



FEATURES

The plastic package carries Underwriters Laboratory
Flammability Classification 94V-0
Guardring for overvoltage protection
Low reverse leakage
High forward surge current capability
High temperature soldering guaranteed
250°C/10 seconds at terminals

MECHANICAL DATA

Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750,
Method 2026

Polarity : Polarity symbol marking on body

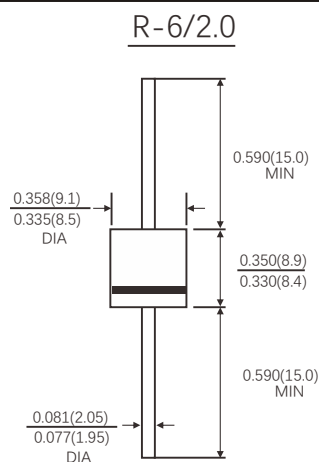
Mounting Position : Any

VOLTAGE RANGE

45 Volts

CURRENT

40.0 Amperes



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	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_J)	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)	I_R	0.2 20	mA
	$T_A=25^\circ C$		
	$T_A=100^\circ C$		
Typical thermal resistance (Note 2)	$R_{\theta JC}$ $R_{\theta JA}$	1.0 45	$^\circ C/W$
Operating junction temperature range at reduced reverse voltage $V_R \leq 80\% V_{RRM}$ in DC forward model	T_J	-55 to +150 -55 to +200	$^\circ C$
Storage temperature range	T_{STG}	-55 to +150	$^\circ C$

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

RATING AND CHARACTERISTIC CURVES (40SQ045)

FIG.1-FORWARD CURRENT DERATING CURVE

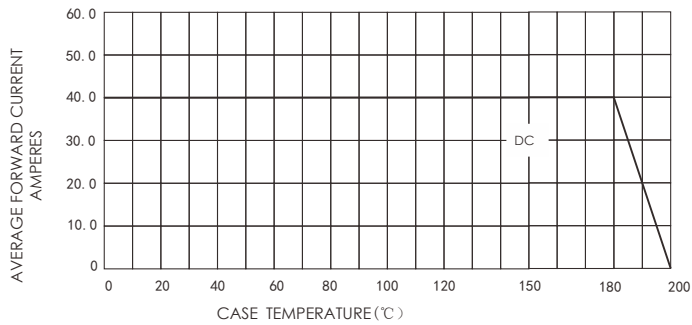


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

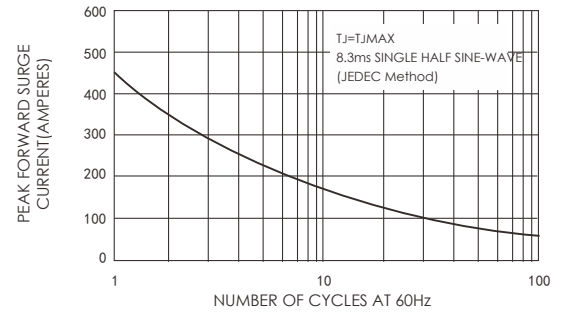


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

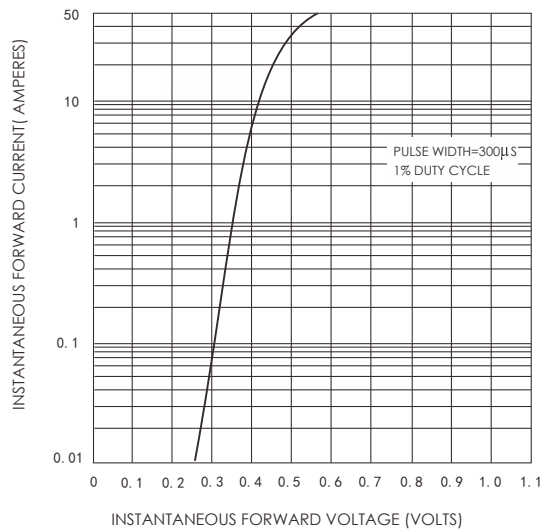


FIG.4-TYPICAL REVERSE CHARACTERISTICS

