

12SQ030~12SQ100

12.0Amp Schottky Barrier Rectifiers

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction,majority carrier conduction
- ◆ Low power loss,high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds,0.375"(9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

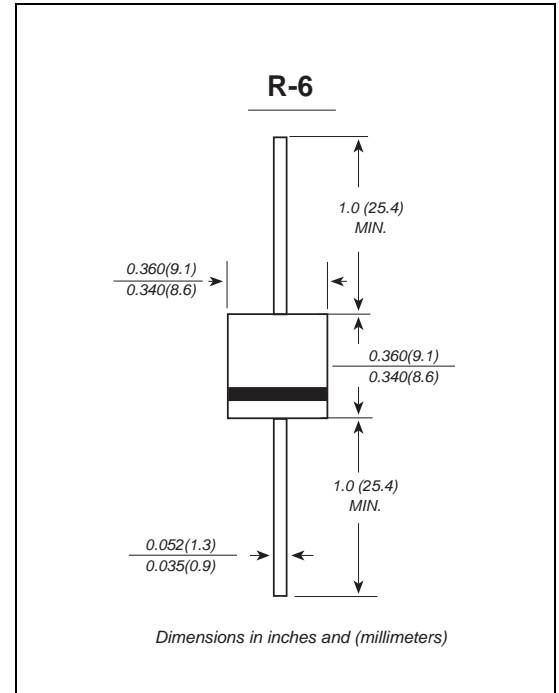
Case: JEDEC R-6 molded plastic body

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight : 0.072 ounce, 2.05grams



Maximum Ratings And Electrical Characteristics

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

	SYMBOLS	12SQ 030	12SQ 035	12SQ 040	12SQ 045	12SQ 050	12SQ 060	12SQ 080	12SQ 100	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	30	35	40	45	50	60	80	100	VOLTS
Maximum RMS voltage	V_{RMS}	21	24.5	28	31.5	35	42	56	70	VOLTS
Maximum DC blocking voltage	V_{DC}	30	35	40	45	50	60	80	100	VOLTS
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{(AV)}$	12.0								Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	275								Amps
Maximum instantaneous forward voltage at 12.0A	V_F	0.55			0.70		0.85			Volts
Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$	I_R	0.5								mA
Typical junction capacitance (NOTE 1)	C_J	450								pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	40.0								°C/W
Operating junction temperature range	T_J	-55 to +150								°C
Storage temperature range	T_{STG}	-55 to +150								°C

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length,P.C.B. mounted

Ratings And Characteristic Curves

12SQ030 THRU 12SQ100

FIG. 1- FORWARD CURRENT DERATING CURVE

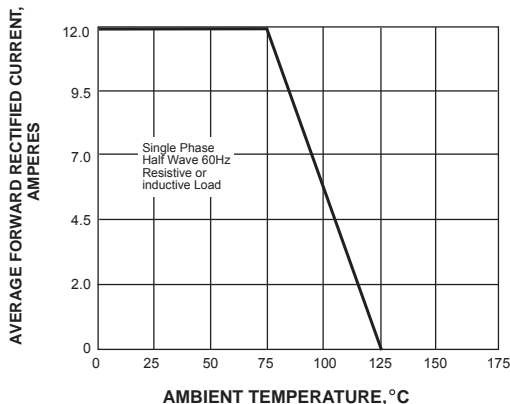


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

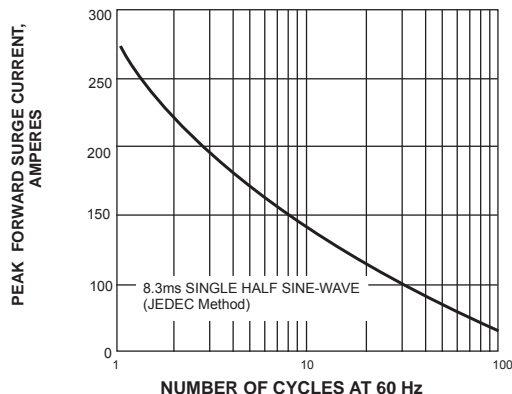


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

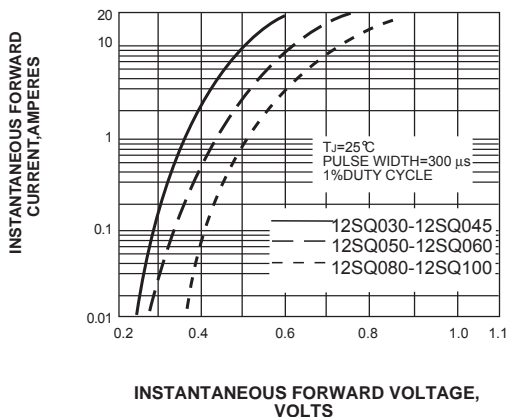


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

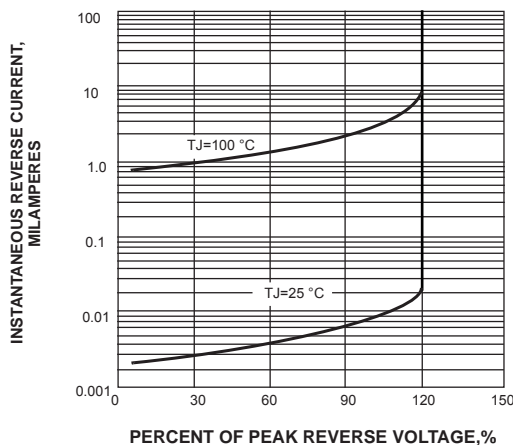


FIG. 5-TYPICAL JUNCTION CAPACITANCE

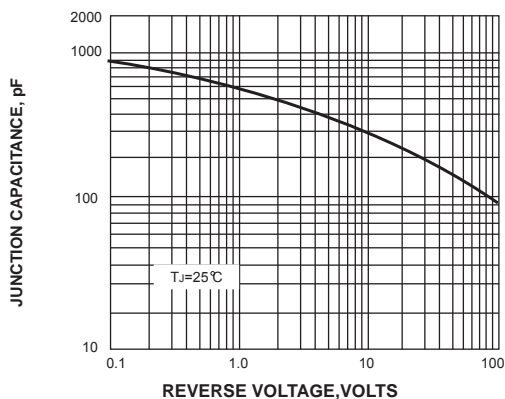


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

