



SEMICONDUCTOR

25SQ045

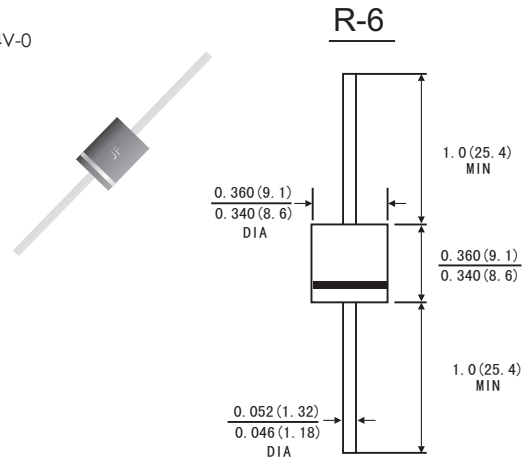
SCHOTTKY BARRIER RECTIFIER
Reverse Voltage -45 Volts
Forward Current - 25Amperes

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 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	25SQ045	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)	25.0	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T _J)	I _{FSM}	400	Amps
Maximum instantaneous forward voltage at 25.0 A(Note 1)	V _F	0.55	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	I _R	T _a =25°C	0.5
		T _a =100°C	50
Typical junction capacitance(Note 3)	C _J	400	pF
Typical thermal resistance (Note 2)	R _{θJL}	3.0	°C/W
Operating junction temperature range at reduced reverse voltage V _R <=80%V _{RRM} in DC forward model V _R <=50%V _{RRM}	T _J	-65 to+150 -65 to+175 -65 to+200	°C
Storage temperature range	T _{STG}	-65 to+200	°C

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

RATINGS AND CHARACTERISTIC CURVES 25SQ045

FIG.1-FORWARD CURRENT DERATING CURVE

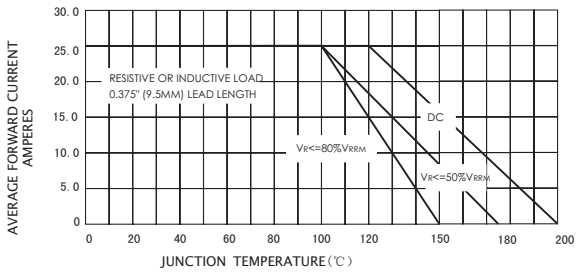


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

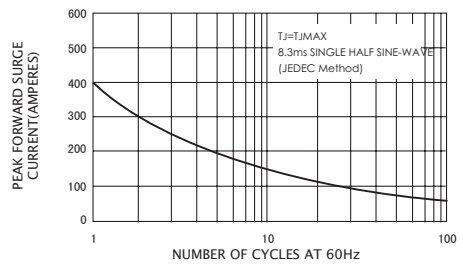


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

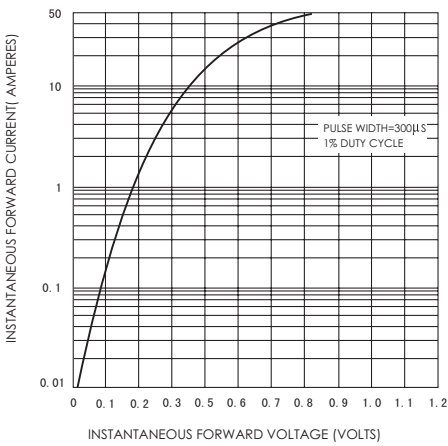


FIG.4-TYPICAL REVERSE CHARACTERISTICS

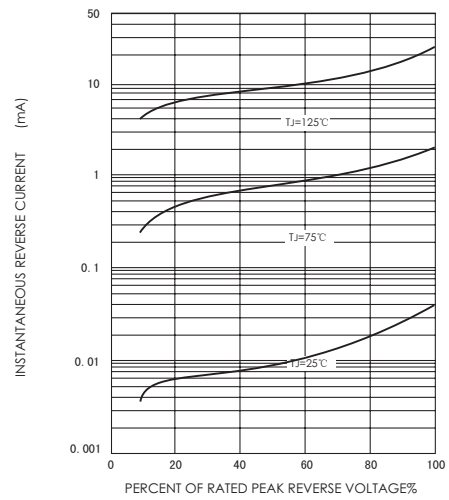


FIG.5-TYPICAL JUNCTION CAPACITANCE

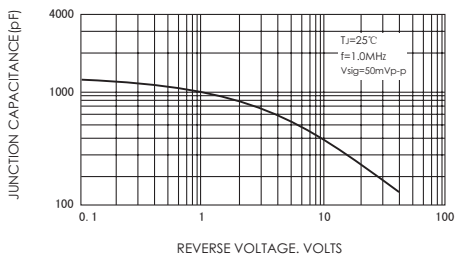


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

