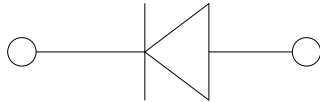


Surface Mount General Purpose Rectifier



Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication.

Mechanical Data

- **Package:** SMBF
Molding compound meets UL 94 V-0 flammability rating, -compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS2ABF	GS2BBF	GS2DBF	GS2GBF	GS2JBF	GS2KBF	GS2MBF
Device marking code			GS2ABF	GS2BBF	GS2DBF	GS2GBF	GS2JBF	GS2KBF	GS2MBF
Maximum Repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC Blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	I_O	A	2.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	I_{FSM}	A	50						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			100						
Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode	I^2t	A ² s	10.735						
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C_j	pF	12						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-55 ~ +150						

GS2ABF THRU GS2MBF

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS2ABF	GS2BBF	GS2DBF	GS2GBF	GS2JBF	GS2KBF	GS2MBF
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	5.0						
			T _j =125°C	100						

■Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS2ABF	GS2BBF	GS2DBF	GS2GBF	GS2JBF	GS2KBF	GS2MBF
Typical Thermal Resistance	R _{θJ-A} ⁽¹⁾	°C/W	60						
	R _{θJ-L} ⁽¹⁾		20						
	R _{θJ-C} ⁽¹⁾		15						

Note:
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

■ Characteristics (Typical)

FIG.1: I_o-T_L Curve

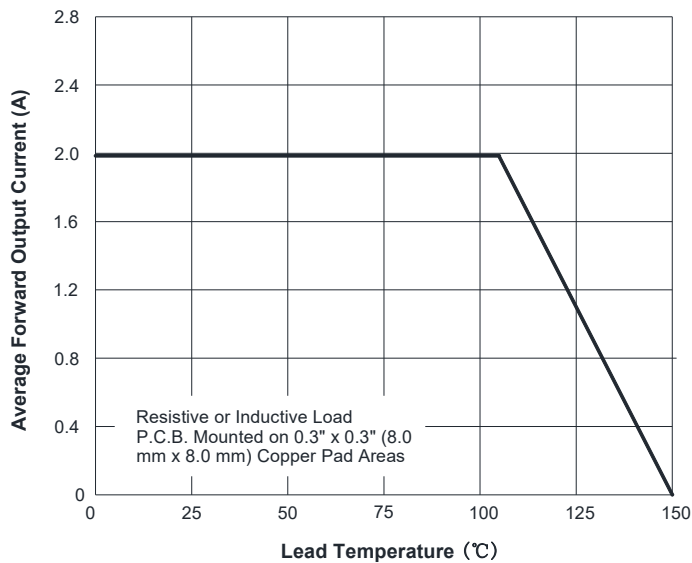
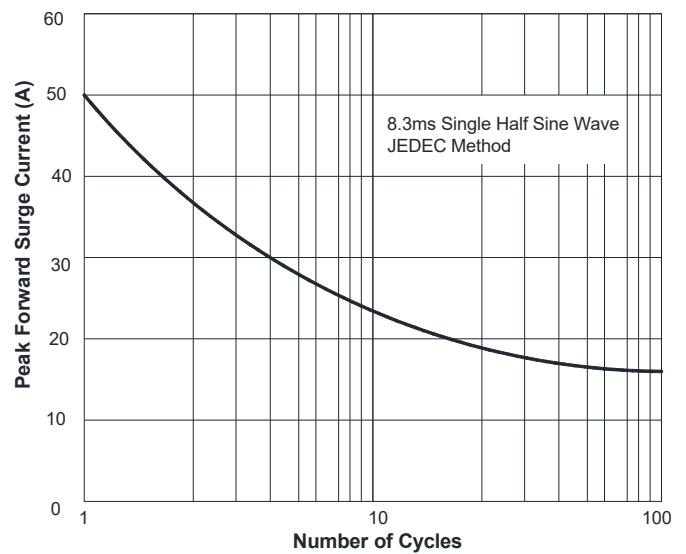


FIG.2: Forward Surge Current Capability



GS2ABF THRU GS2MBF

FIG.3: Typical Forward Voltage

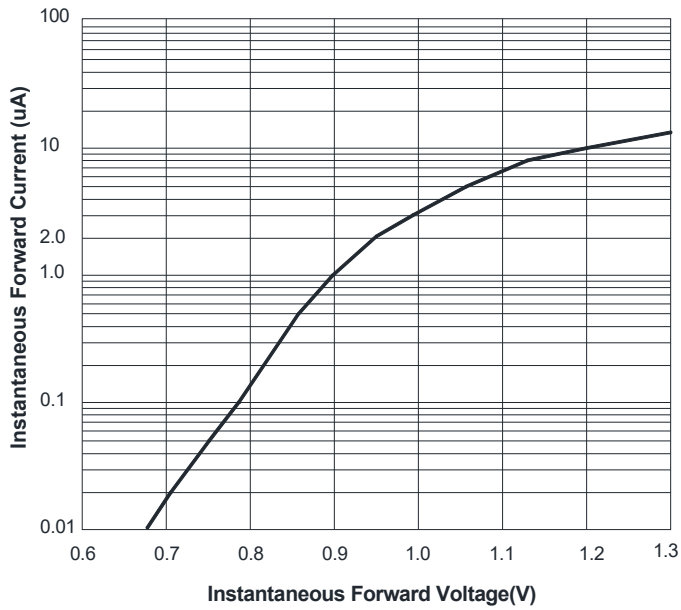
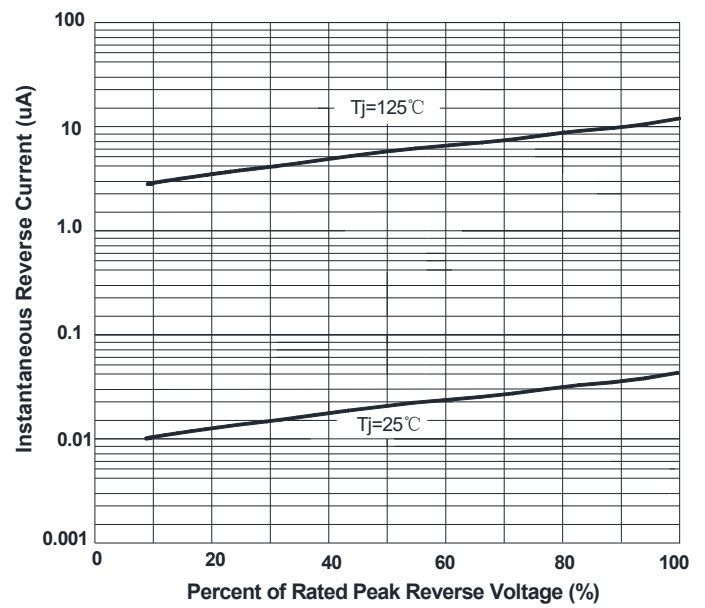


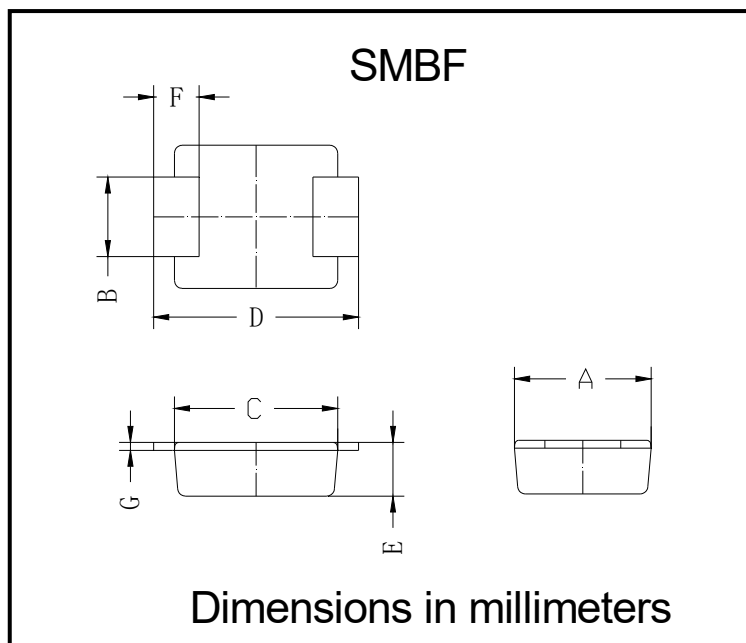
FIG.4: Typical Reverse Characteristics



■ Ordering Information (Example)

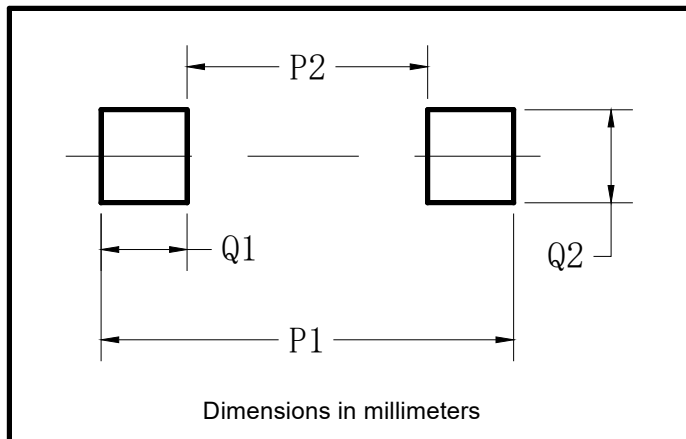
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS2ABF - GS2MBF	F1	Approximate 0.065	5000	/	80000	13" reel

■ Outline Dimensions



SMBF		
Dim	Min	Max
A	3.40	3.80
B	1.90	2.10
C	4.15	4.45
D	5.10	5.60
E	1.05	1.55
F	0.70	1.35
G	0.15	0.25

■ Suggested pad layout



Dim	Millimeters
P1	6.20
P2	2.40
Q1	1.90
Q2	2.20

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