

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
- **RoHS COMPLIANT**

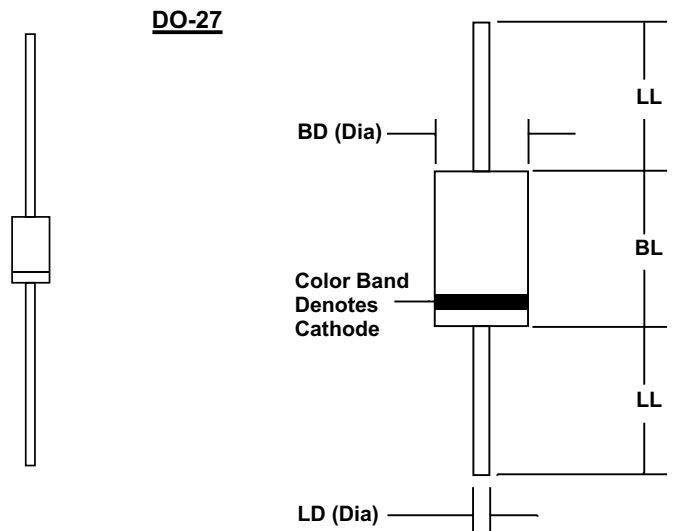
MECHANICAL DATA

- Case: JEDEC DO-27, molded epoxy (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

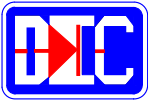
MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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 _{RM}	20	40	60	70	100	VOLTS
Maximum RMS Voltage	V _{RMS}	14	28	42	49	70	
Maximum Peak Recurrent Reverse Voltage	V _{RRM}	20	40	60	70	100	
Average Forward Rectified Current @ T _L = 90 °C (T _L measured on cathode lead, 1/32 in. from case)	I _O	5					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I _{FSM}	150		120			
Maximum Forward Voltage at 5 Amps DC	V _{FM}	0.55		0.70		0.85	VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage (Note 1)	I _{RM}	@ T _A = 25 °C 0.5		0.5			mA
		@ T _A = 100 °C 50		25			
Typical Thermal Resistance, Junction to Ambient	R _{θJA}	15					°C/W
Typical Junction Capacitance (Note 2)	C _J	250					pF
Junction Operating Temperature Range	T _J	-65 to +125				-65 to +150	°C
Storage Temperature Range	T _{STG}	-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

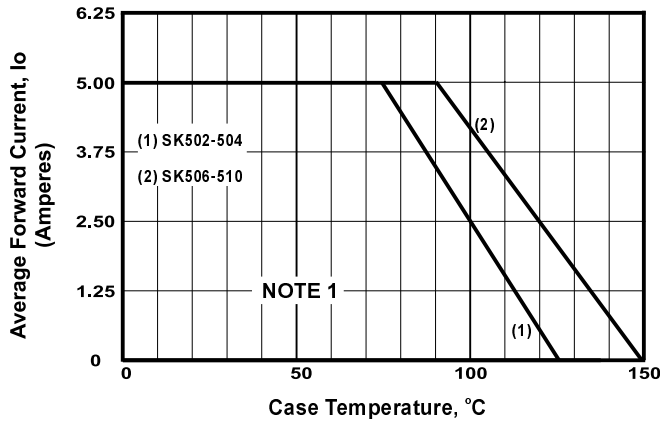


FIGURE 1. FORWARD CURRENT DERATING CURVE

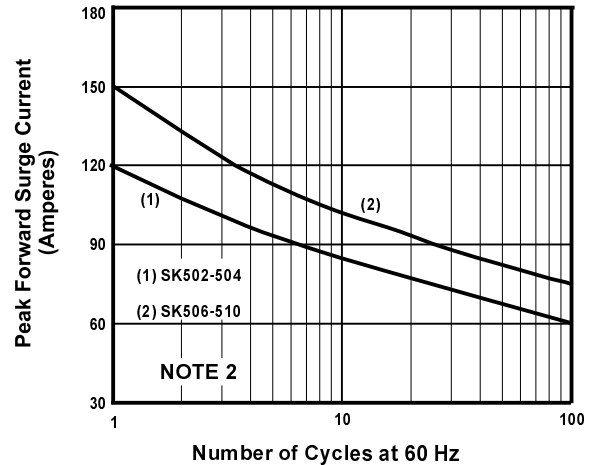


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

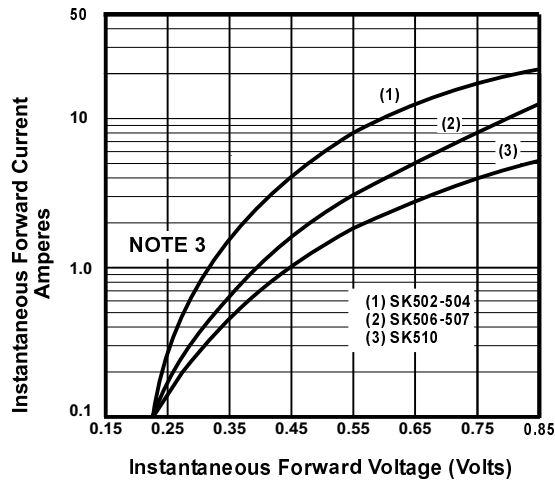


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

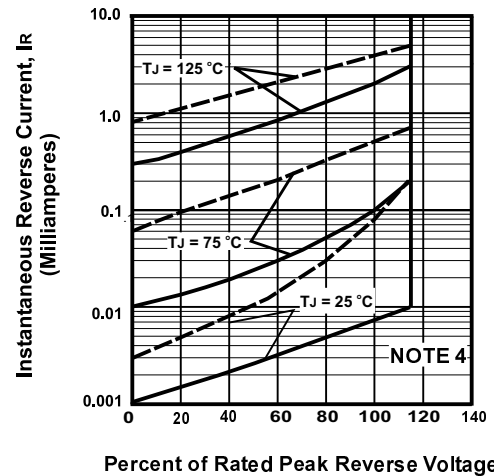


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

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 μSec , 2.0% Duty Cycle
- (4) Legend for Figure 4, Typical Reverse Characteristics:

----- SK502-504
 _____ SK506-510