

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 applcatlons

Mechanical Data

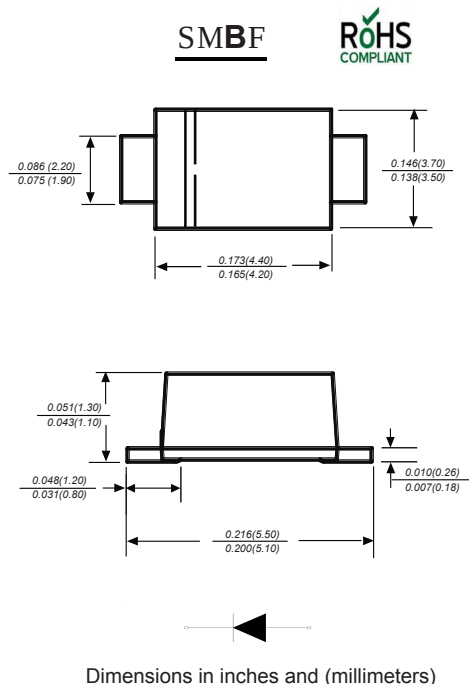
Case : JEDEC SMBF molded plastic body

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

Polarity : Polarity symbol marking on body Mounting

Position : Any

Weight : 0.002 ounce, 0.057 grams



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	SS22BF	SS23BF	SS24BF	SS25BF	SS26BF	SS28BF	SS210BF	SS215BF	SS220BF	UNITS
Marking Code		MDD S22B	MDD S23B	MDD S24B	MDD S25B	MDD S26B	MDD S28B	MDD S210B	MDD S215B	MDD S220B	
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)	2.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	55					45				A
Maximum instantaneous forward voltage at 2.0A	V _F	0.55			0.70		0.85		0.95		V
Maximum DC reverse current T _A =25℃ at rated DC blocking voltage T _A =125℃	I _R	0.5					0.3				mA
		20.0					3.0				
Typical junction capacitance (NOTE 1)	C _J	250					110				pF
Typical thermal resistance (NOTE 2)	R _{θJA}	65.0									℃/W
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

