

Surface Mount Fast Recovery Rectifier

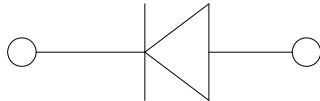


Features

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

Typical Applications

For use in high frequency 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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GR2ABF	GR2BBF	GR2DBF	GR2GBF	GR2JBF	GR2KBF	GR2MBF
Device marking code			GR2ABF	GR2BBF	GR2DBF	GR2GBF	GR2JBF	GR2KBF	GR2MBF
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	VRMS	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	VDC	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	IO	A	2.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	IFSM	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	I²t	A²s	10.375						
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	18				11		
Storage temperature	Tstg	°C	-55 ~ +150						
Junction temperature	Tj	°C	-55 ~ +150						

GR2ABF THRU GR2MBF

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

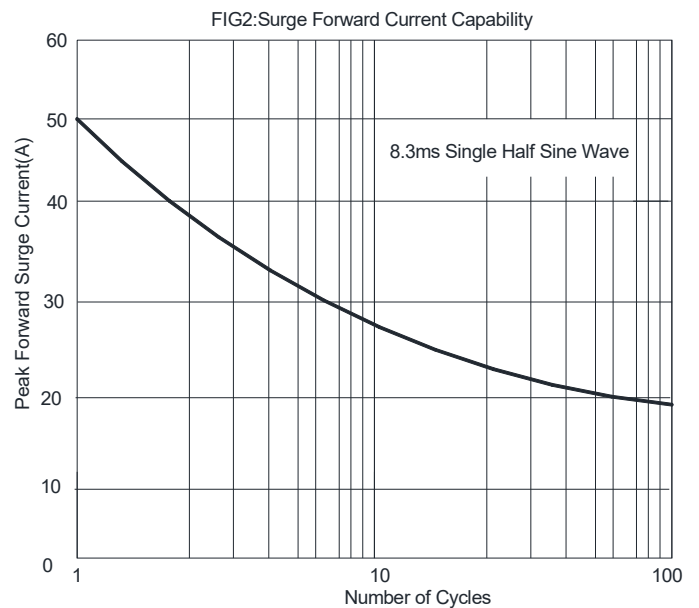
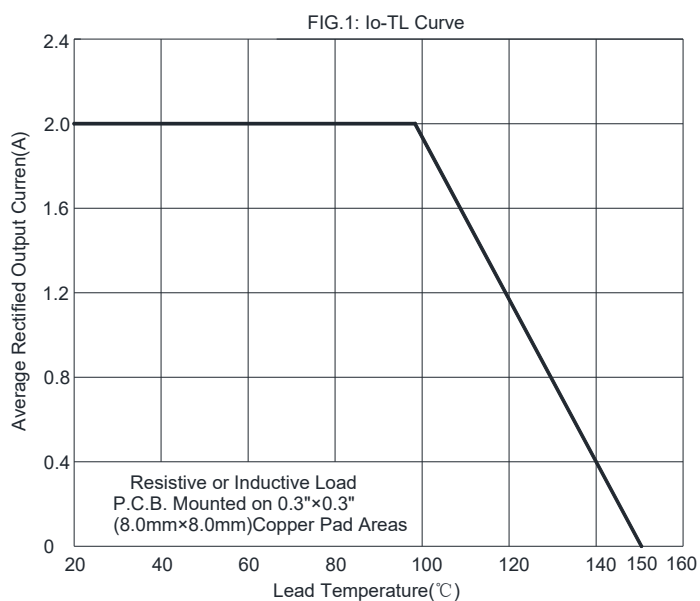
PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GR2ABF	GR2BBF	GR2DBF	GR2GBF	GR2JBF	GR2KBF	GR2MBF
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	1.3						
Maximum reverse recovery time	t _r	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	150				250	500	
Maximum DC reverse current at rated DC 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	GR2ABF	GR2BBF	GR2DBF	GR2GBF	GR2JBF	GR2KBF	GR2MBF
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)



