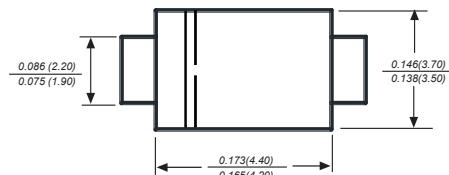




SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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

SMBF**Mechanical Data**

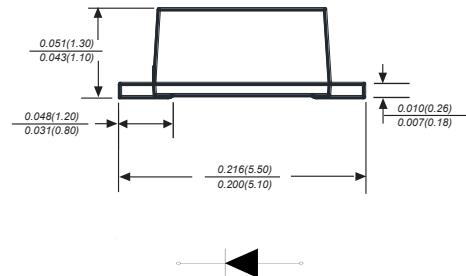
Case : JEDEC UT BØ molded plastic body

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

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	MDD SS32BF	MDD SS33BF	MDD SS34BF	MDD SS35BF	MDD SS36BF	MDD SS38BF	MDD SS310BF	MDD SS315BF	MDD SS320BF	UNITS
Marking Code											
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	I _(AV)							3.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}							80			A
Maximum instantaneous forward voltage at 3.0A	V _F		0.55		0.70	0.85		0.95			V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R		0.5		5.0			0.3	3.0		mA
Typical junction capacitance (NOTE 1)	C _J		450				400				pF
Typical thermal resistance (NOTE 2)	R _{θJA}				65						°C/W
Operating junction temperature range	T _J				-55 to +125						°C
Storage temperature range	T _{STG}				-55 to +150						°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. mounted with 2.0"x2.0"(5.0x5.0cm) copper pad areas



