

SB820 thru SB8100

Schottky Barrier Rectifiers

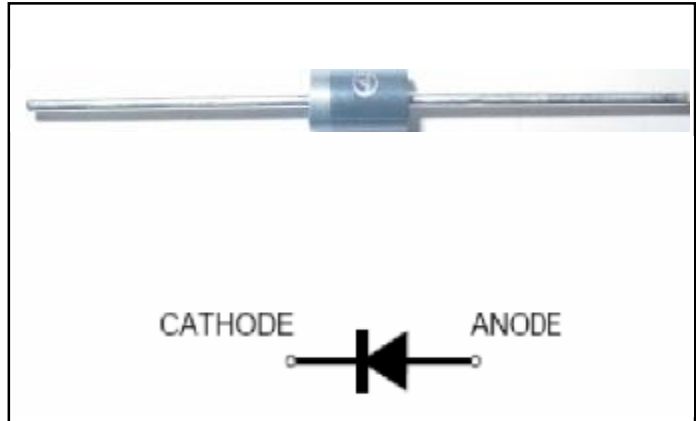
Reverse Voltage 20 to 100V

Feature & Dimensions

- * Plastic package has underwriters laboratory Flammability classification 94V-0
- * Low power loss, high efficiency
- * For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- * Guarding for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals

Mechanical Data

Case : JEDEC DO-201AD, molded plastic over sky die
 Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
 Polarity : Color band denotes cathode end
 Weight : 0.038oz., 1.03 g
 Mounting position : Any
 Handling precaution : None



We declare that the material of product compliance with ROHS requirements

1. Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter symbol	Symbol	SB820	SB830	SB840	SB850	SB860	SB880	SB8100	Unit
Device marking code		SB820	SB830	SB840	SB850	SB860	SB880	SB8100	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1)	$I_{F(AV)}$	8.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM1}	150							A
Peak forward surge current 1.0ms single half sine-wave superimposed on rated load	I_{FSM2}	200							A
Minimum ESD (1.4601.442-01 ESD contact)		15							KV
Thermal resistance, junction to ambient	$R_{\theta JA}$	35							°C/W
Thermal resistance, junction to case	$R_{\theta JC}$	5							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-40 to +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter symbol	Symbol	SB820	SB830	SB840	SB850	SB860	SB880	SB8100	Unit
Maximum instantaneous forward voltage at 8.0A	V_F	0.55			0.70		0.85		V
Maximum DC reverse current $T_C = 25^\circ C$	I_r	1							mA
$t_{on}=8ms; t_{off}=35ms$ $T_C = 120^\circ C$	I_r	10							mA
$t_{on}=8ms; t_{off}=35ms$ $T_C = 140^\circ C$	I_r	30							mA
Maximum reverse recovery time $T_C = 25^\circ C$	T_{rr}	20							ns
$T_C = 120^\circ C$	T_{rr}	35							ns
Typical junction capacitance at 4.0V, 1MHz	C_J	500			200				PF

Notes:

1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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2. Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

