

## Schottky Barrier Rectifiers

Reverse Voltage - 30 to 100 V

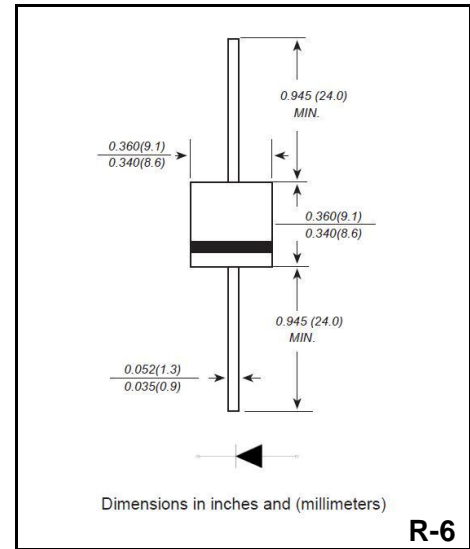
Forward Current - 12 A

### FEATURES

- ◆ Guardring for overvoltage protection
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed  
250°C /10 seconds at terminals
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- ◆ Case: R-6
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 2.05g /0.072oz



### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, 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 $T_c = 100\text{ }^\circ\text{C}$	$I_{F(AV)}$	12.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	225.0							A
Maximum Instantaneous Forward Voltage at 12A	$V_F$	0.55			0.70		0.85		V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	$I_R$	0.5 50					0.05 10		mA
Typical Thermal Resistance	$R_{\theta JA}$	40.0							$^\circ\text{C/W}$
Operating junction temperature range	$T_j$	-55 ~ +150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ +150							$^\circ\text{C}$

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

**Ratings And Characteristic Curves**

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

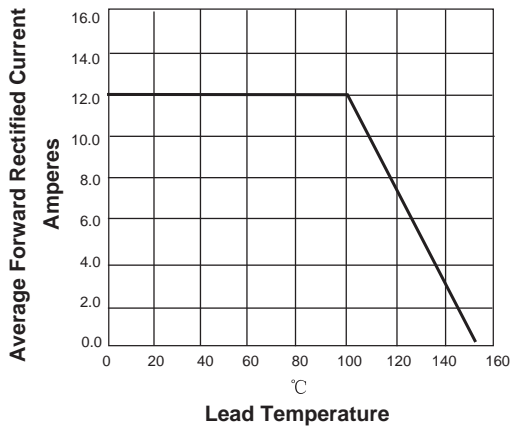


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

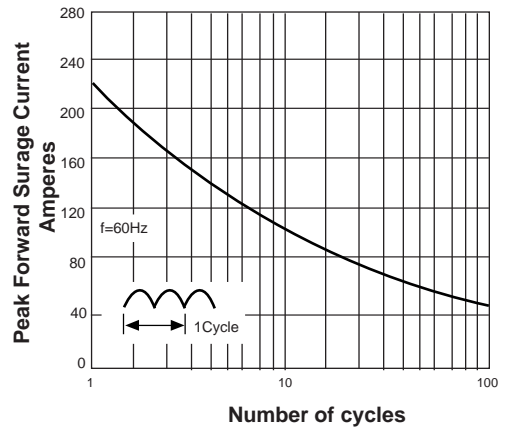


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

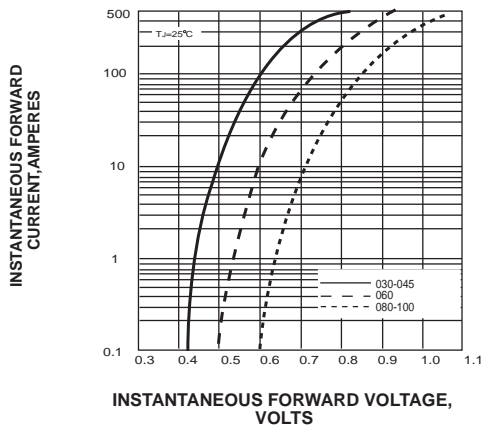
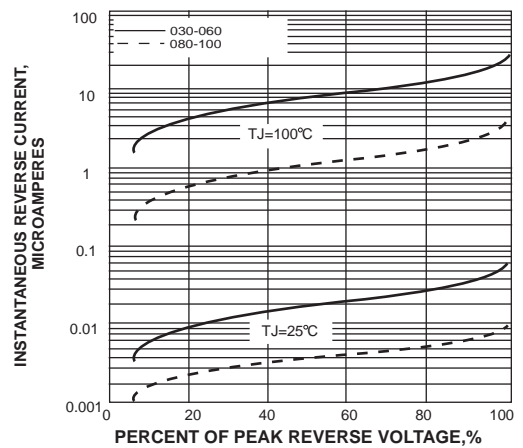
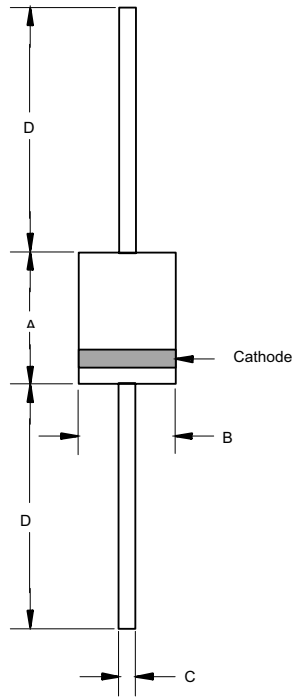


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Package Outline R-6



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.340	.360	8.60	9.10	
B	.340	.360	8.60	9.10	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
R-6	BOX	500	EIA-481-1