

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

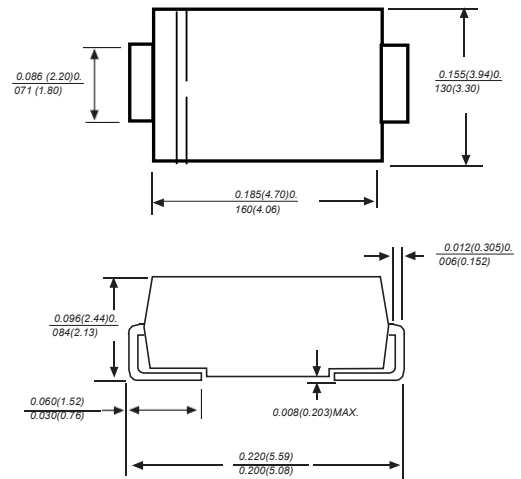
- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250 °C/10 seconds at terminals

Mechanical Data

Case : JEDEC DO-214AA/SMB molded plastic body
 Terminals : Solderable per MIL-STD-750, Method 2026
 Polarity : Color band denotes cathode end Mounting
 Position : Any
 Weight : 0.003 ounce, 0.095 grams

DO-214AA/SMB

ROHS COMPLIANT



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	SS52B	SS53B	SS54B	SS55B	SS56B	SS58B	SS510B	SS5150B	SS5200B	UNITS
		RCD SS52B	RCD SS53B	RCD SS54B	RCD SS55B	RCD SS56B	RCD SS58B	RCD SS510B	RCD SS5150B	RCD SS5200B	
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current at TL (see fig.1)	I _(AV)	5.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150									A
Maximum instantaneous forward voltage at 5.0A	V _F	0.55			0.70		0.85				V
Maximum DC reverse current at rated DC blocking voltage T _A =25 °C T _A =125 °C	I _R	1.0			0.3		25				mA
Typical junction capacitance (NOTE 1)	C _J	500			300						pF
Typical thermal resistance (NOTE 2)	R _{θJA}	50.0									°C/W
Operating junction temperature range	T _J	-50 to +150 -									°C
Storage temperature range	T _{STG}	50 to +150									°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

