

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

- ◆ Metal silicon junction, majority carrier conduction For surface
- ◆ mounted applications
- ◆ Low power loss,high efficiency
- ◆ High forward surge current capability
- ◆ For use in low voltage,high frequency inverters, free wheeling,and polarity protection applications

Mechanical Data

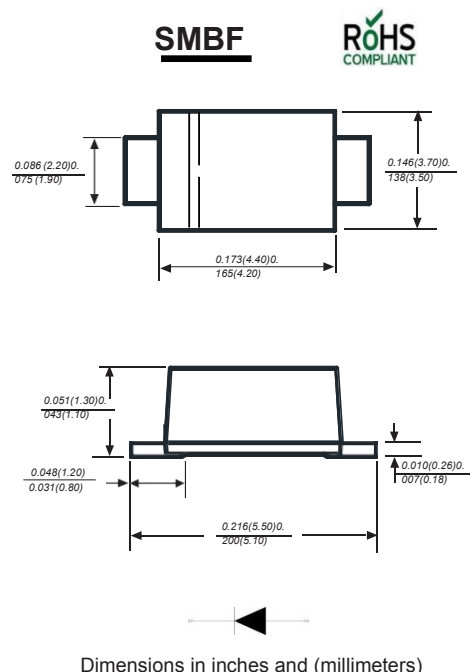
Case : JEDEC SMBF molded plastic body

Terminals : Solderable per MIL-STD-750,Method 2026

Polarity : Polarity symbol marking on body Mounting

Position : Any

Weight : 0.002 ounce, 0.057 grams



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	SS52BF	SS53BF	SS54BF	SS55BF	SS56BF	SS58BF	SS510BF	SS515BF	SS520BF	UNITS
Marking Code		RCD SS52BF	RCD SS53BF	RCD SS54BF	RCD SS55BF	RCD SS56BF	RCD SS58BF	RCD SS510BF	RCD SS515BF	RCD SS520BF	
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			0.95	V
Maximum DC reverse current T _A =25℃ T _A at rated DC blocking voltage =125℃	I _R	1.0									mA
		50.0									
Typical junction capacitance (NOTE 1)	C _J	800			500						pF °C
Typical thermal resistance (NOTE 2)	R _{θJA}	40.0									/W °C
Operating junction temperature range	T _J	-55 to +125-									℃
Storage temperature range	T _{STG}	55 to +150									