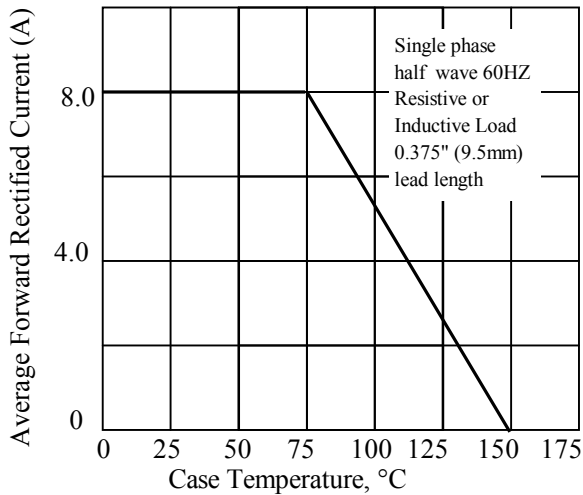


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

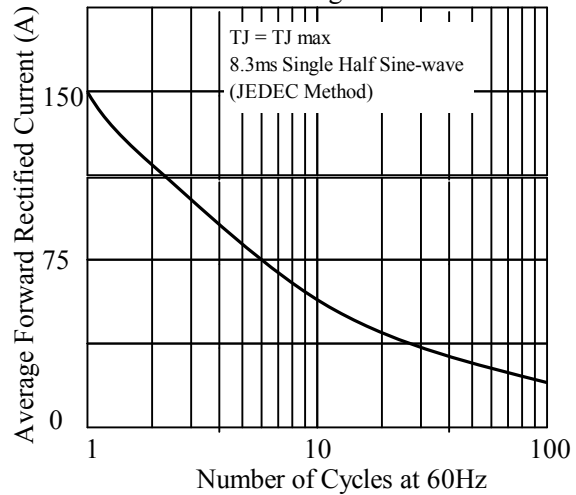


Fig 3. - Typical Instantaneous Forward Characteristics

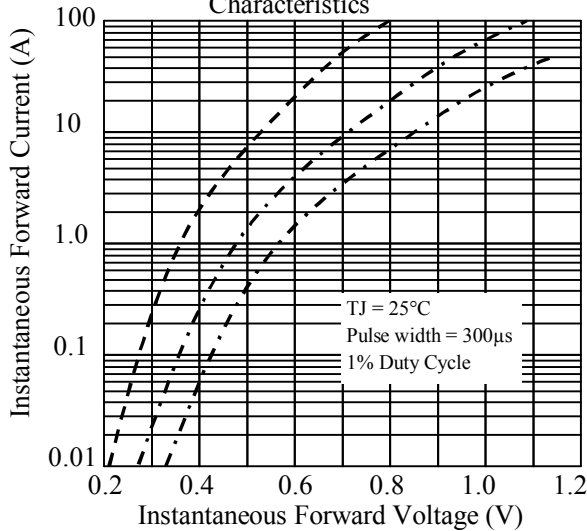


Fig 4. - Typical Reverse Characteristics

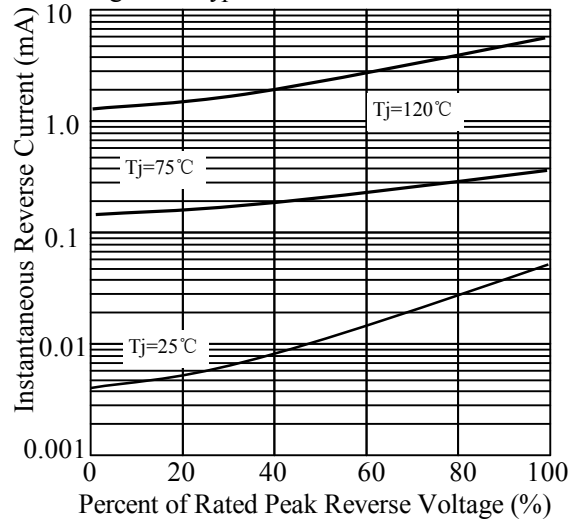


Fig 5. - typical transient thermal impedance

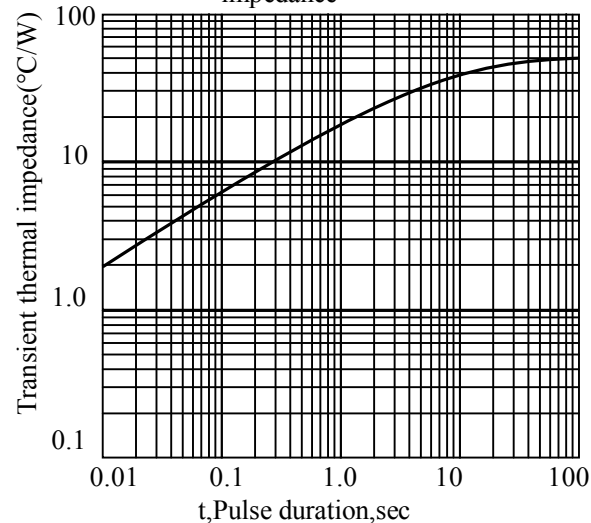
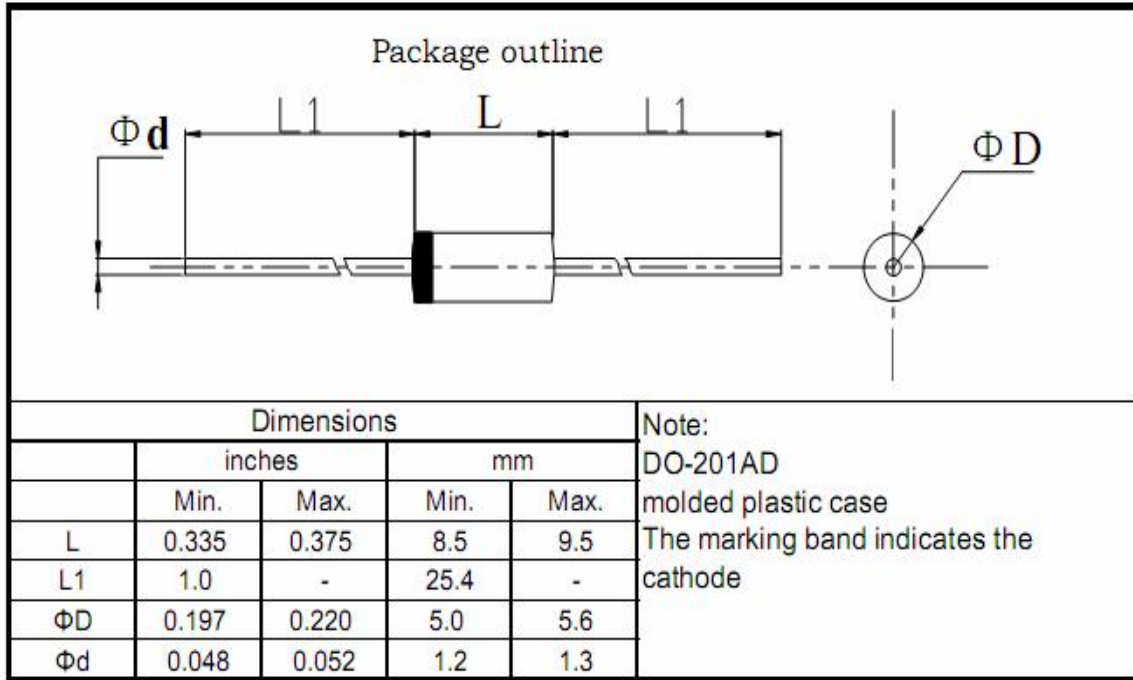


Fig 6. - Typical Junction Capacitance

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3. dimension:



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4. Update Record

版次	更新记录	更新作者	更新日期
2	20--40V VF调整为0.55V	周杰	2014.05.04