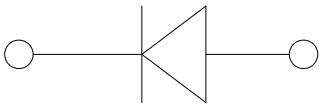
FMG1A THRU FMG1J

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 low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

Mechanical Date

- ● **Package**: SOD-323FL
  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 (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FMG1A	FMG1B	FMG1D	FMG1G	FMG1J
Device marking code			**1AL**	**1BL**	**1DL**	**1GL**	**1JL**
Repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600
Maximum RMS voltage	V_{RMS}	V	35	70	140	280	420
Average rectified output current @60Hz sine wave, resistance load, Tc=80℃	Io	A	1.0				
Surge(non-repetitive)forward current @ 60Hz half-sine wave,1 cycle, T_J=25℃	I_{FSM}	A	20				
Current Squared Time @1ms≤t<8.3ms Tj=25℃	I^2t	A^2s	1.66				
Storage temperature	T_{STG}	℃	-55 ~+150				
Junction temperature	T_J	℃	-55 ~+150				

FMG1A THRU FMG1J

■Electrical Characteristics（T_j=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	FMG1A	FMG1B	FMG1D	FMG1G	FMG1J
Maximum instantaneous forward voltage drop per diode	V_F	V	I_F=1.0A	1.1				
Typical junction capacitance	C_J	pF	V_R=4V,1 MHz	4.5				
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM}	μA	T_J=25℃	5				
			T_J=125℃	50				

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	FMG1AE	FMG1BE	FMG1DE	FMG1GE	FMG1JE
Thermal resistance	$R_{\theta J-A}$	℃/W	270 (1)				
	$R_{\theta J-L}$		85 (1)				
	$R_{\theta J-C}$		60 (2)				

Note:

(1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B without copper pad areas.

(2) Thermal resistance between junction and cathode tab solder point.

■ Characteristics(Typical)

FIG1：Io-Tc Curve

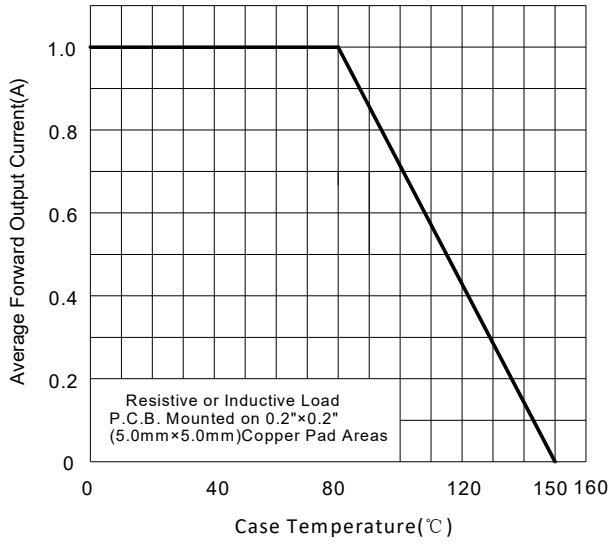
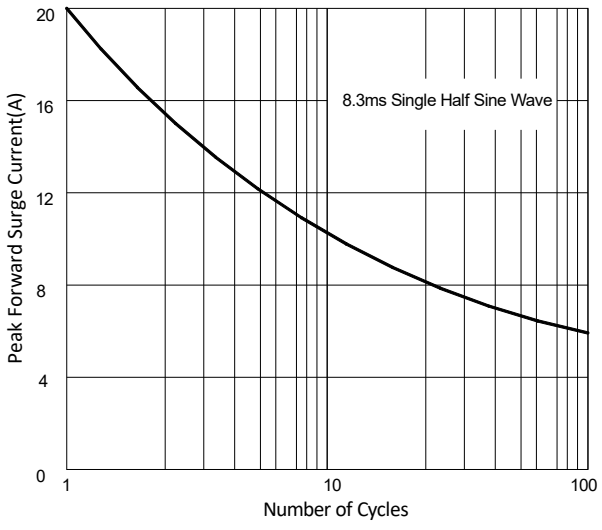


