

GS52BF thru GS520BF

Surface Mount Schottky Barrier Rectifier
 Reverse Voltage 20V to 200V Forward Current 5.0A

Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability



SMBF

Mechanical Data

- Case: SMBF Molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end
- Mounting Position: Any

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	GS52 BF	GS54 BF	GS56 BF	GS58 BF	GS510 BF	GS515 BF	GS520 BF	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}	20	40	60	80	100	150	200	V	
RMS Reverse Voltage	V_{RMS}	14	28	42	56	70	105	140	V	
DC Blocking Voltage	V_{DC}	20	40	60	80	100	150	200	V	
Maximum Average Forward Output Current	$I_{F(AV)}$	5							A	
Peak Forward Surge Current, 8.3ms Single Half-Sine-Wave @ $T_J=25^\circ\text{C}$	I_{FSM}	150							A	
Rating For Fusing ($t < 8.3\text{ms}$)	I^2t	93.375							A^2sec	
Maximum Instantaneous Forward Voltage @ 5A	V_F	0.55	0.7	0.85	0.9					V
Maximum Reverse Current Rated V_R @ $T_A=25^\circ\text{C}$	I_R	0.5			0.1				mA	
Maximum Reverse Current Rated V_R @ $T_A=100^\circ\text{C}$		20			5					

Thermal Characteristics

Parameter	Symbol	GS52 BF	GS54 BF	GS56 BF	GS58 BF	GS510 BF	GS515 BF	GS520 BF	Unit
Typical Thermal Resistance ¹	$R_{\theta JA}$	65							$^\circ\text{C}/\text{W}$
	$R_{\theta JA}$	20							
Operating Junction Temperature Range	T_J	-55 to +125			-55 to +150				$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. Unit mounted on P.C.B. with 8.0 x 8.0mm copper pads.

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Typical Electrical Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