GR2ABF THRU GR2MBF

FIG.3: Typical Forward Characteristics

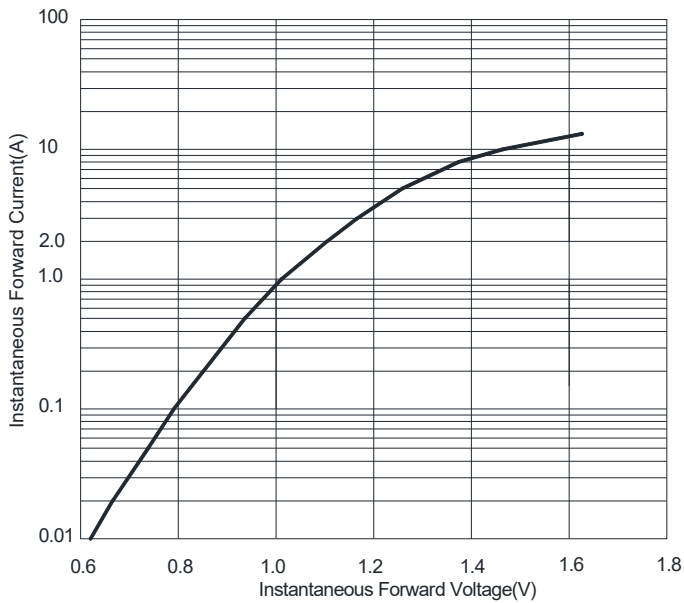


FIG.4: Typical Reverse Characteristics

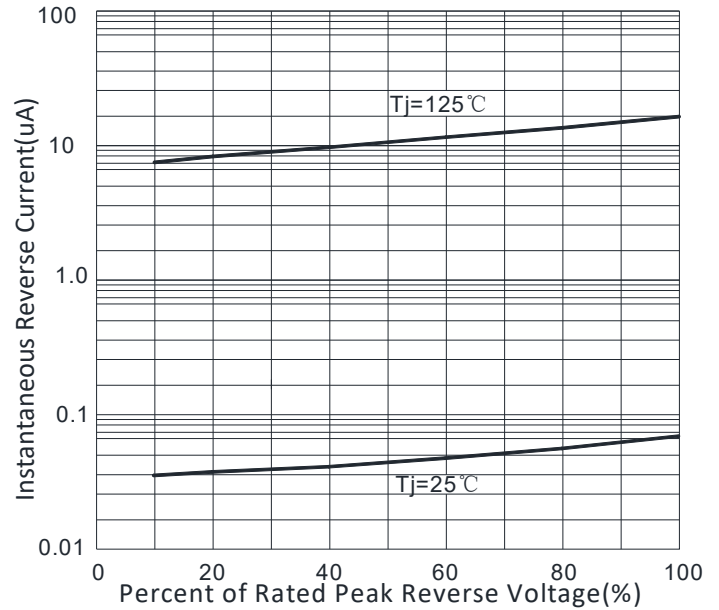
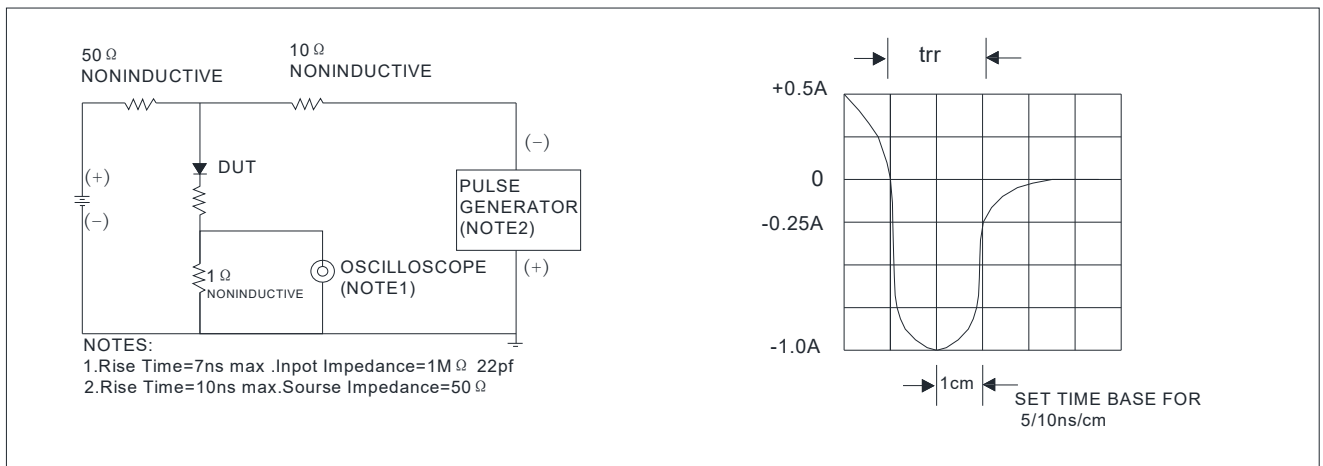


