

## 5 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

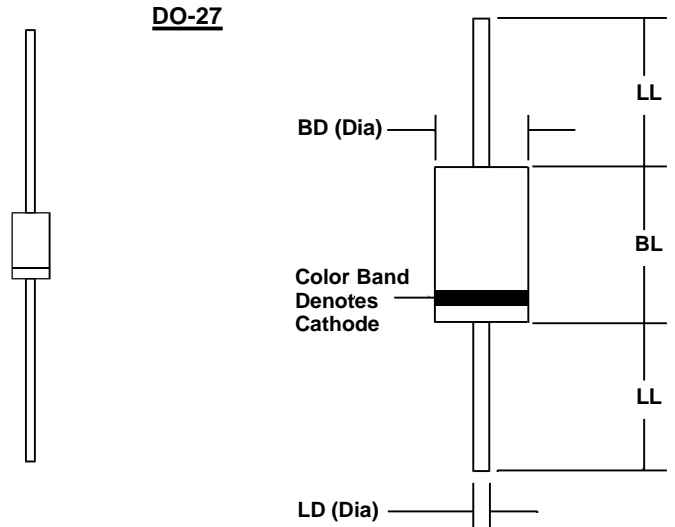
### MECHANICAL DATA

- Case: JEDEC DO-27, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

### MECHANICAL SPECIFICATION

ACTUAL SIZE OF  
DO-27 PACKAGE

SERIES SK502 - SK510



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

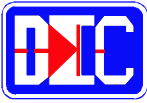
### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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
		SK502	SK504	SK506	SK507	SK510	
Series Number		SK502	SK504	SK506	SK507	SK510	
Maximum DC Blocking Voltage	V <sub>RM</sub>	20	40	60	70	100	VOLTS
Maximum RMS Voltage	V <sub>RMS</sub>	14	28	42	56	70	
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>	20	40	60	70	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>	5					AMPS
Peak Forward Surge Current ( 8.3mS single half sine wave superimposed on rated load)	I <sub>FSM</sub>	150		120			
Maximum Forward Voltage at 5 Amps DC	V <sub>FM</sub>	0.55		0.70		0.85	VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage (Note 1)	I <sub>RM</sub>	0.5		0.5			mA
@ T <sub>A</sub> = 25 °C		50		25			
Typical Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	15					°C/W
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	250					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) Measured at pulse width 300 μSec and 2% duty cycle.  
 (2) Measured at 1MHz and an applied reverse voltage of 4 volts.

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### RATING & CHARACTERISTIC CURVES FOR SERIES SK502 - SK510

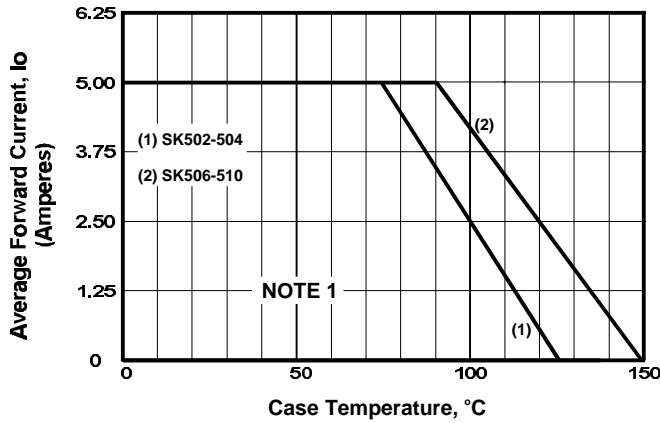


FIGURE 1. FORWARD CURRENT DERATING CURVE

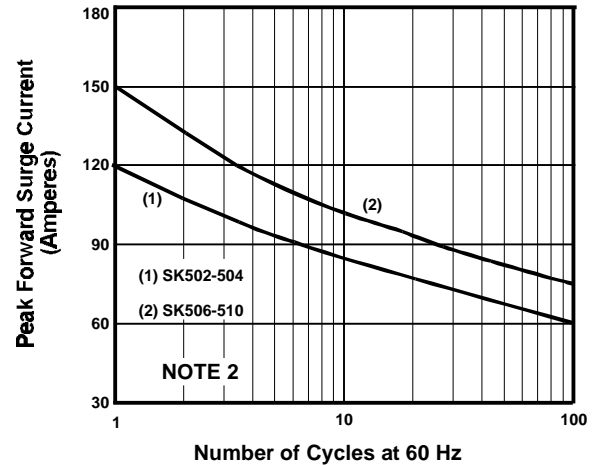


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

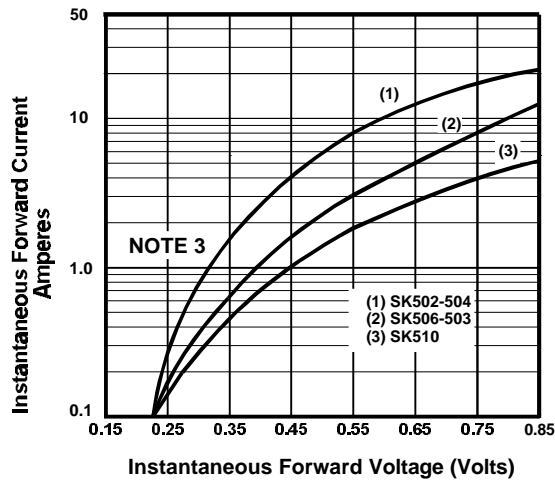


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

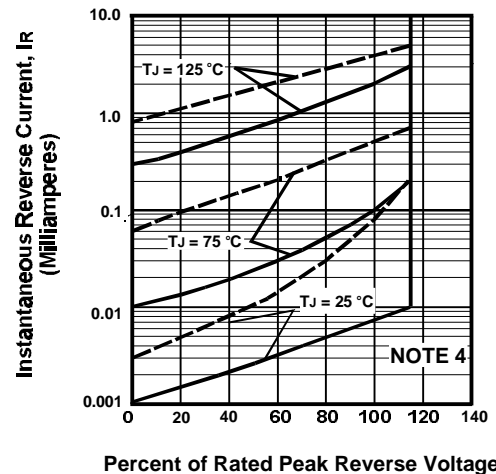


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

#### 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) Legend for Figure 4, Typical Reverse Characteristics:

- - - - - SK502-504  
 \_\_\_\_\_ SK506-510