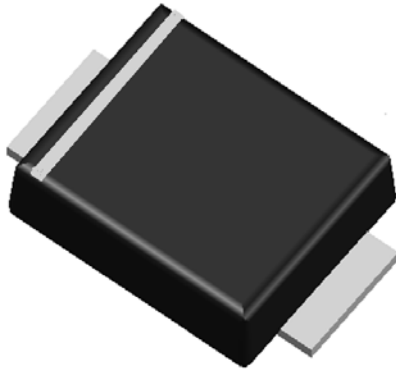


Surface Mount General Purpose Rectifier

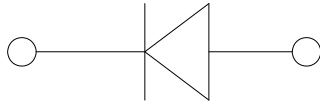


Features

- 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, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=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, T _j =25°C	I _{FSM}	A	50						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			100						
Current squared time @1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s	10.735						
Storage temperature	T _{stg}	°C	-55 ~ +150						
Junction temperature	T _j	°C	-55 ~ +150						

■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	V _F	V	I _{FM} =2.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage	I _R	μA	T _j =25°C	5.0						
			T _j =125°C	100						
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	12						



GS2ABF THRU GS2MBF

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GS2ABF	GS2BBF	GS2DBF	GS2GBF	GS2JBF	GS2KBF	GS2MBF
Typical Thermal Resistance	$R_{\theta J-A}^{(1)}$	$^{\circ}\text{C/W}$	60						
	$R_{\theta J-L}^{(1)}$		20						
	$R_{\theta J-C}^{(1)}$		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

