

GENERAL PURPOSE SILICON RECTIFIER

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ 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

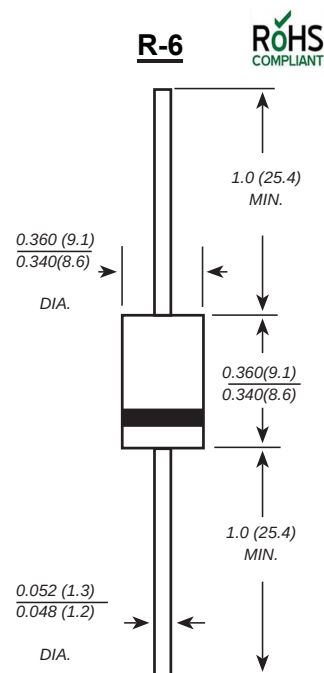
Case : JEDEC R-6 Molded plastic body

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

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.072 ounce, 2.05 grams



Dimensions in inches and (millimeters)

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%.

Parameter	SYMBOLS	MDD 10A05	MDD 10A1	MDD 10A2	MDD 10A4	MDD 10A6	MDD 10A8	MDD 10A10	MDD 10A12	UNITS
Marking Code										
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	1200	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	840	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	1200	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=60^\circ\text{C}$	$I_{(AV)}$	10.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400								A
Maximum instantaneous forward voltage at 10.0A	V_F	1.0								V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	10.0 100								μA
Typical junction capacitance (NOTE 1)	C_J	150								pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	10.0								$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150								$^\circ\text{C}$

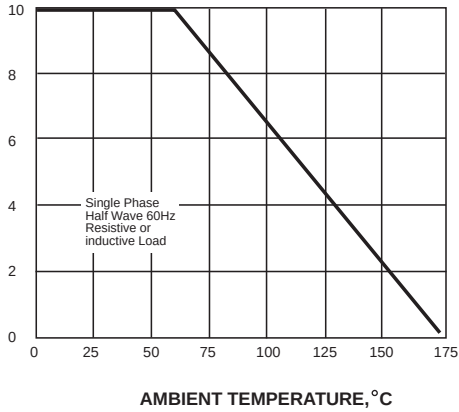
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

Ratings And Characteristic Curves

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

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

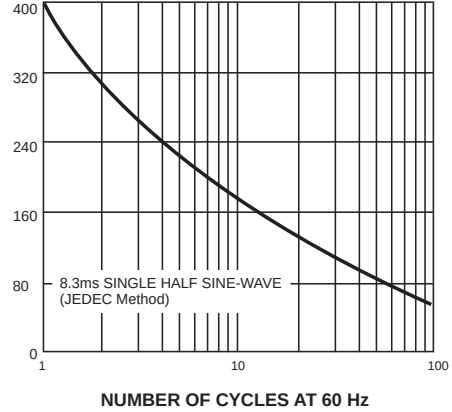


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

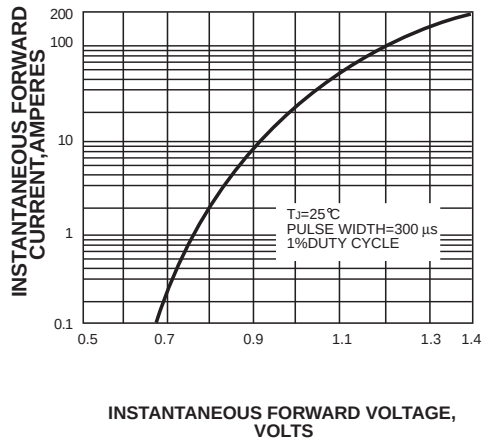


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

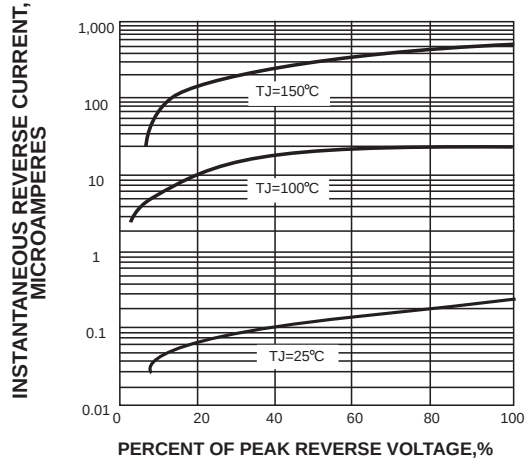


FIG. 5-TYPICAL JUNCTION CAPACITANCE

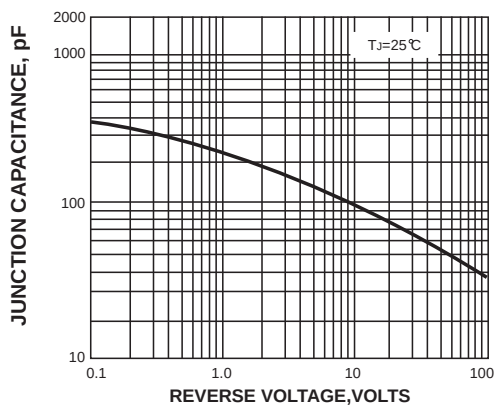
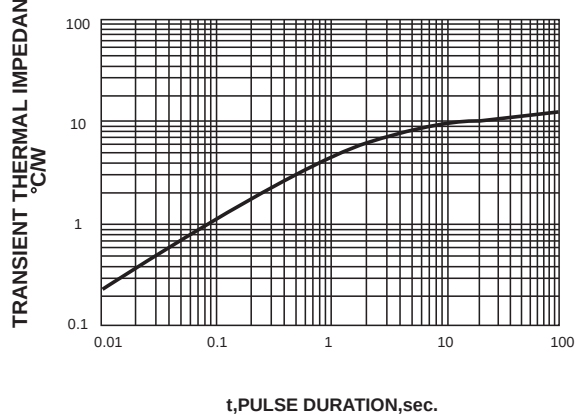


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.



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