

SCHOTTKY BARRIER RECTIFIER
VOLTAGE 45 Volts CURRENT 20.0 Ampere

FEATURES

- * Metal of silicon rectifier , majority carrier conduction
- * Guard ring for transient protection
- * Low power loss,high efficiency
- * High current capability
- * High surge capacity

MECHANICAL DATA

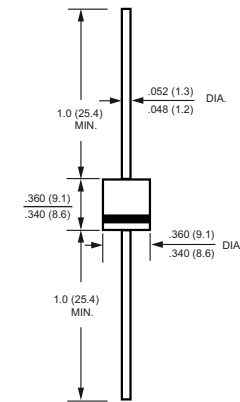
- * Epoxy: Device has UL flammability classification 94V-0
- * For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



R-6



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	20SQ045	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 Average Forward Rectified Current at $T_c = 95^{\circ}C$	I_O	20	Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	310	Amps
Current Squared Time	I^2t	398.8	A^2Sec
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	3.0	$^{\circ}C/W$
Typical Junction Capacitance (Note 1)	C_J	450	pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	$^{\circ}C$

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

CHARACTERISTICS	SYMBOL	20SQ045	UNITS
Maximum Forward Voltage at 10A DC	V_F	0.55	Volts
Maximum DC Average Reverse Current at $@T_j = 25^{\circ}C$	I_R	0.5	mAmps
Rated DC Blocking Voltage $@T_j = 100^{\circ}C$		50	mAmps

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
2. Thermal Resistance Junction to Case.
3. RoHS Compliant

2020-10/25
REV:O

RATING AND CHARACTERISTICS CURVES (20SQ045)

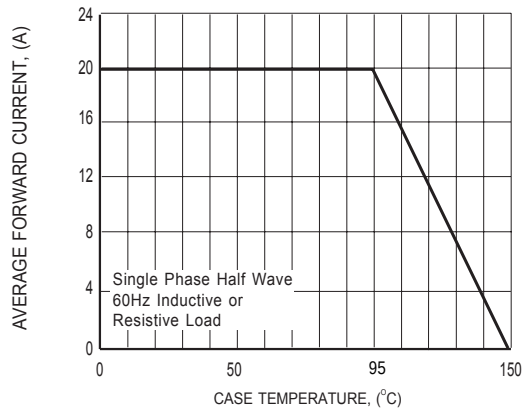


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

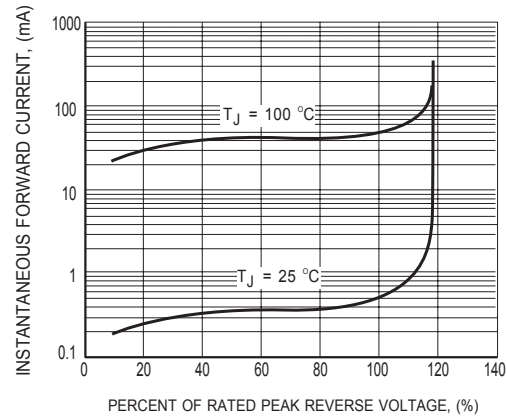


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

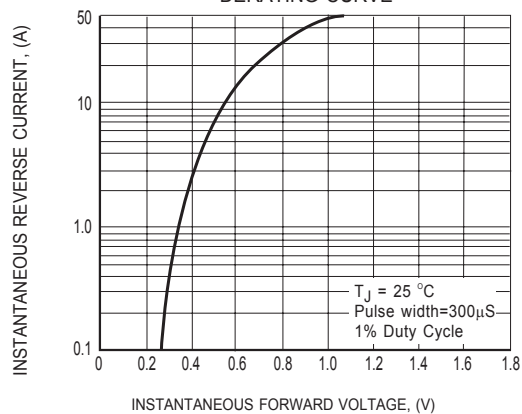


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

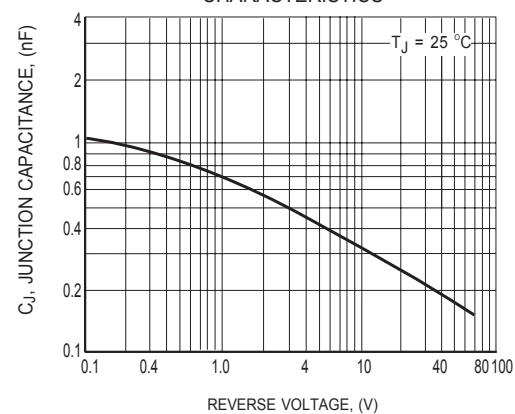


FIG.4 TYPICAL JUNCTION CAPACITANCE

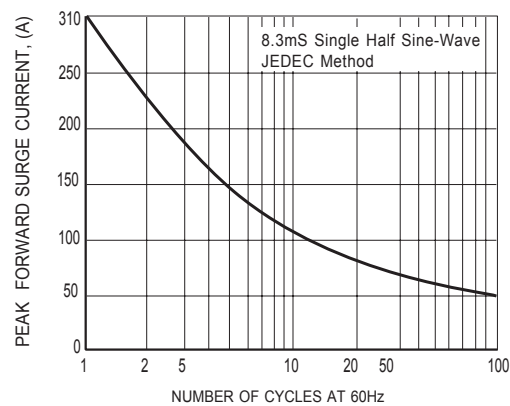


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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