DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
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Data Sheet No. SBDA-102-1B

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

MECHANICAL DATA

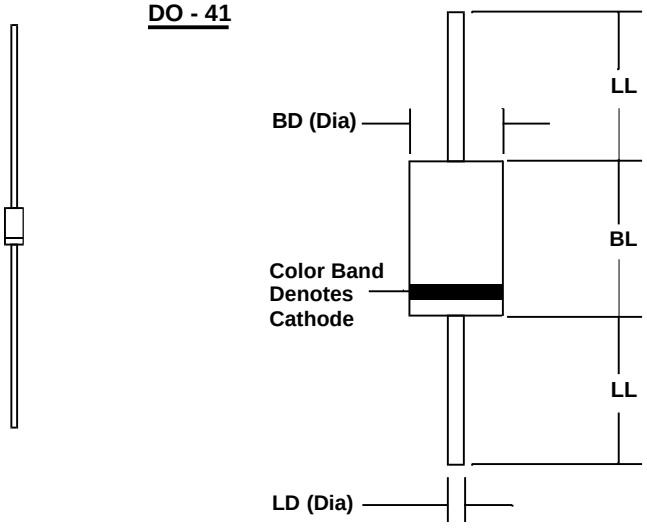
- Case: JEDEC DO-41, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES SK102 - SK110

DO - 41



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
Series Number		SK102	SK104	SK106	SK107	SK108	SK110	
Maximum DC Blocking Voltage	V_{RM}	20	40	60	70	80	100	VOLTS
Maximum RMS Voltage	V_{RMS}	14	28	42	49	56	70	VOLTS
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	20	40	60	70	80	100	VOLTS
Average Forward Rectified Current @ T_L = 90 °C (T_L measured on cathode lead, 1/32 in. from case)	I_O	1						AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	40						AMPS
Maximum Forward Voltage at 1 Amp DC	V_{FM}	0.5		0.7		0.8		VOLTS
Maximum Average DC Reverse Current @ T_L = 25 °C At Rated DC Blocking Voltage (Note 1) @ T_L = 100°C	I_{RM}	0.5 10				0.1 5		mA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	15						°C/W
Typical Junction Capacitance (Note 2)	C_J	110						pF
Junction Operating Temperature Range	T_J	-65 to +125				-65 to +150		°C
Storage Temperature Range	T_{STG}	-65 to +150						°C

4-97/sbda102

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

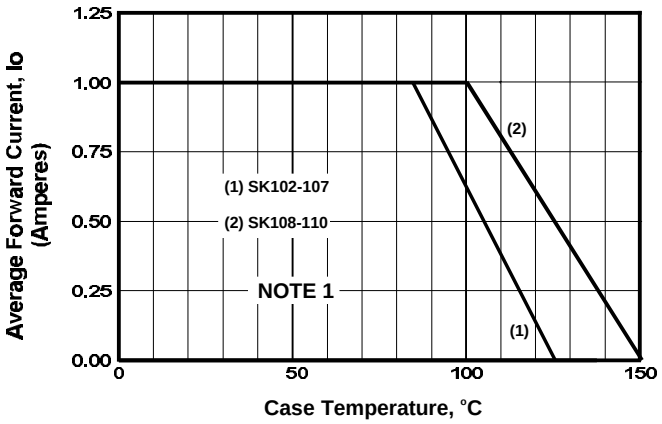

FIGURE 1. FORWARD CURRENT DERATING CURVE

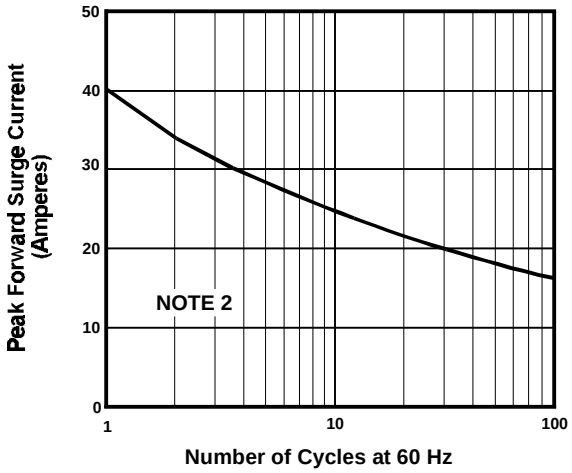

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

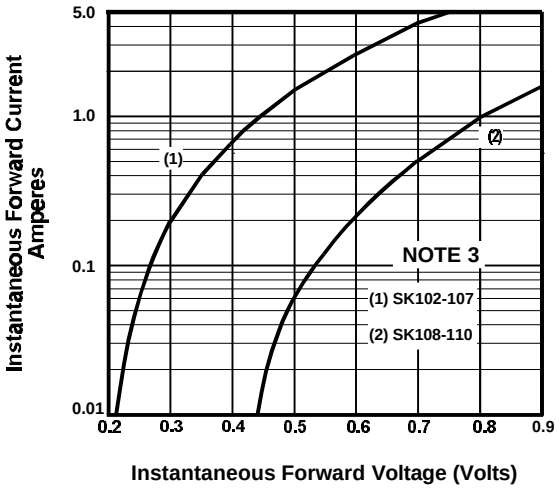

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

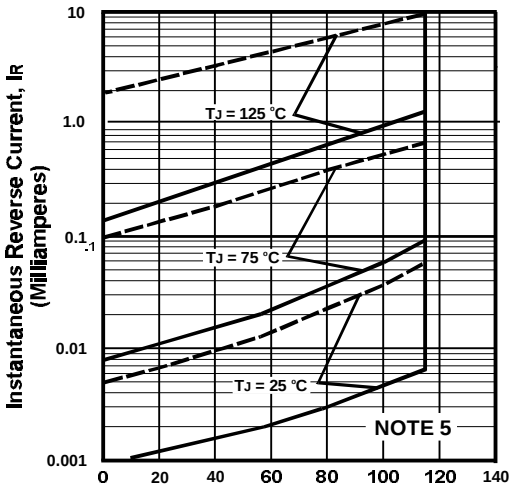

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

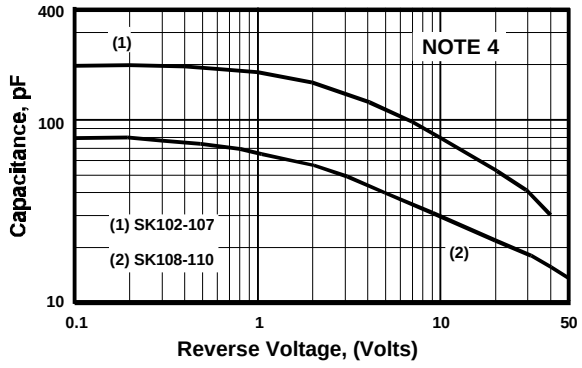

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

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, Tc = 95 °C

(3) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(4) T_J = 25 °C, f = 1MHz, V_{SIG} = 50 mV P-P

(5) Legend for Figure 4, Typical Reverse Characteristics:

- - - - - SK102-107

——— SK108-110