

SM220BF thru SM2100BF

Schottky Barrier Rectifiers

Reverse Voltage 20 to 100V Forward Current 2.0A

FEATURES

- * 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
- * Guardring for over voltage protection
- * High temperature soldering guaranteed:
260°C/10 seconds at terminals

Mechanical Data

Case: JEDEC SMB-FL

molded plastic over glass die

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

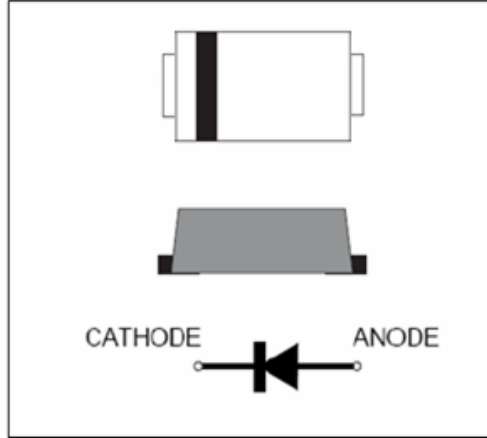
Weight: 0.066 g

Handling precaution: None

Electrical Characteristic

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

Parameter Symbol	symbol	SM220BF	SM230BF	SM240BF	SM250BF	SM260BF	SM280BF	SM2100BF	Unit
device marking code		S22	S23	S24	S25	S26	S28	S210	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RSM voltage	V_{RSM}	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 lead length (See fig. 1) at $T_c = 75^\circ\text{C}$	$I_F(AV)$	2.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60							A
Typical thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JC}$	150 30							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J,$ T_{STG}	-40 to +150							$^\circ\text{C}$



We declare that the material of product is Halogen free (green epoxy compound)

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

Parameter Symbol	symbol	SM220BF	SM230BF	SM240BF	SM250BF	SM260BF	SM280BF	SM2100BF	Unit
Maximum instantaneous forward voltage at 2.0A	V_F	0.55			0.70		0.85		V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_J = 100^\circ\text{C}$	I_R	0.1 10.0							mA
Typical junction capacitance at 4.0V, 1MHz	C_J	110							PF

NOTES:

1.8.0mm² (.013mm thick) land areas

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2. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