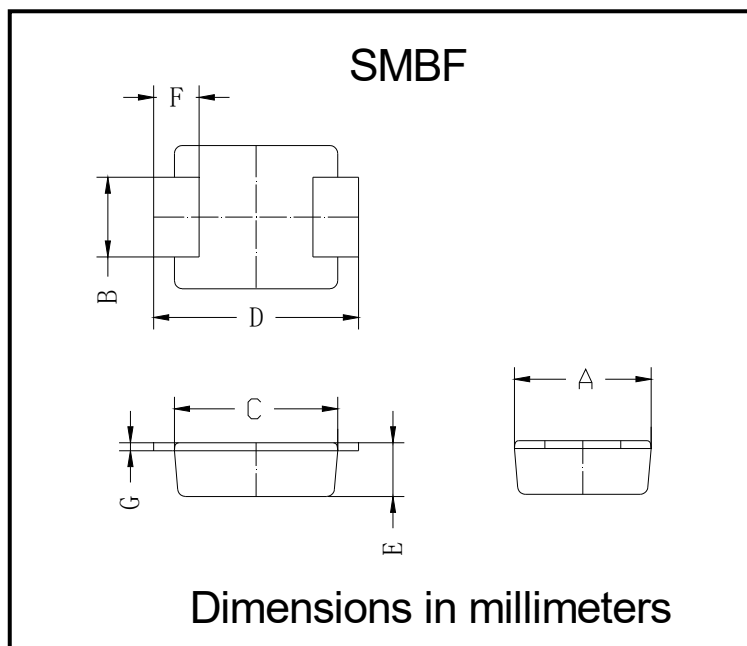
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



Ordering Information (Example)

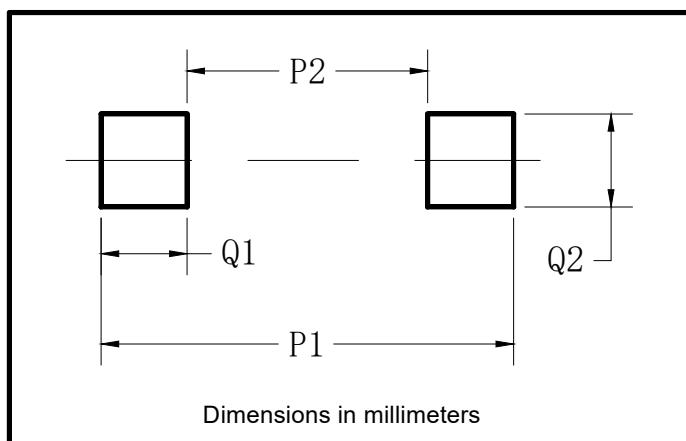
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GR2ABF - GR2MBF	F1	Approximate 0.065	5000	/	80000	13" reel

■ 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

Disclaimer

The information presented in this document is for reference only. Shanghai Sunco Electronics Co., Ltd reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Russiansunco or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.russiansunco.com](http://www.russiansunco.com) , or consult your nearest Russiansunco's sales office for further assistance.