Typical Characteristics

Fig.1 Forward Current Derating Curve

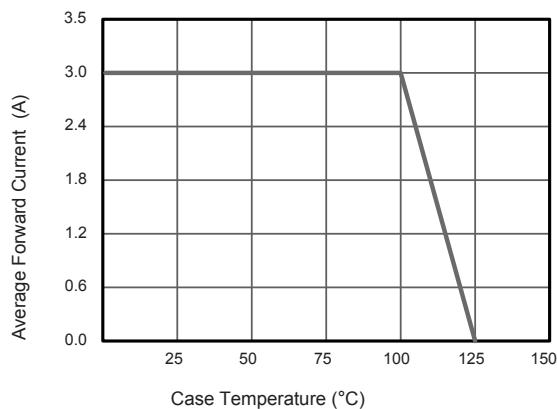


Fig.2 Typical Reverse Characteristics

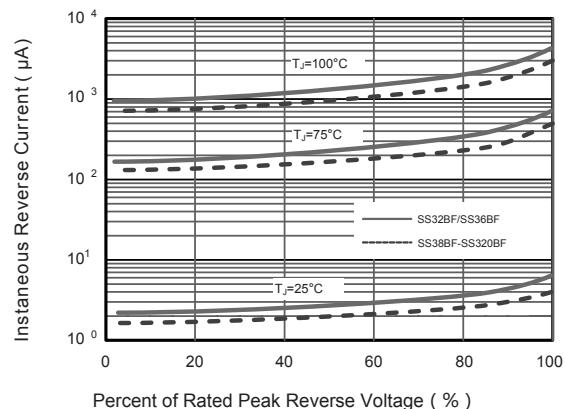


Fig.3 Typical Forward Characteristic

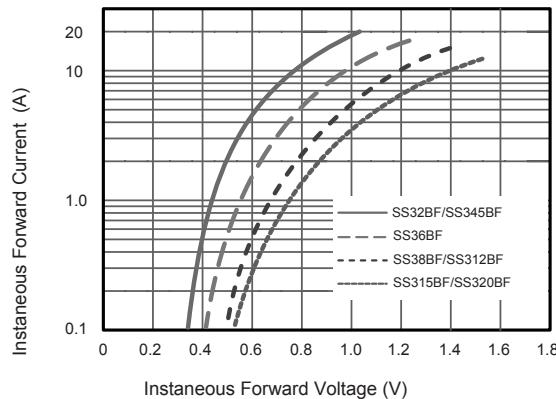


Fig.4 Typical Junction Capacitance

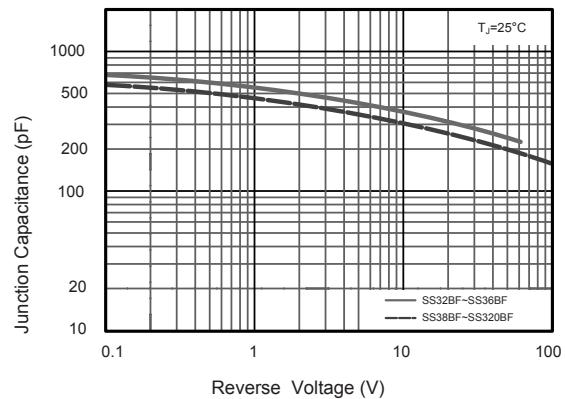


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

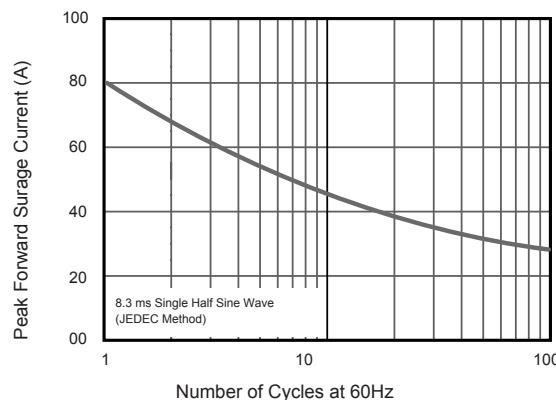
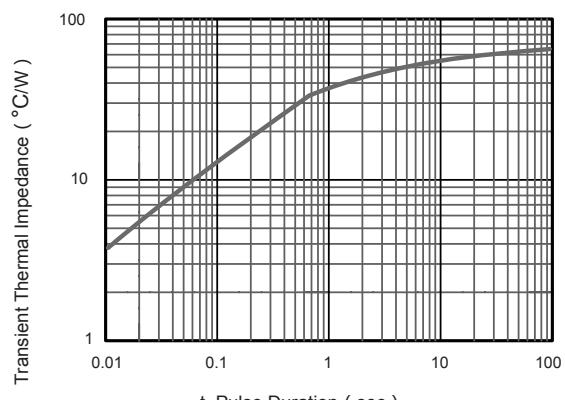
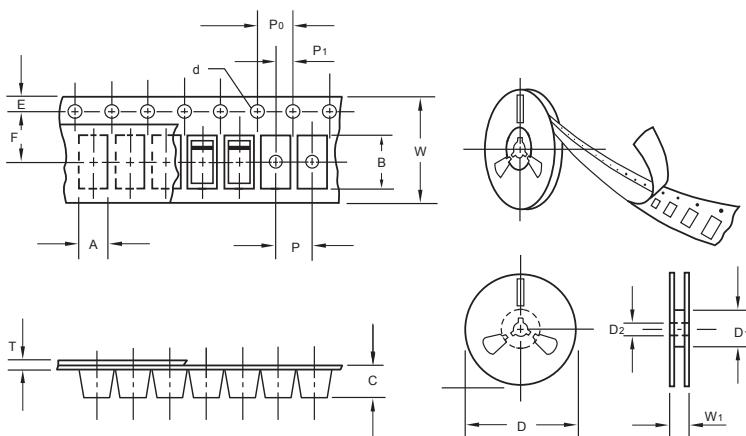


Fig.6-Typical Transient Thermal Impedance



The curve above is for reference only.

Packing information



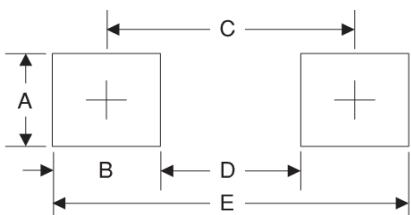
Item	Symbol	Tolerance	SMBF
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.61
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D ₁	min	50.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
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

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