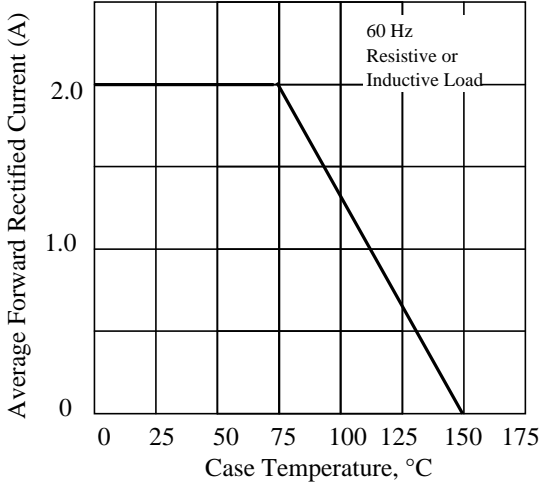


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

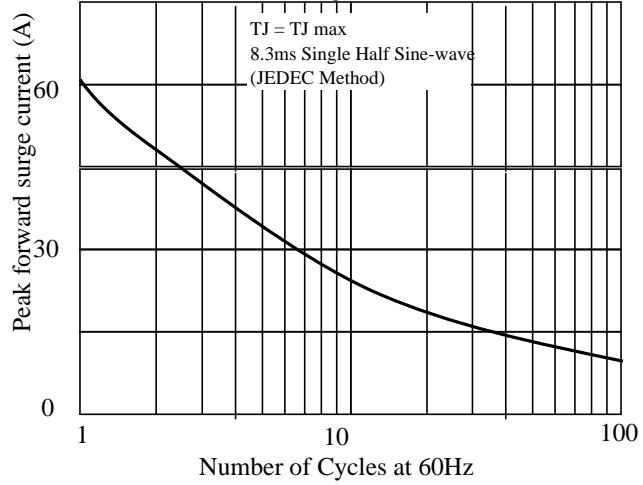


Fig 3. - Typical Instantaneous Forward Characteristics

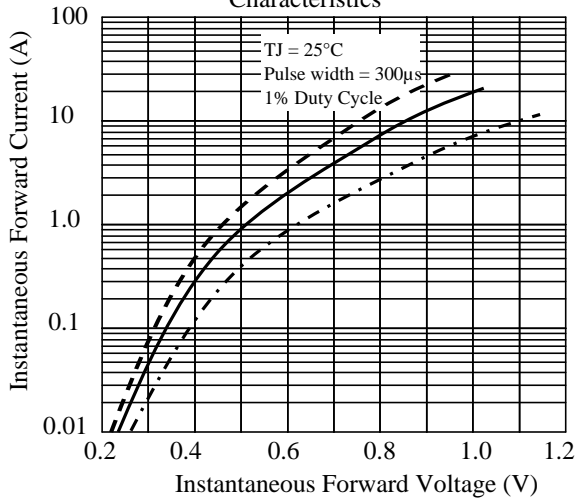


Fig 4. - Typical Reverse Characteristics

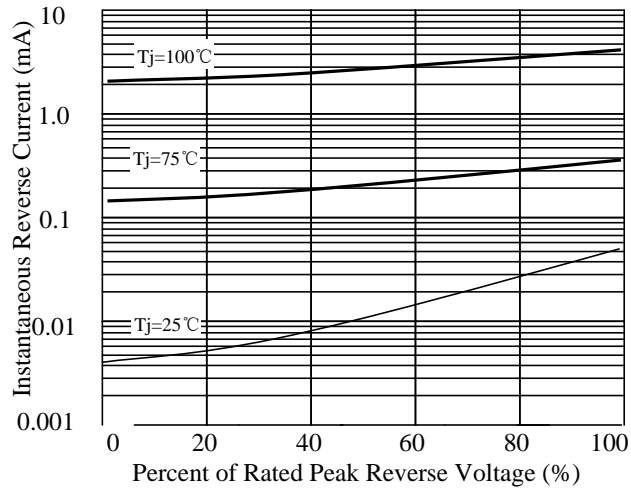


Fig 5. - typical transient thermal impedance

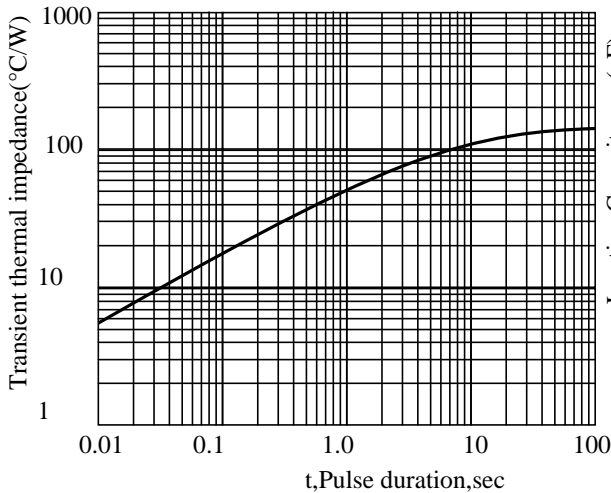
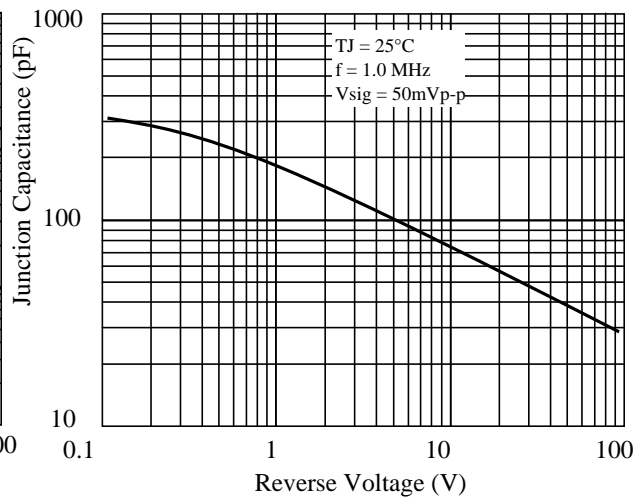


