

**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**

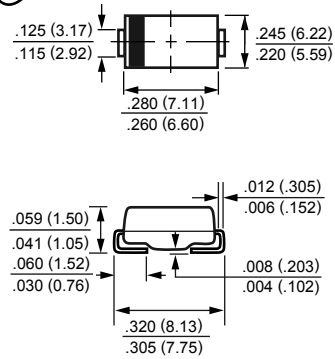
- \* Case: R-6 axial-leaded, molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.2527grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.



SMCL



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

RATINGS	SYMBOL	SPKC1645	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 @ $T_L=75^{\circ}C$ (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 Thermal Resistance	$R_{\theta JA}$	55	$^{\circ}C/W$
	$R_{\theta JL}$	17	
Operating Temperature Range	$T_J$	150	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to + 150	$^{\circ}C$

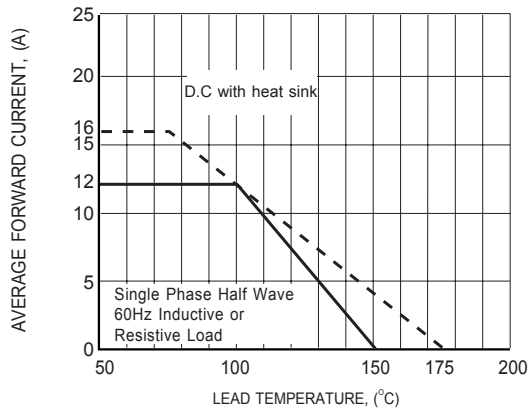
**ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	SPKC1645	UNITS
Maximum Instantaneous Forward Voltage at 16 A DC	$V_F$	@ $T_A = 25^{\circ}C$	.51
		@ $T_A = 75^{\circ}C$	.47
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_A = 25^{\circ}C$	100
		@ $T_A = 75^{\circ}C$	2.5

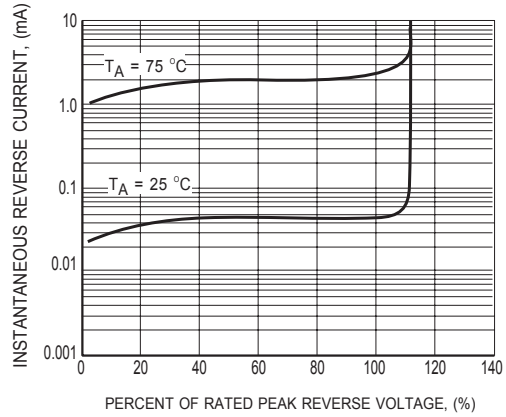
- NOTES : 1. Heat-sink mounted 10mm max from body  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

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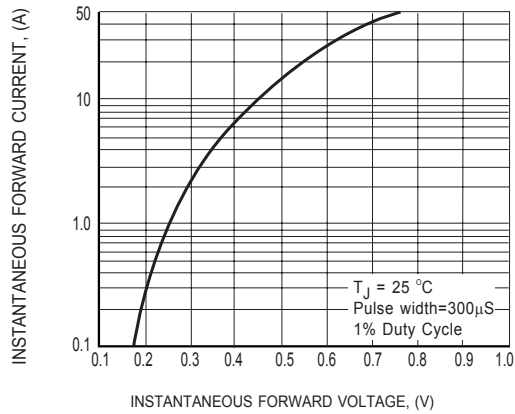
## RATING AND CHARACTERISTICS CURVES ( SPKC1645 )



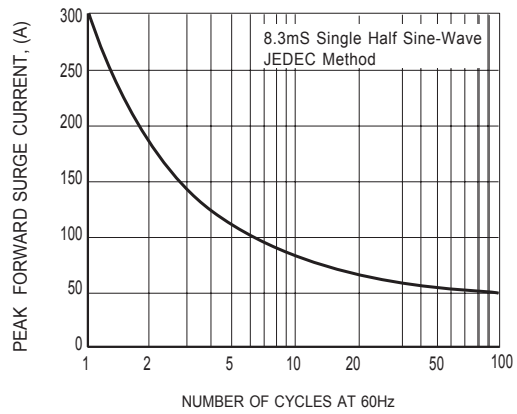
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.2 TYPICAL REVERSE CHARACTERISTICS**



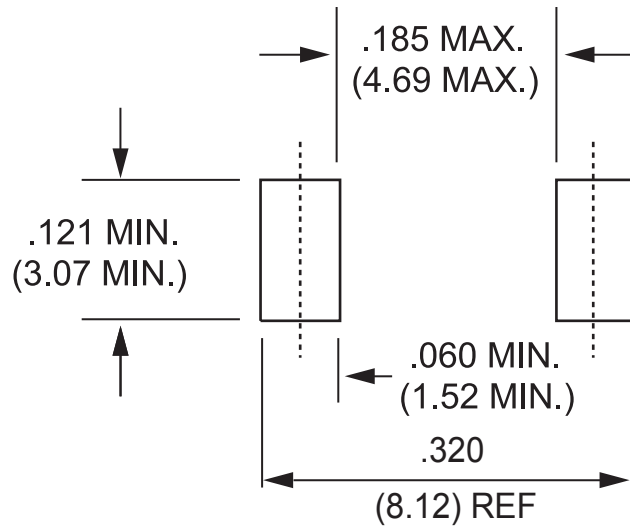
**FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



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

# SOLDER PADS OUTLINE

Unit: inch ( mm )



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