Typical Characteristics

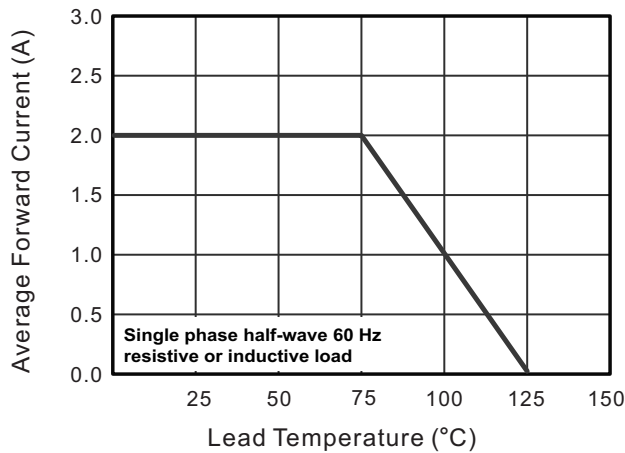


Fig.3 Typical Forward Characteristic

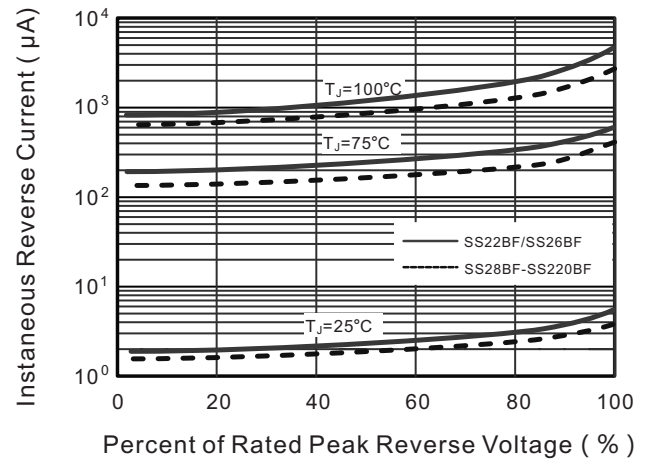


Fig.4 Typical Junction Capacitance

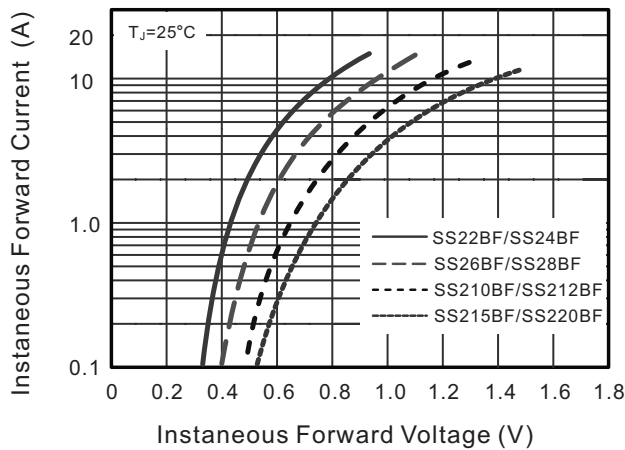


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

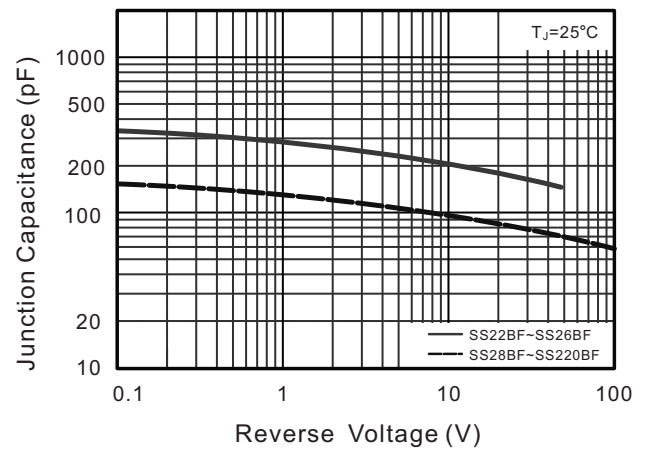
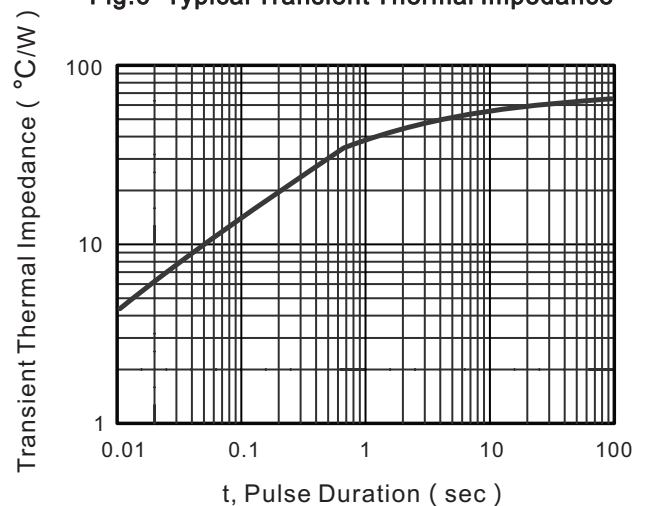
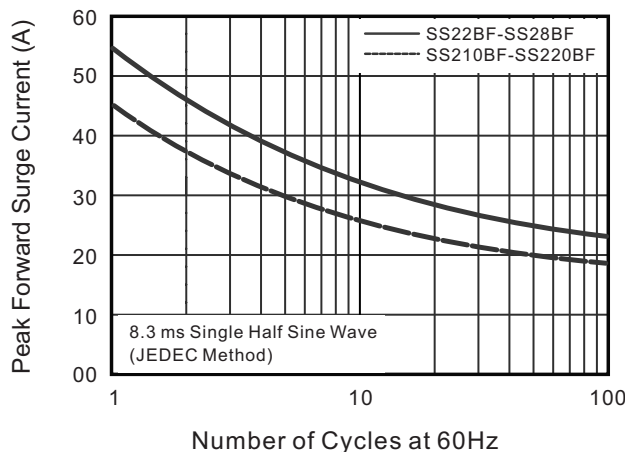
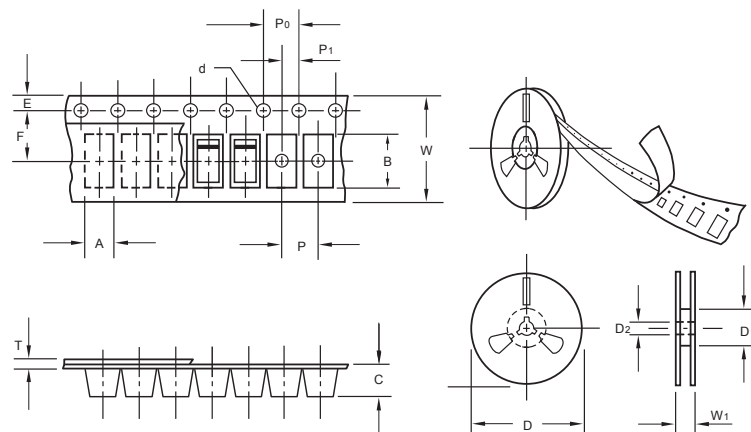


Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.

Packing information



unit:mm

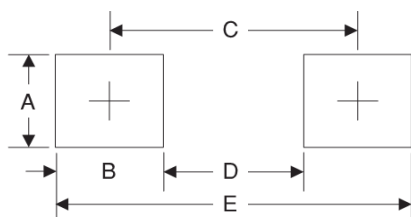
Item	Symbol	Tolerance	SMBF
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.61
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D ₁	min	50.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	12.00
Reel width	W ₁	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