

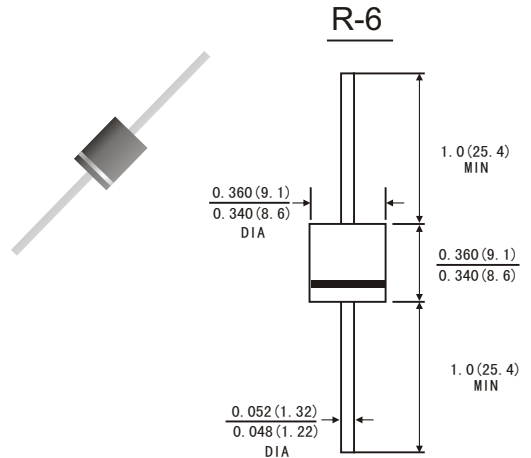


## FEATURES

- 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

## 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



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbols	15SQ045	Units
Maximum repetitive peak reverse voltage	VRRM	45	Volts
Maximum RMS voltage	VRMS	32	Volts
Maximum DC blocking voltage	VDC	45	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	I(AV)	15.0	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated Tj)	IFSM	150.0	Amps
Maximum instantaneous forward voltage at 15.0 A(Note 1)	VF	0.55	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	IR	T <sub>a</sub> = 25°C	0.2
		T <sub>a</sub> = 100°C	50
Typical junction capacitance(Note 3)	CJ	400	pF
Typical thermal resistance (Note 2)	RθJC	2.5	°C/W
Operating junction temperature range at reduced reverse voltage VR <= 80%VRRM VR <= 50%VRRM in DC forward model	TJ	-65 to+150 -65 to+175 -65 to+200	°C
Storage temperature range	TSTG	-65 to+200	°C

- Notes: 1.Pulse test: 300μs 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 15SQ045

FIG.1-FORWARD CURRENT DERATING CURVE

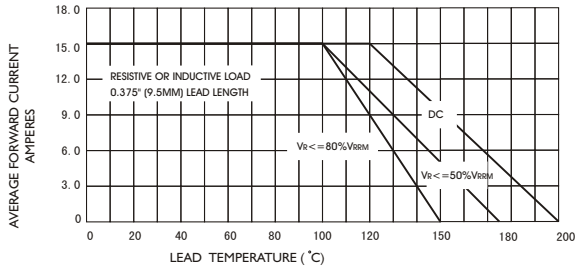


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

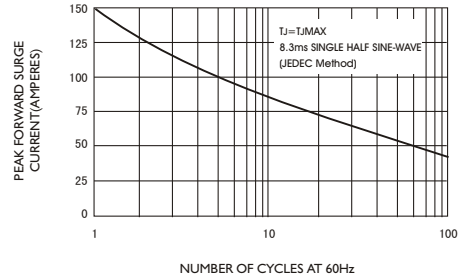


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

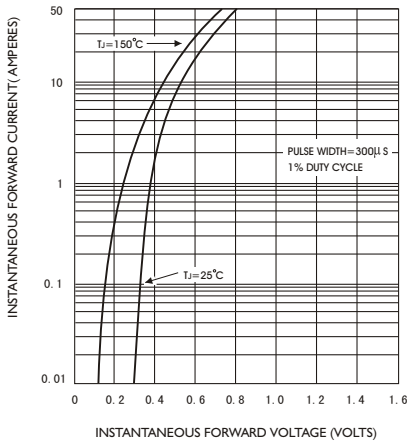


FIG.4-TYPICAL REVERSE CHARACTERISTICS

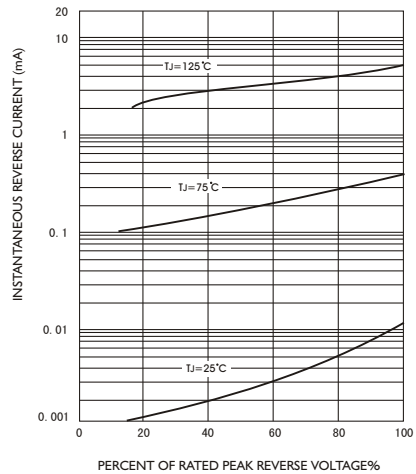


FIG.5-TYPICAL JUNCTION CAPACITANCE

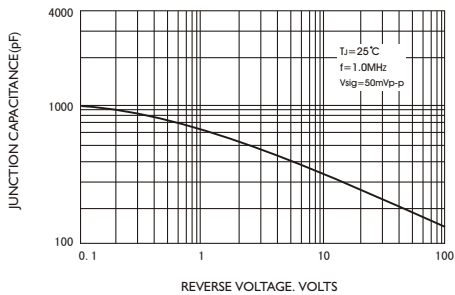


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

