



**SCHOTTKY BARRIER SOLAR RECTIFIER**

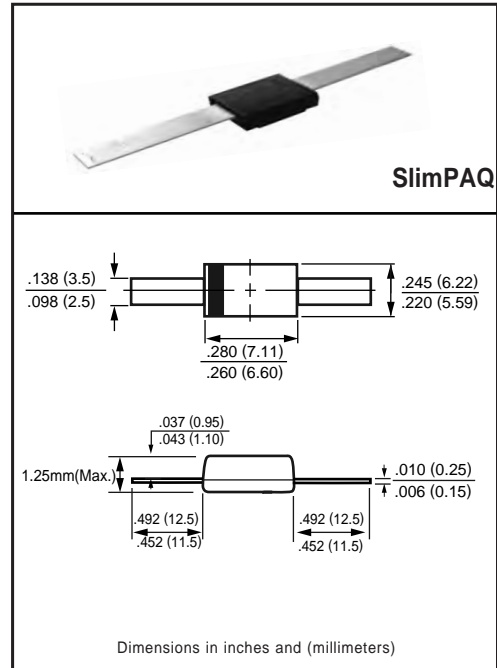
**VOLTAGE 45 Volts CURRENT 8 Amperes**

**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: SlimPAQ
- \* 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)**

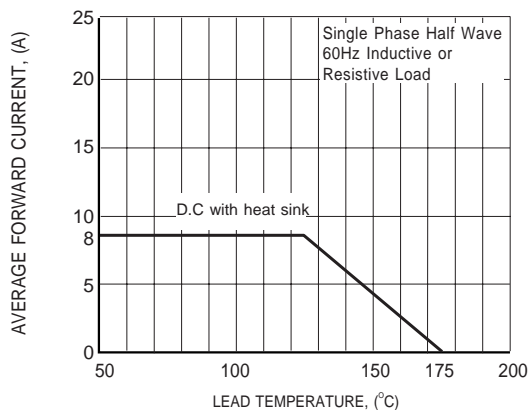
RATINGS	SYMBOL	SPKC845F	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	Volts
Maximum RMS Voltage	$V_{RMS}$	31.5	Volts
Maximum DC Blocking Voltage	$V_{DC}$	45	Volts
Maximum DC Forward Current @TL=125°C(Note 1)	$I_o$	8	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150	Amps
Typical Current Square Time	$I^2T$	93.3	A <sup>2</sup> S
Typical Thermal Resistance	$R_{\theta JA}$	55	°C/W
	$R_{\theta JL}$	3.5	
Operating Temperature Range	$T_J$	175(T <sub>J</sub> ≤200°C in Bypass Mode)	
Storage Temperature Range	$T_{STG}$	-55 to + 175	°C

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

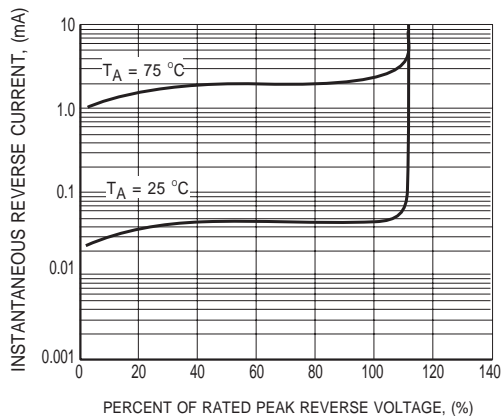
CHARACTERISTICS	SYMBOL	SPKC845F	UNITS
Maximum Instantaneous Forward Voltage at 8 A DC	$V_F$	@ $T_A = 25^\circ C$	.55
		@ $T_A = 75^\circ C$	.50
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_A = 25^\circ C$	100
		@ $T_A = 75^\circ C$	2.5

- 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.

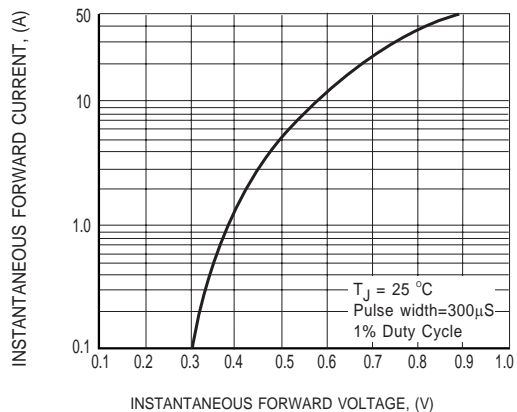
## RATING AND CHARACTERISTICS CURVES ( SPKC845F )



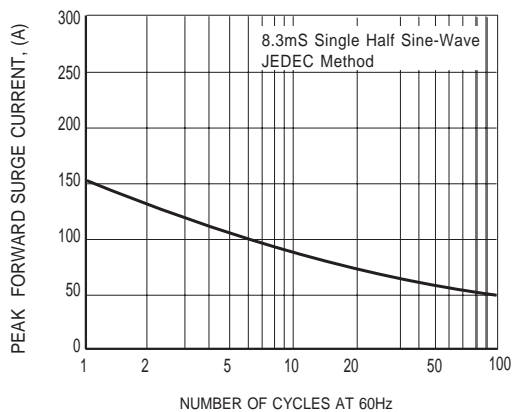
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.2 TYPICAL REVERSE CHARACTERISTICS**



**FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

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