DATA

- * Case: Slim PAQ
- * Epoxy: Device has UL flammability 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 @T _L =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)	
Storage Temperature Range	T _{STG}	-55 to + 175	

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

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

- 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.

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REV: B

RATING AND CHARACTERISTICS CURVES (SPKC1645F)

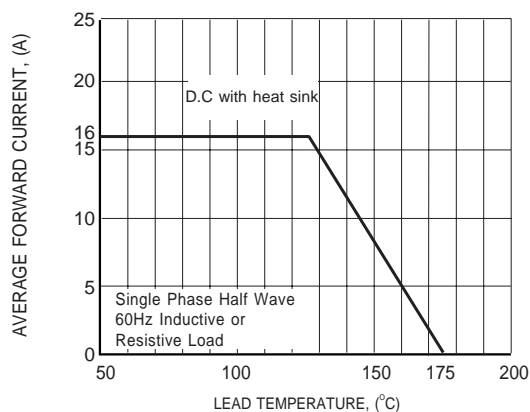


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

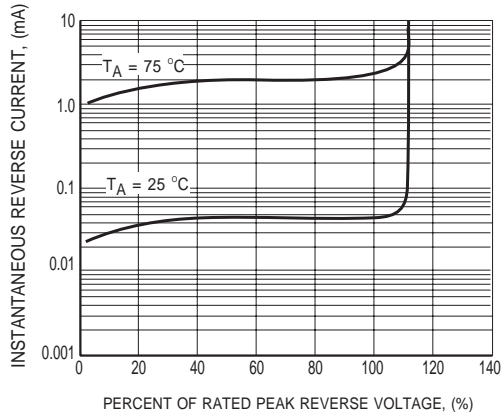


FIG.2 TYPICAL REVERSE CHARACTERISTICS

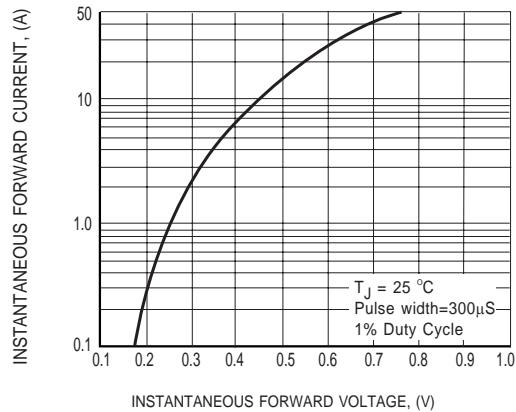


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

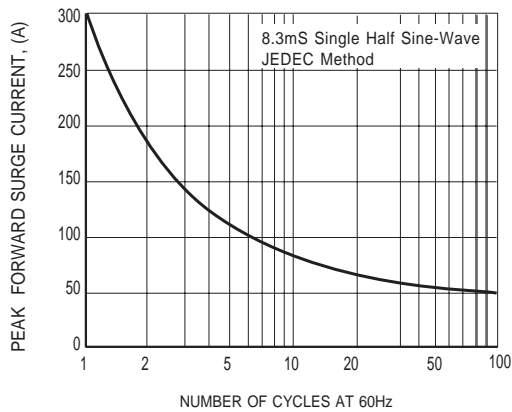


FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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