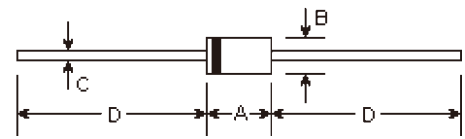
MEDIUM CURRENT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage 20 to 100 Volts, Forward Current 3.0 Ampere

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low V_F
- High surge capacity
- Epitaxial construction
- Guardring for transient protection
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 250℃/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kg) tension

DO-201AD



DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.283	0.374	7.20	9.50	
B	0.189	0.208	4.80	5.30	ϕ
C	0.048	0.051	1.20	1.30	ϕ
D	1.000	-	25.40	-	

Mechanical Data

- **Case:** DO-201AD molded plastic body
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.041 ounce, 1.15 grams

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

	Symbols	SB 320	SB 330	SB 340	SB 350	SB 360	SB 370	SB 380	SB 390	SB 3100	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	Volts
Maximum average forward rectified current at 0.375" (9.5mm) lead length (see Fig. 1)	$I_{(AV)}$	3.0									Amps
Peak forward surge current, 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	80.0									Amps
Maximum instantaneous forward voltage at 3.0A (Note 1)	V_F	0.55			0.70			0.85			Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1) T_A=25℃ / T_A=100℃	I_R	0.5 20.0			0.5 10.0						mA
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	40.0 10.0									℃/W
Operating junction temperature range	T_J	-65 to +125			-65 to +150						℃
Storage temperature range	T_{STG}	-65 to +150									℃

Notes:

(1) Pulse test: 300uS pulse width, 1% duty cycle

(2) Thermal resistance from junction to lead vertical P.C.B. mounting, 0.500" (12.7mm) lead length with 2.5"X2.5" (63.5X63.5mm) copper pad

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

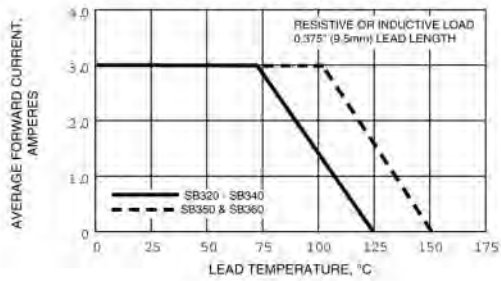


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

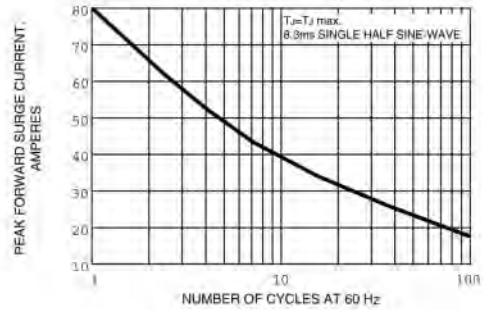


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

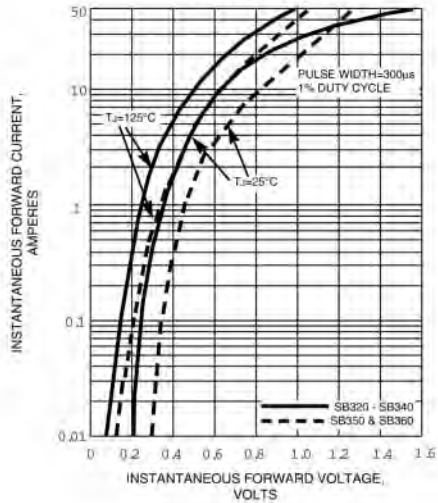


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

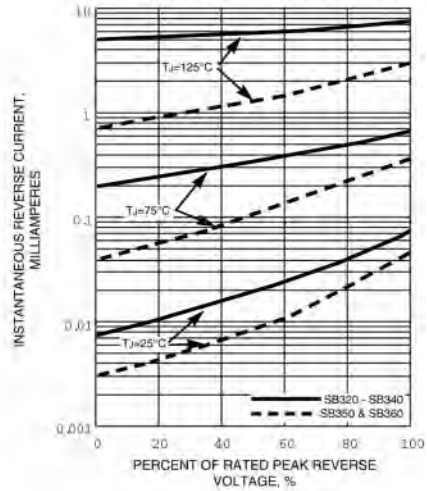


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

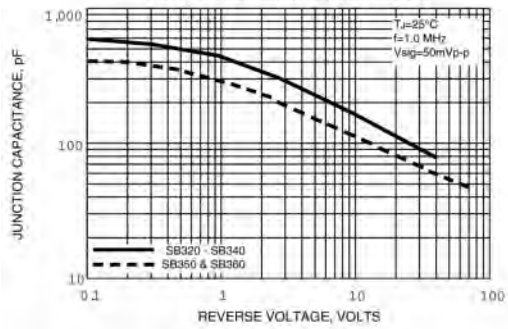


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE