15SQ045

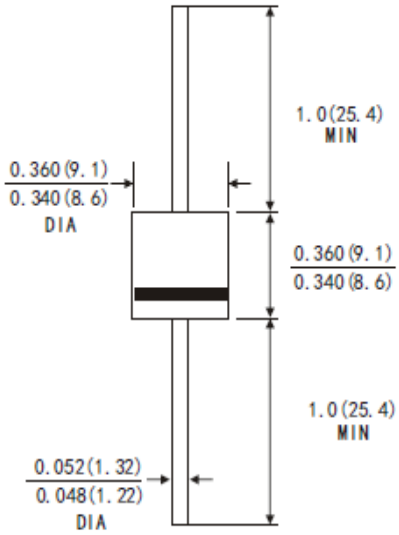
SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 45 Volts Forward Current - 15.0 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260 C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

R-6



Dimensions in inches and (milimeters)

MECHANICAL DATA

Case:R-6 molded plastic body

Terminals : Plated axial lead, solderable per MIL-STD-750, Method 2026

Polarity : Color band denotes cathode end

Mounting Position : Any

Weight : 0.07ounce, 2.1 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

CHARACTERISTICS	SYMBOL	15SQ045	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	32	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current 0.375"(9.5mm) lead length(see fig.1)	$I_{(AV)}$	15.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC method at rated TL)	I_{FSM}	300	A
Maximum Forward Voltage at 15.0A DC(Note 1)	V_F	0.55	V
Peak Reverse Current T_A =25℃ at Rated DC Blocking Voltage(Note 1) T_A=100℃	I_R	0.3 50	mA
Typical Junction Capacitance (Note3)	C_J	400	pF
Typical Thermal Resistance(Note 2)	$R_{\theta JC}$	2.0	℃/W
Operating junction temperature range at reduced reverse voltage VR<=80%VRRM VR<=50%VRRM in DC forward model	T_J	 -65 to +150 -65 to +175 -65 to +200	℃
Storage Temperature Range	T_{STG}	-65 to +200	℃

Note:1.Pulse test: 300 μs pulse width,1% duty cycle

2.Thermal resistance from junction to case

3.Measured at 1MHz and reverse voltage of 4.0 volts

Ratings And Characteristic Curves

FIG.1-FORWARD CURRENT DERATING CURVE

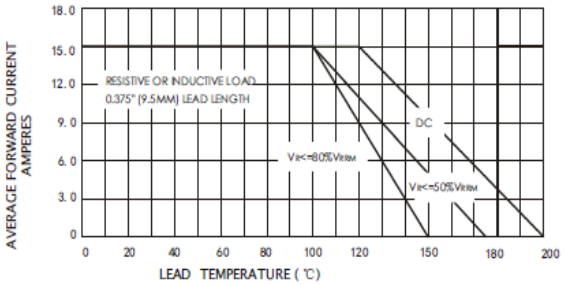


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

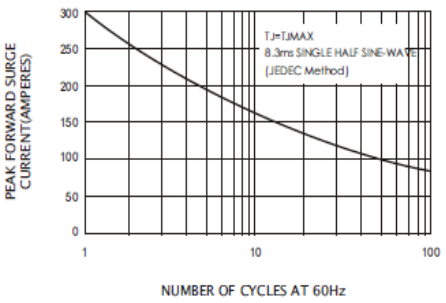


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

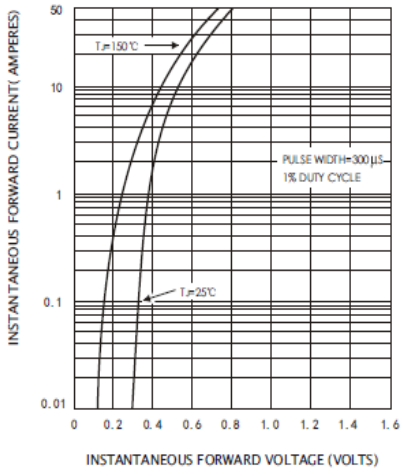


FIG.4-TYPICAL REVERSE CHARACTERISTICS

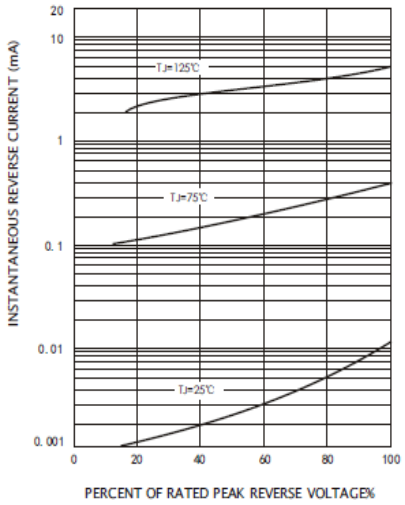


FIG.5-TYPICAL JUNCTION CAPACITANCE

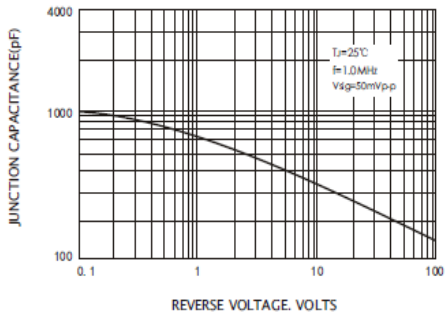


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE