

# 1 AMP SCHOTTKY BARRIER RECTIFIERS

## FEATURES

- Metal semiconductor junction with guard ring
- Epitaxial Construction
- Low forward voltage drop
- High current capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- **RoHS COMPLIANT**

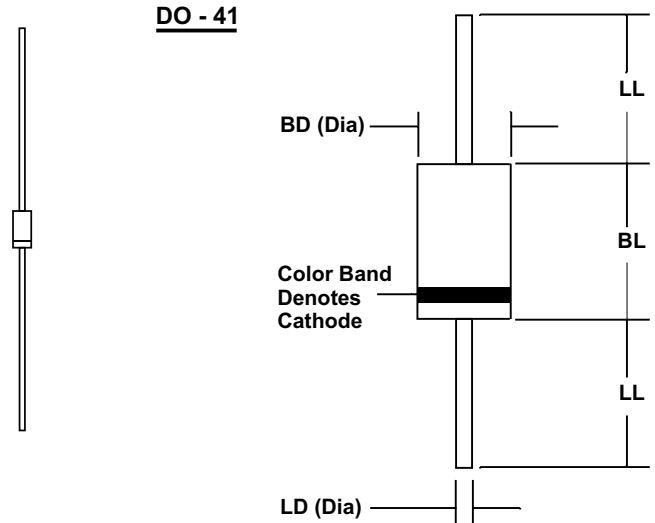
## MECHANICAL DATA

- Case: JEDEC DO-41, molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

## MECHANICAL SPECIFICATION

ACTUAL SIZE OF  
DO-41 PACKAGE

SERIES SK102 - SK110



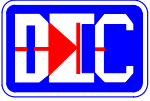
Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

## MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS						UNITS
		SK102	SK104	SK106	SK107	SK108	SK110	
Series Number								
Maximum DC Blocking Voltage	V <sub>RM</sub>	20	40	60	70	80	100	VOLTS
Maximum RMS Voltage	V <sub>RMS</sub>	14	28	42	49	56	70	
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>	20	40	60	70	80	100	
Average Forward Rectified Current @ T <sub>L</sub> = 90 °C (T <sub>L</sub> measured on cathode lead, 1/32 in. from case)	I <sub>O</sub>	1						AMPS
Peak Forward Surge Current ( 8.3mS single half sine wave superimposed on rated load)	I <sub>FSM</sub>	40						
Maximum Forward Voltage at 1 Amp DC	V <sub>FM</sub>	0.5		0.7		0.8		VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage (Note 1)	I <sub>RM</sub>	@ T <sub>L</sub> = 25 °C 0.5			@ T <sub>L</sub> = 100 °C 0.1			mA
Typical Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	15						
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	110						pF
Junction Operating Temperature Range	T <sub>J</sub>	-65 to +125				-65 to +150		°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150						

NOTES: (1) Lead temperature reference is cathode lead 1/32 in from case.  
 (2) Measured at 1MHz & applied reverse voltage of 4 volts



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## RATING & CHARACTERISTIC CURVES FOR SERIES SK102 - SK107 and SERIES SK108 - SK110