FIG2：Surge Forward Current Capability



FMG1A THRU FMG1J

FIG.3: Forward characteristics

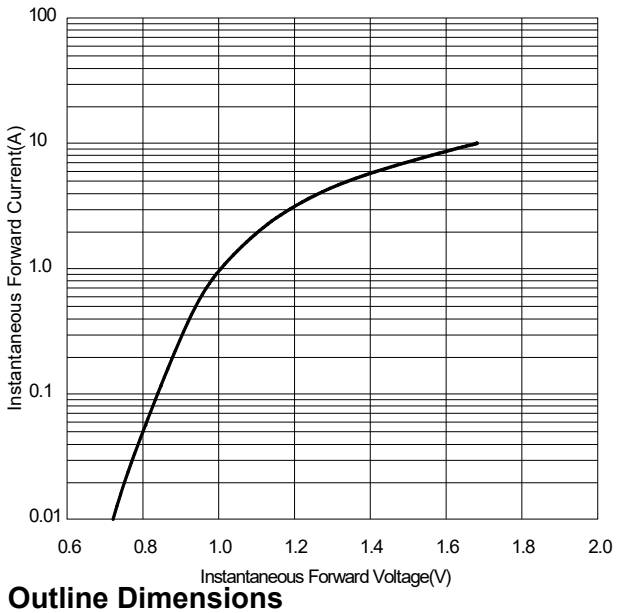
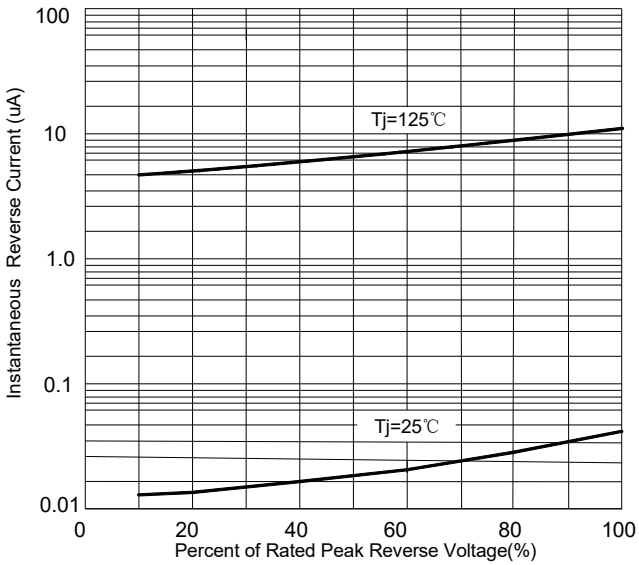
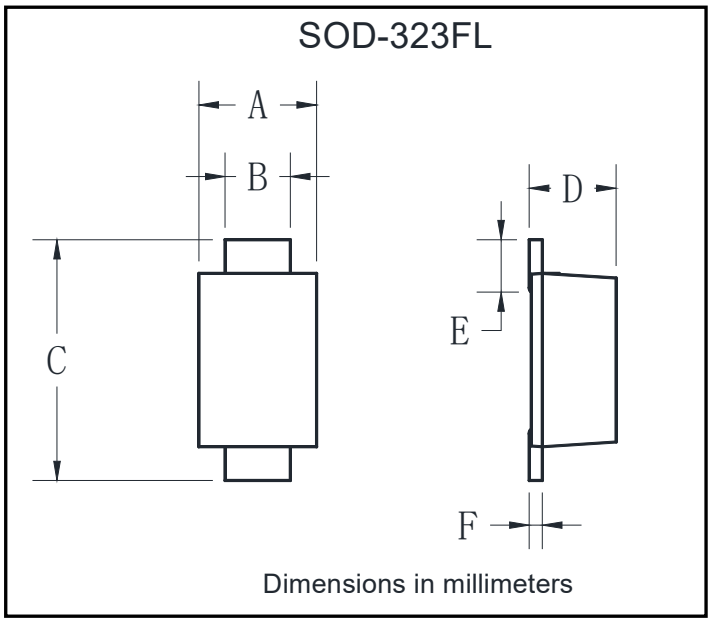


FIG4：Typical Reverse Characteristics

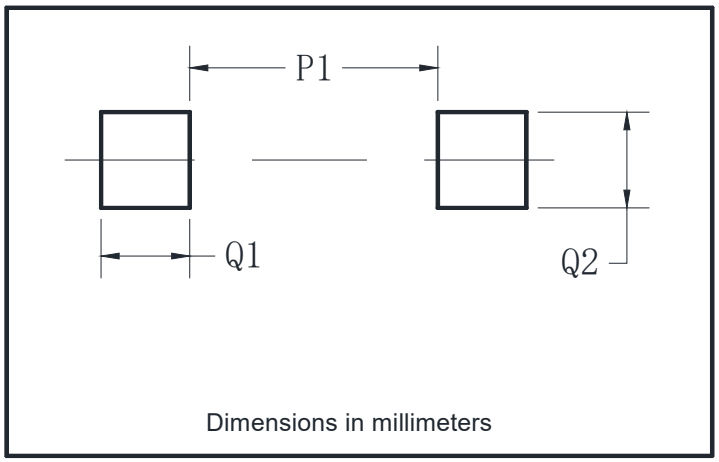


■ Outline Dimensions



SOD-323FL		
Dim	Min	Max
A	1.05	1.45
B	0.90	1.15
C	2.30	2.70
D	0.80	1.20
E	0.25	0.70
F	0.05	0.25

■ Suggested pad layout



SOD-323FL	
Dim	Millimeters
P1	1.30
Q1	1.00
Q2	1.50

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 with 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 , or consult your nearest Russiansunco's sales office for further assistance.