RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

SPKT1845

SCHOTTKY BARRIER SOLAR RECTIFIER

VOLTAGE 45 Volts CURRENT 18 Amperes

FEATURES

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

MECHANICAL DATA

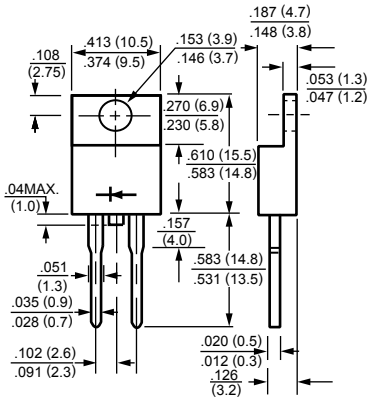
* Case: R-6 axial-leaded, molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 1.883 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.



TO-220A



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	SPKT1845	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°C(Note 1)	I_O	18	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	$R_{\theta JA}$	35	°C/W
	$R_{\theta JL}$	3.3	
Operating Temperature Range	T_J	175	°C
Storage Temperature Range	T_{STG}	-55 to + 175	°C

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

CHARACTERISTICS		SYMBOL	SPKT1845	UNITS
Maximum Instantaneous Forward Voltage at 18 A DC	@T_A = 25°C	V_F	.52	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)".

2009-04
REV: O

RATING AND CHARACTERISTICS CURVES (SPKT1845)

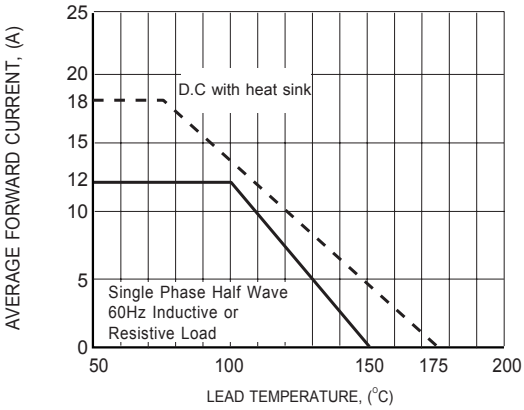


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

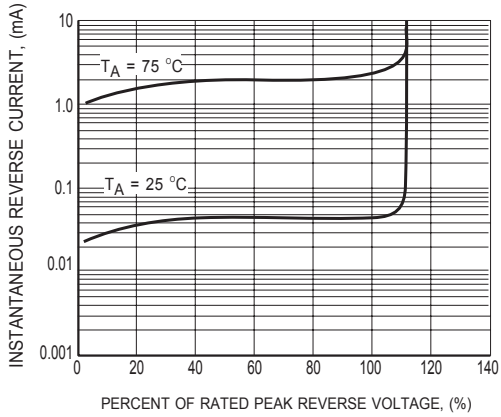


FIG.2 TYPICAL REVERSE CHARACTERISTICS

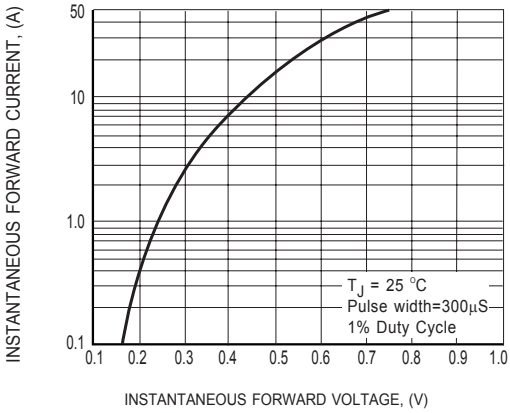


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

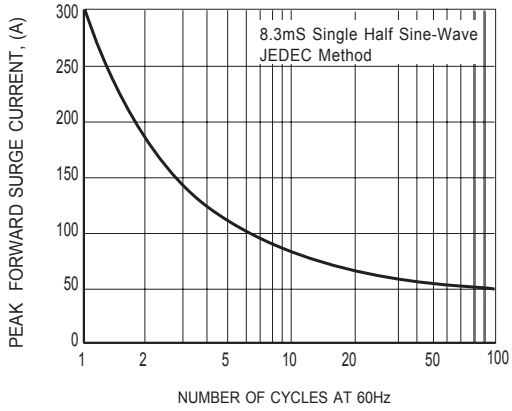


FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.