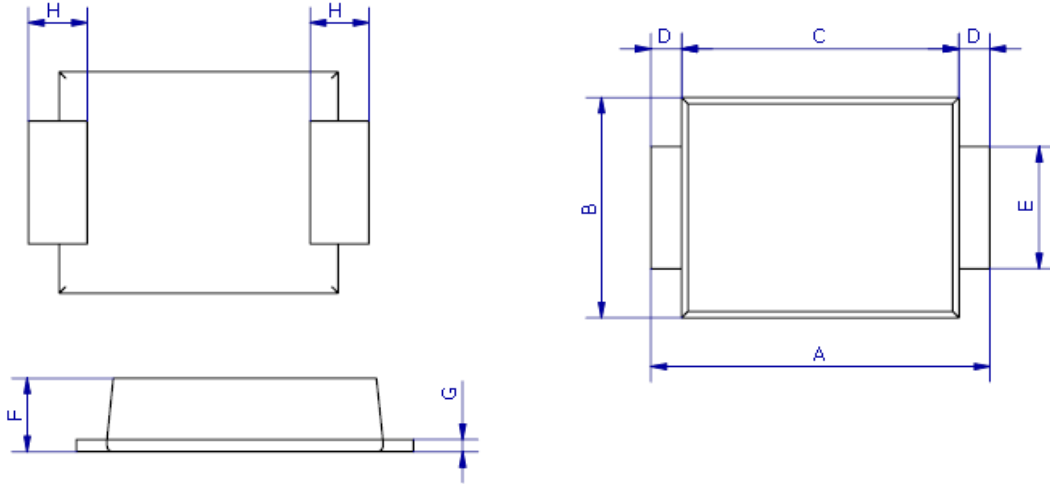
Fig 6. - Typical Junction Capacitance



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3. dimension:

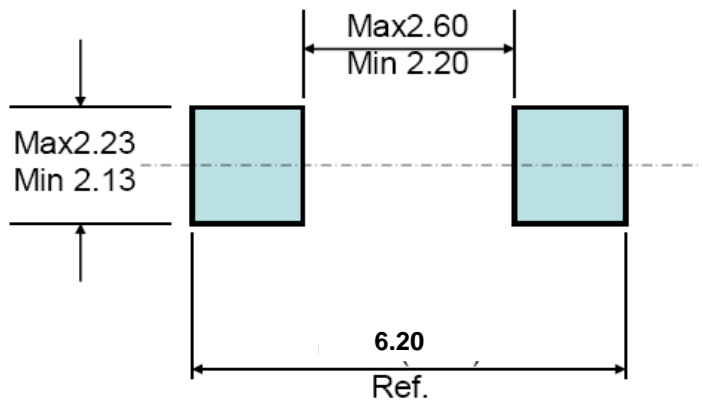
SMB-FL



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.3	5.7	0.209	0.224
B	3.4	3.8	0.134	0.150
C	4.3	4.7	0.169	0.185
D	0.45Typ		0.018Typ	
E	1.9	2.1	0.0748	0.08268
F	1.05	1.40	0.04134	0.05512
G	0.2	0.3	0.00591	0.00984
H	0.95Typ		0.037Typ	

Mounting Pad Layout

--- SMB-FL



SM240BF: "S"--肖特基产品; "M"--表面贴装; "2"--正向电流2A; "40"---VB为40V; "BF"--SMB-FL封装;

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4. Update Record

版次	更新记录	更新作者	更新日期
1	更新散热系数	周杰	2014.01.09
A	VF 0.5V 变更到0.55V	谭志伟	2021.10.12