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

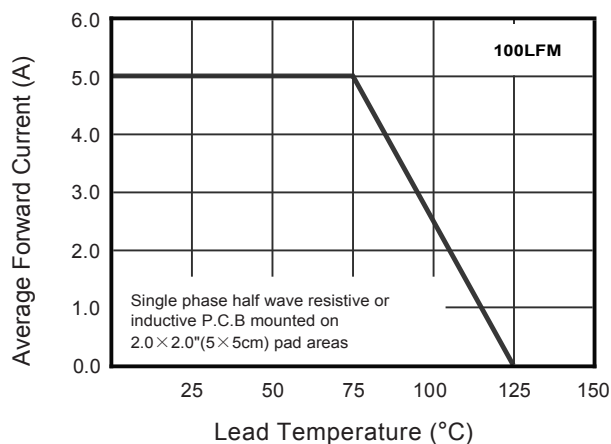


Fig.2 Typical Reverse Characteristics

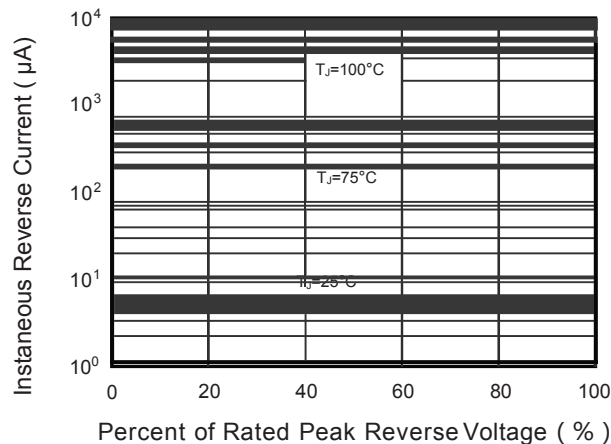


Fig.3 Typical Forward Characteristic

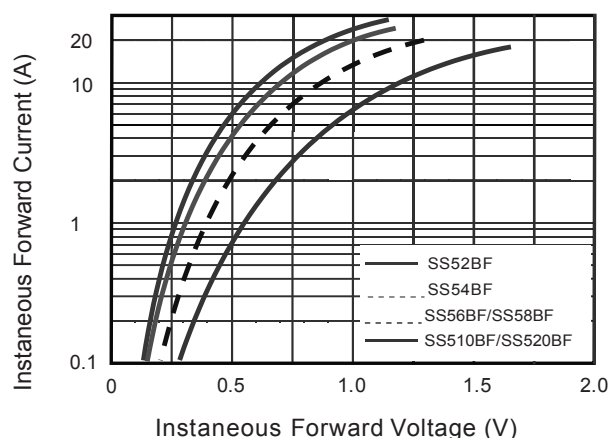


Fig.4 Typical Junction Capacitance

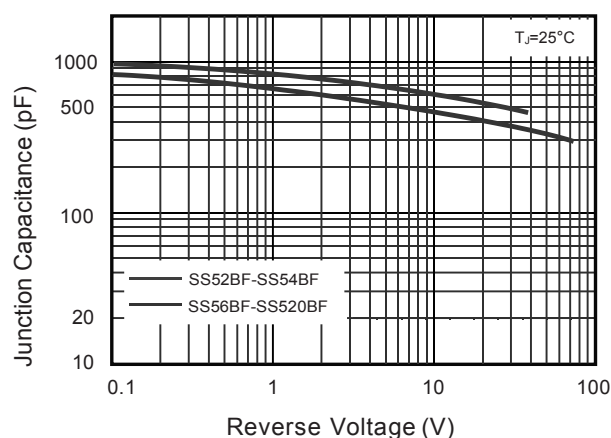


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

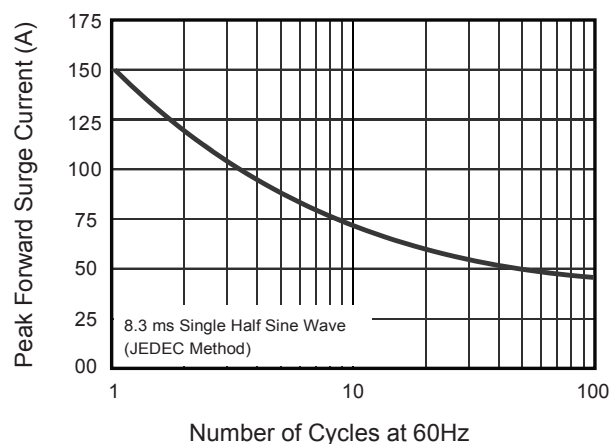
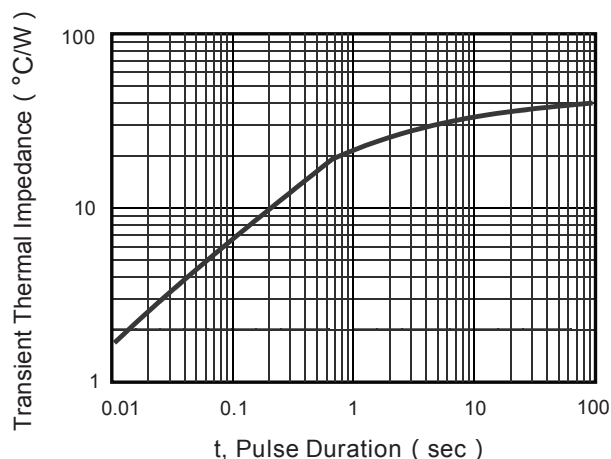
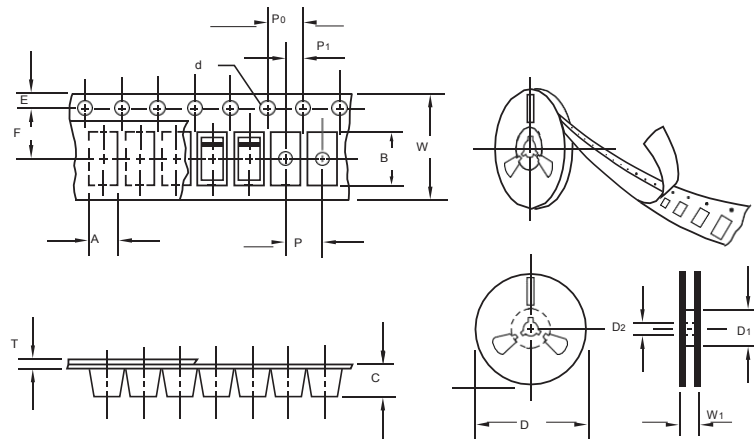


Fig.6 Typical Transient Thermal Impedance





unit:mm

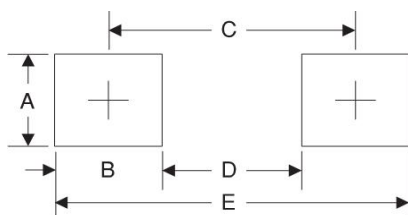
Item	Symbol	Tolerance	SMBF
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.61
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D1	min	50.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
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)
SMBF	13"	5,000	4.0	10,000	190*190*41	330	365*365*360	80,000	14.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.54	0.100
B	1.8	0.071
C	4.8	0.189
D	3.0	0.118
E	6.6	0.260