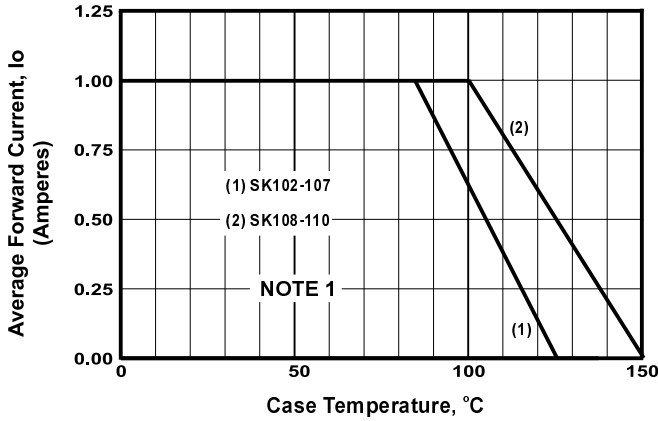


FIGURE 1. FORWARD CURRENT DERATING CURVE

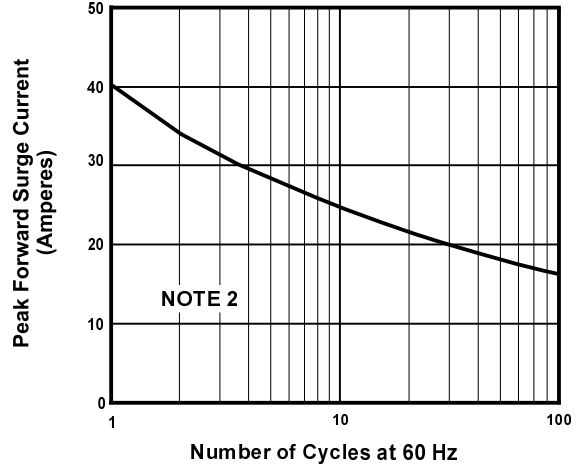


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

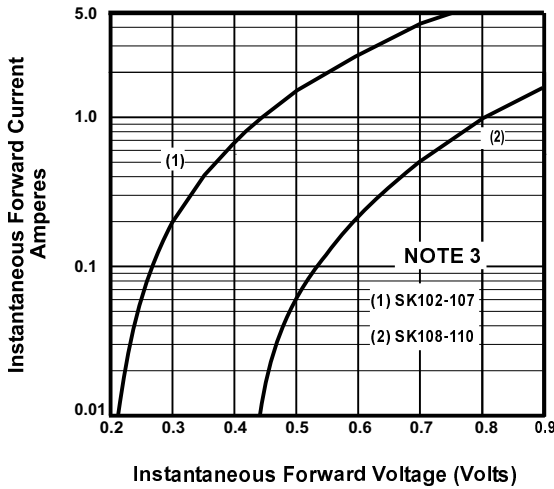


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

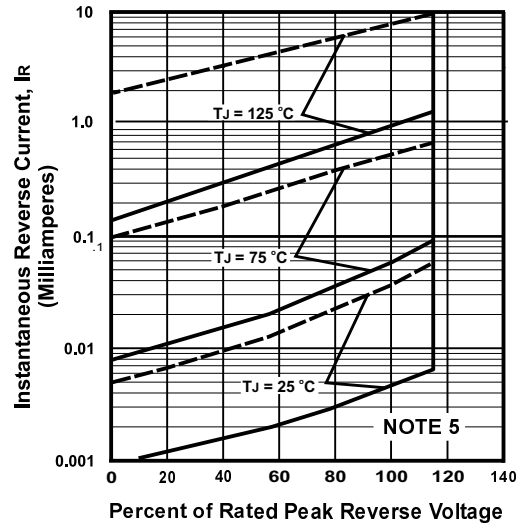


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

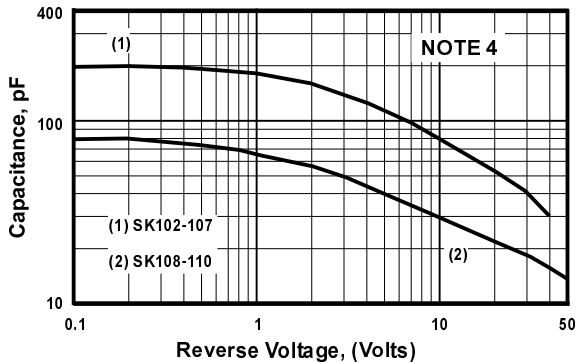


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

### NOTES

- (1) Single Phase, Half Wave, 60 Hz, Resistive or Inductive Load, 0.375" (9mm) Lead Length
- (2) JEDEC Method, 8.3 mSec. Single Half Sine Wave,  $T_c = 95^\circ\text{C}$
- (3)  $T_J = 25^\circ\text{C}$ , Pulse Width = 300  $\mu\text{Sec}$ , 2.0% Duty Cycle
- (4)  $T_J = 25^\circ\text{C}$ ,  $f = 1\text{MHz}$ ,  $V_{SIG} = 50\text{ mV P-P}$
- (5) Legend for Figure 4, Typical Reverse Characteristics:

----- SK102-107

————— SK108-110