Fig.1 Forward Current Derating Curve

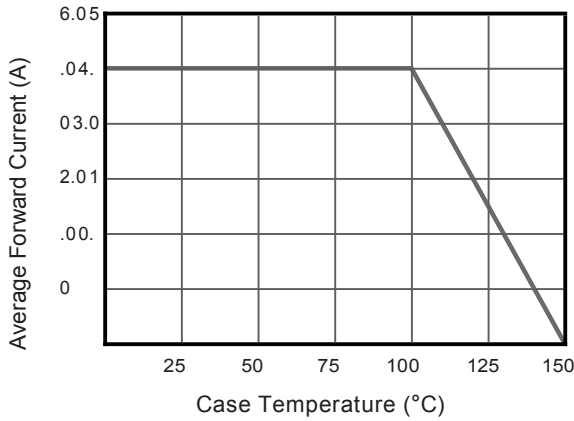


Fig.2 Typical Reverse Characteristics

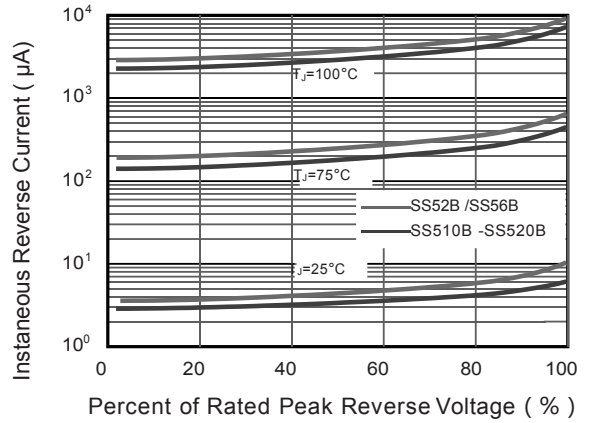


Fig.3 Typical Forward Characteristic

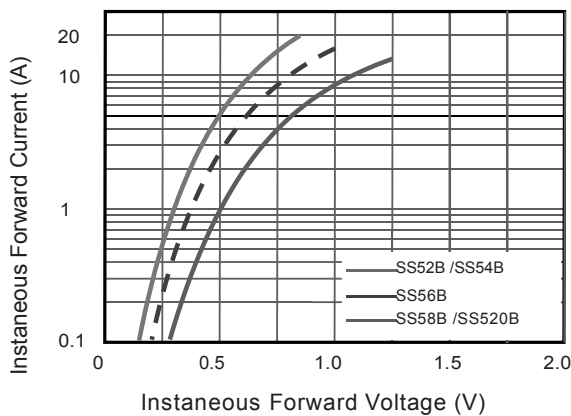


Fig.4 Typical Junction Capacitance

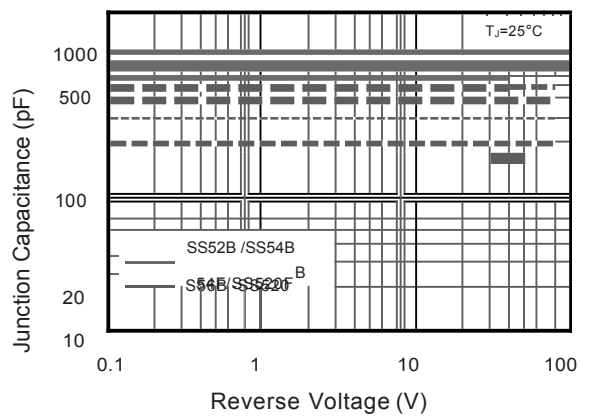


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

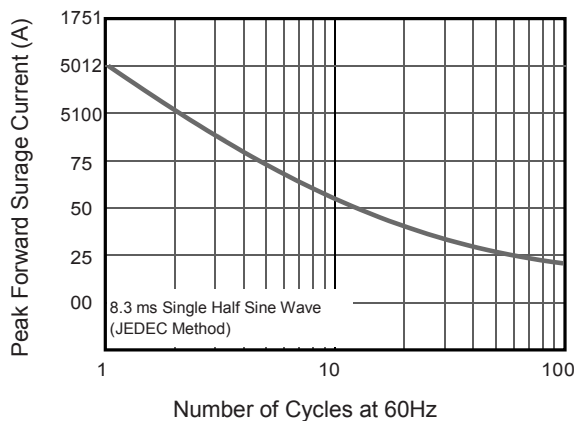
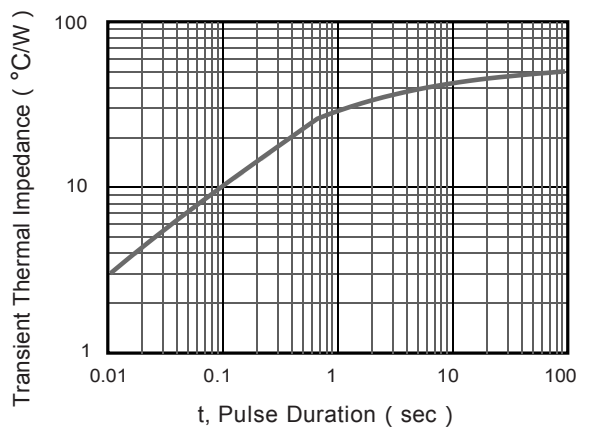
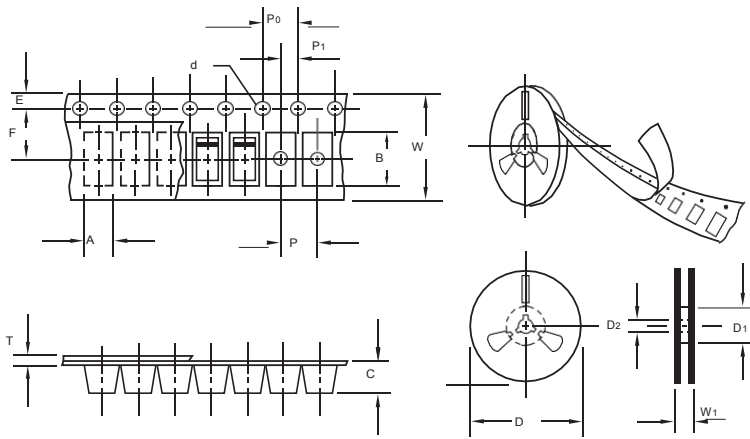


Fig.6- Typical Transient Thermal Impedance





unit:mm

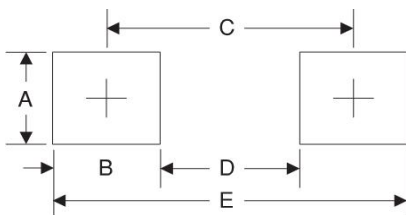
Item	Symbol	Tolerance	SMB
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.41
Carrier depth	C	0.1	2.42
Sprocket hole	d	0.05	1 5.0
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D1	min	50.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.55
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	12.00
Reel width	W1	1.0	12.30

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (mm)	BOX (pcs)	INNER BOX (mm)	REEL DIA, (mm)	CARTON SIZE (mm)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMB	13"	3,000	4.0	6,000	190*190*41	330	365*365*360	48,000	14.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.8	0.110
B	2.4	0.094
C	4.6	0.181
D	2.2	0.086
E	7.0	0.276