

### 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

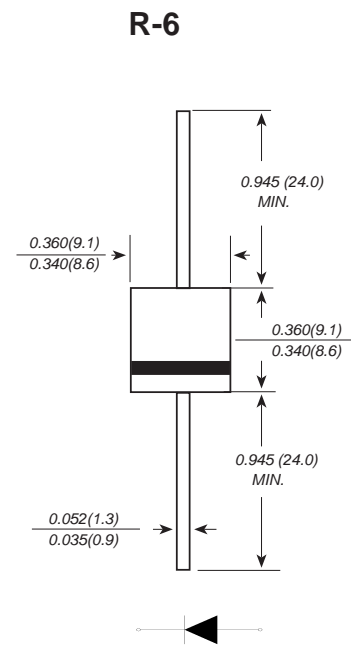
**Case :** Molded plastic body

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

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any

**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	12SQ030	12SQ035	12SQ040	12SQ045	12SQ060	12SQ080	12SQ100	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	35	40	45	60	80	100	V
Maximum RMS voltage	$V_{RMS}$	14	24.5	28	31.5	42	56	70	V
Maximum DC blocking voltage	$V_{DC}$	20	35	40	45	60	80	100	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	12.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	225.0							A
Maximum instantaneous forward voltage at 12.0A	$V_F$	0.55				0.70	0.85		V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	0.5 50					0.05 10		mA
Typical thermal resistance	$R_{qJA}$	40.0							$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

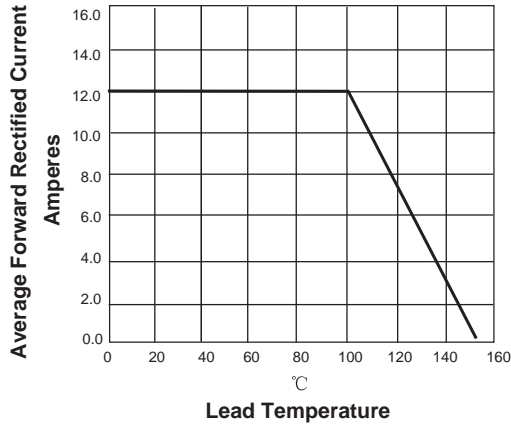


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

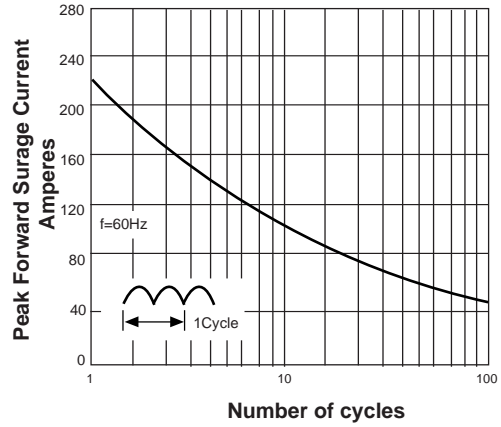


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

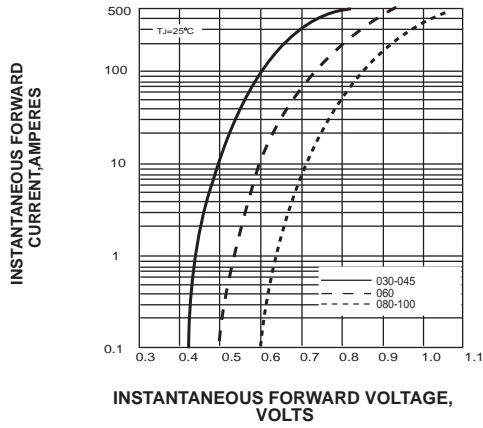
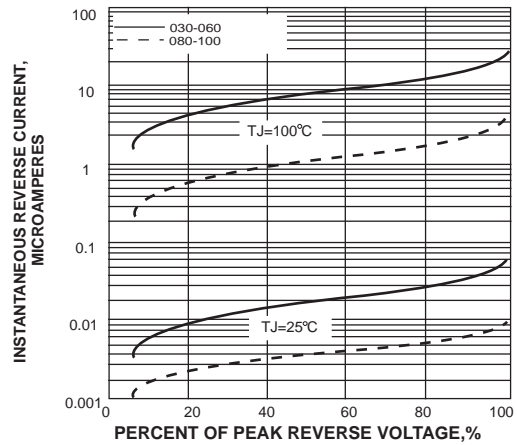
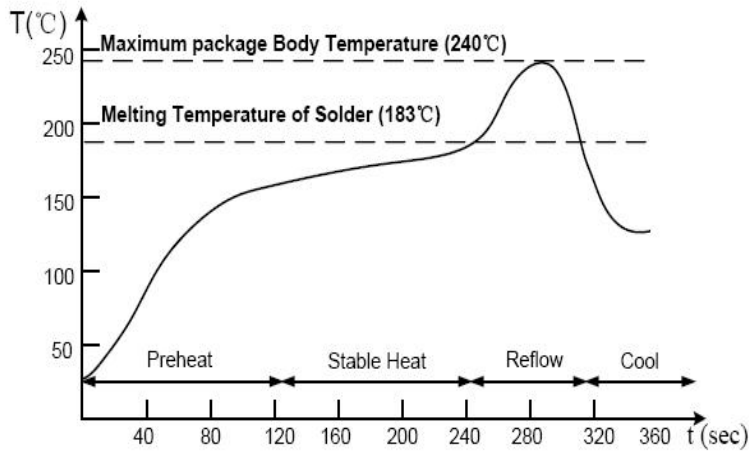


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



**Suggested Soldering Temperature Profile**

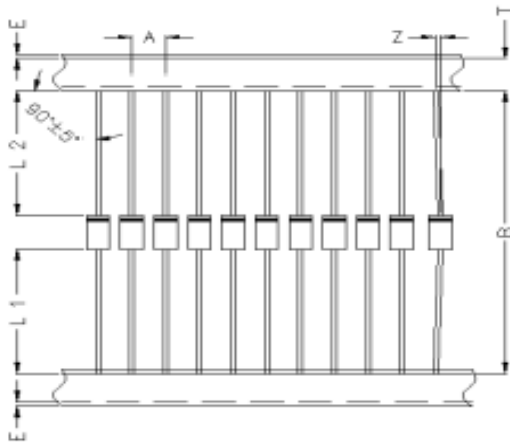


**Note**

- ◆ Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- ◆ The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- ◆ Devices can be cleaned using standard industry methods and solvents.
- ◆ If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

**Package Information**

**Taping Specifications**



Item	Symbol	Specifications(mm)
Component Pitch	A	10.0±0.5
Inner Tape Pitch	B	52.4±1.5
Component alignment	Z	1.2 Max
Tape width	T	6.0±0.5
Exposed adhesive	E	0.8 Max
Body eccentricity	L1-L2	1.0 Max