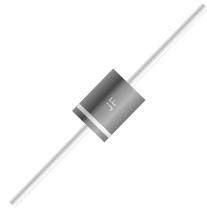
SEMICONDUCTOR

SCHOTTKY BARRIER RECTIFIER

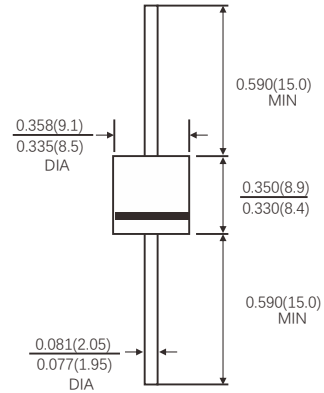
Reverse Voltage - 45 Volts
Forward Current - 40Amperes

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
- Dual rectifier construction
- High temperature soldering guaranteed:260° C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2015/863/EU



R-6/2.0



Dimensions in inches and (millimeters)

Mechanical Data

- Case: R-6/2.0 molded plastic body
- Terminals: Plated axial lead, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

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%.)

Parammeter	Symbols	40SQ045	Units
Maximum repetitive peak reverse voltage	V_{RRM}	45	Volts
Maximum RMS voltage	V_{RMS}	32	Volts
Maximum DC blocking voltage	V_{DC}	45	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{(AV)}$	40.0	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)	I_{FSM}	450	Amps
Maximum instantaneous forward voltage at 40. 0 A(Note 1)	V_F	0. 55	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A=25℃	I_R	0. 2	mA
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A=100℃	I_R	20	mA
Typical thermal resistance (Note 2)	$R_{\theta JC}$ $R_{\theta JA}$	1. 0 45	℃/W
Operating junction temperature range at reduced reverse voltage V_R<=80%V_{RRM}	T_J	-55 to+150	℃
in DC forward model	T_J	-55 to+200	℃
Storage temperature range	T_{STG}	-55 to+150	℃

Notes: 1.Pulse test: 300μ s pulse width,1% duty cycle
2.Thermal resistance from junction to case, Thermal resistance from junction to lead, Thermal resistance from junction to ambient

FIG.1-FORWARD CURRENT DERATING CURVE

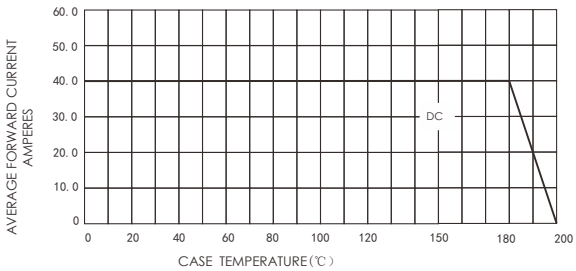


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

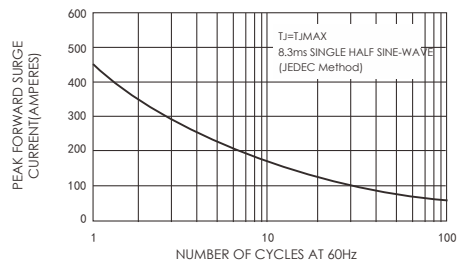


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

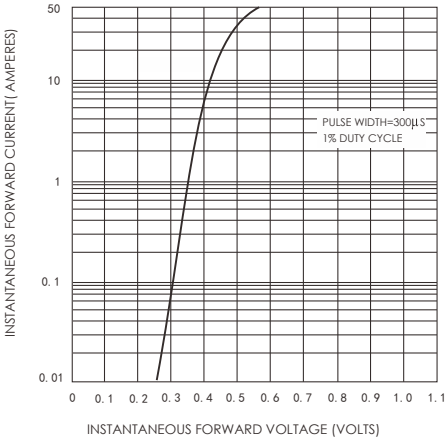
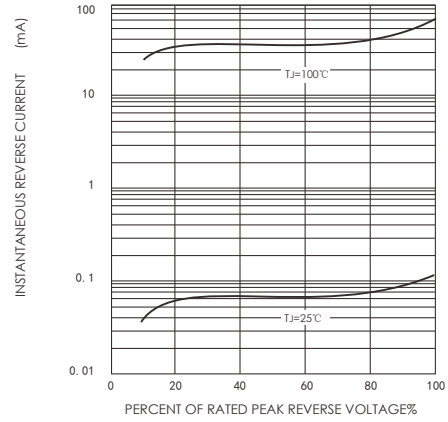


FIG.4-TYPICAL REVERSE CHARACTERISTICS



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