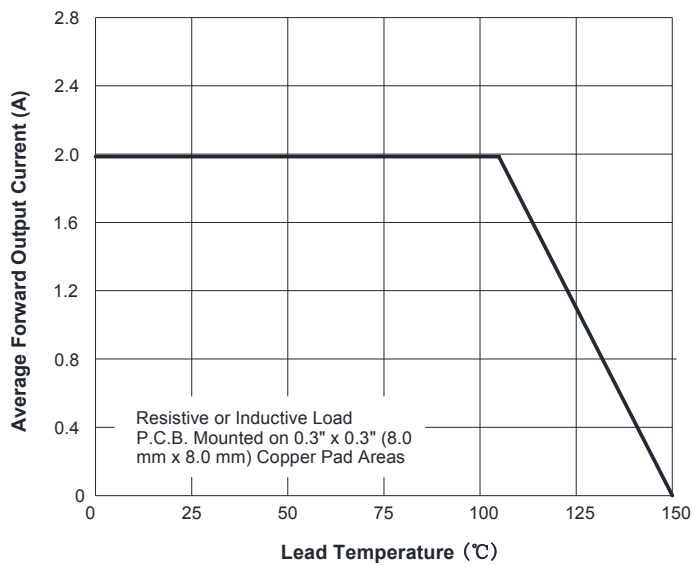


FIG.2: Forward Surge Current Capability

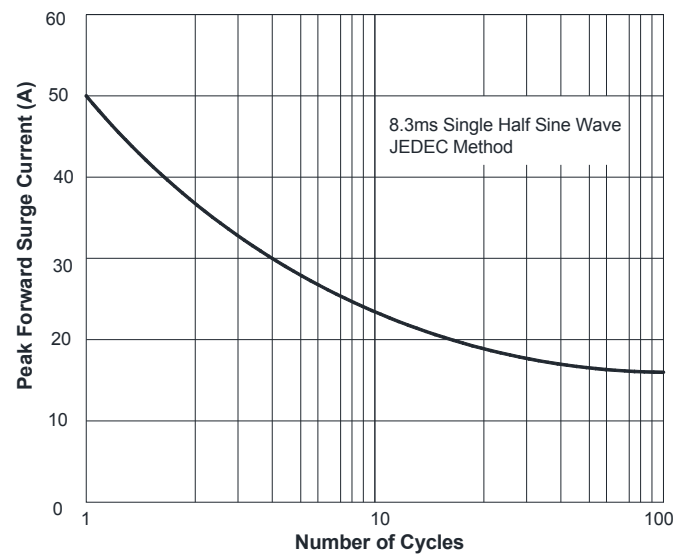


FIG.3: Typical Forward Voltage

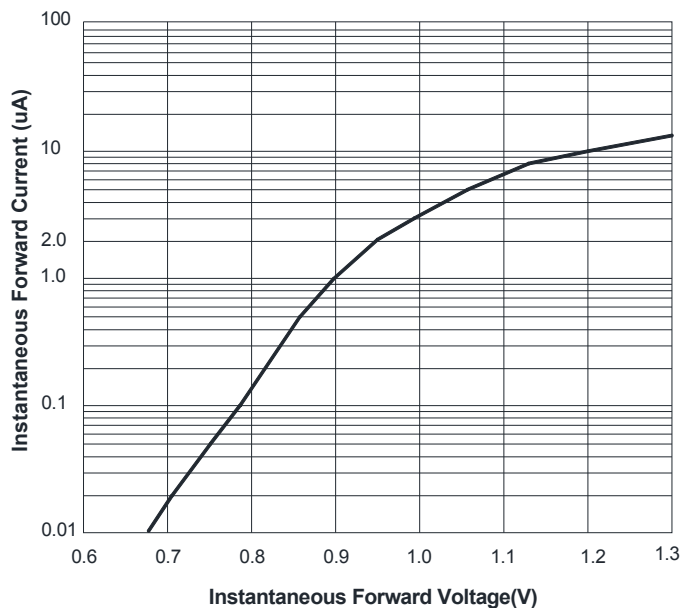
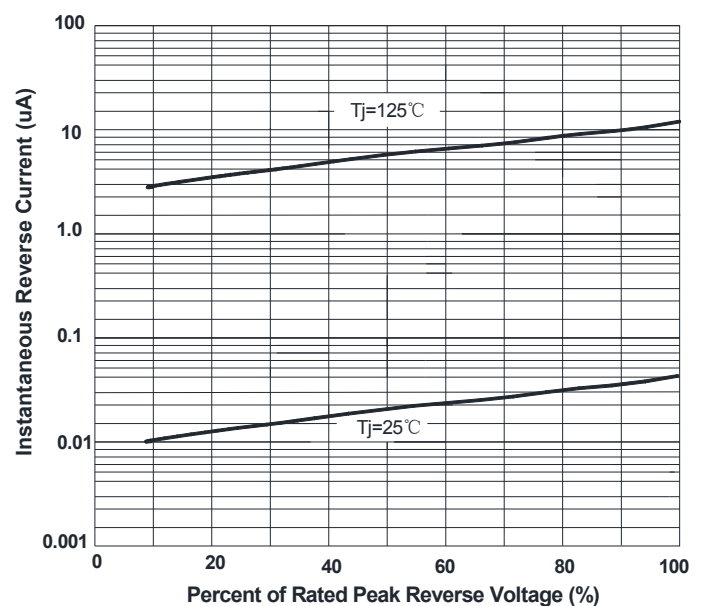


FIG.4: Typical Reverse Characteristics



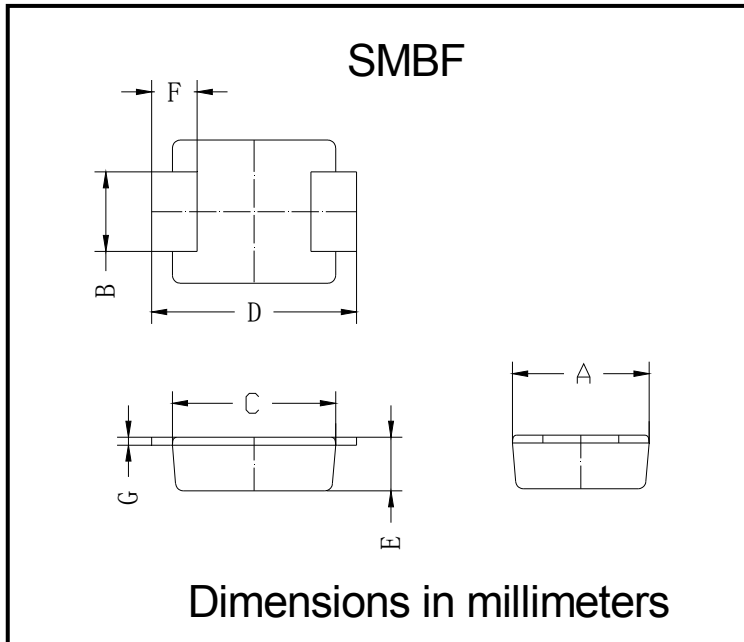


GS2ABF THRU GS2MBF

■ Ordering Information (Example)

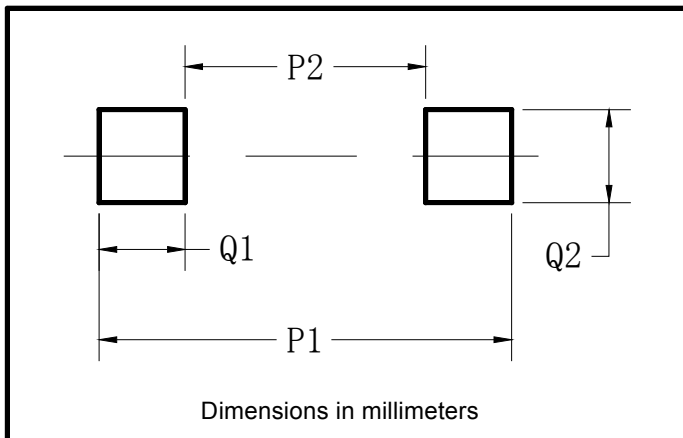
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS2ABF - GS2MBF	F1	Approximate 0.065	5000	/	80000	13" reel

■ 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	Milimeters
P1	6.20
P2	2.40
Q1	1.90
Q2	2.20



GS2ABF THRU GS2MBF

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