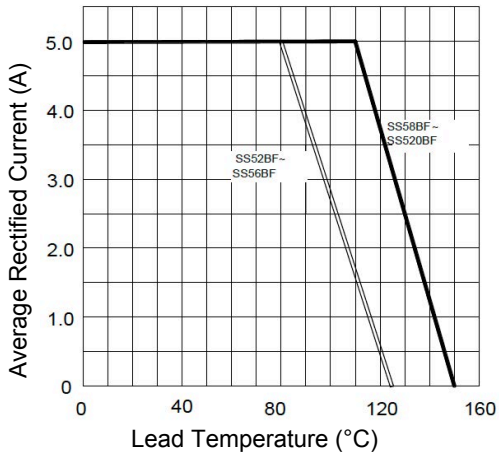


Figure 1. Forward Current Derating Curve

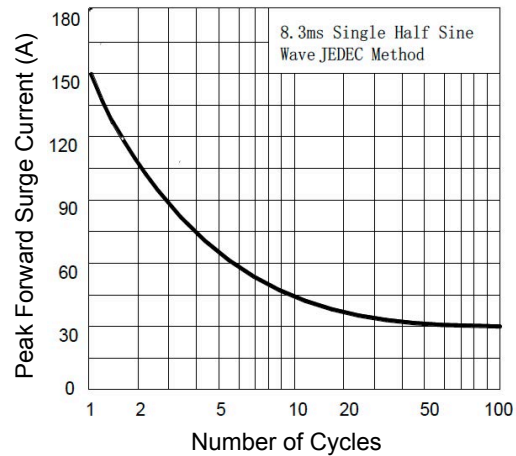


Figure 2. Surge Current Derating Curve

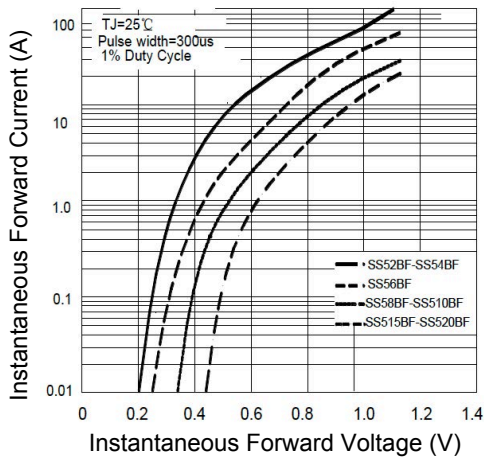


Figure 3. Typical Forward Voltage Characteristic

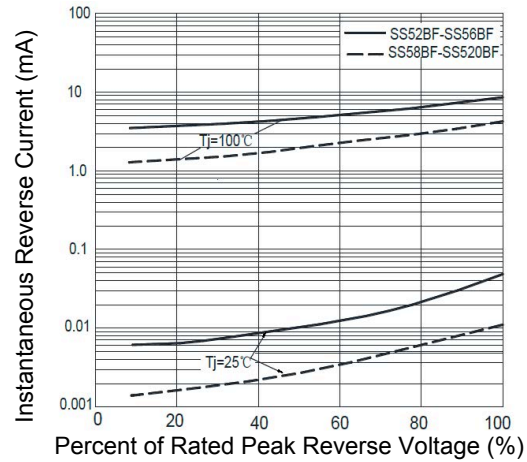
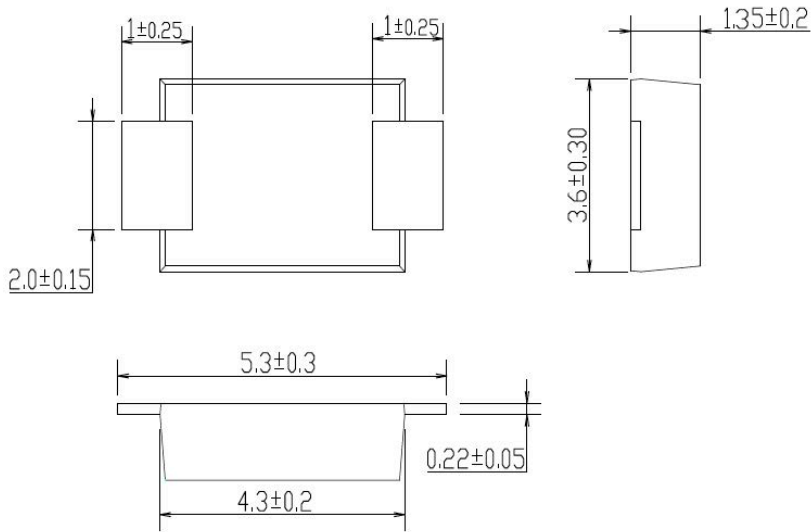


Figure 4. Typical Reverse Characteristic

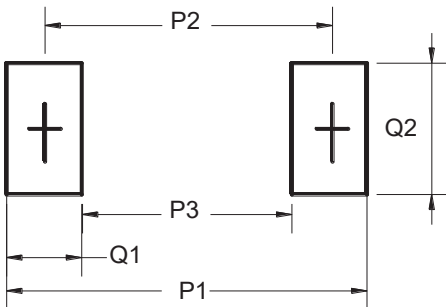
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Package Outline Dimensions SMBF (Unit: mm)



Recommended Pad Layout



Symbol	Dimensions in Millimeters
P1	6.70
P2	4.50
P3	2.30
Q1	2.20
Q2	2.50

Order Information

Device	Package	Marking	Carrier	Quantity
GS52BF	SMBF	SS52BF	Tape & Reel	5,000 pcs / Tape & Reel
GS54BF	SMBF	SS54BF	Tape & Reel	5,000 pcs / Tape & Reel
GS56BF	SMBF	SS56BF	Tape & Reel	5,000 pcs / Tape & Reel
GS58BF	SMBF	SS58BF	Tape & Reel	5,000 pcs / Tape & Reel
GS510BF	SMBF	SS510BF	Tape & Reel	5,000 pcs / Tape & Reel
GS515BF	SMBF	SS515BF	Tape & Reel	5,000 pcs / Tape & Reel
GS520BF	SMBF	SS520BF	Tape & Reel	5,000 pcs / Tape & Reel