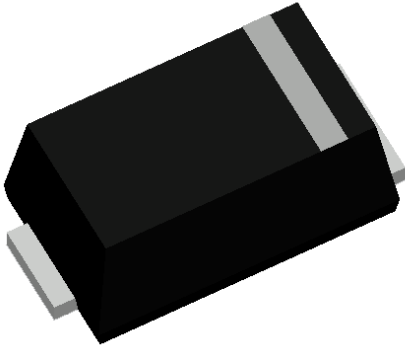


Surface Mount General Purpose Rectifier

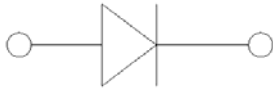


Features

- 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, automotive and telecommunication.



Mechanical Data

- **Package:** SOD-323HE
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	FMG1AE	FMG1BE	FMG1DE	FMG1GE	FMG1JE	
Device marking code			1A	1B	1D	1G	1J	
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, T _c =80°C	I _o	A	1.0					
Surge(non-repetitive)forward current @ 60Hz half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	A	18					
Current Squared Time @1ms≤t<8.3ms T _j =25°C	I ² t	A ² s	1.34					
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	FMG1AE	FMG1BE	FMG1DE	FMG1GE	FMG1JE
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	5				
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM}	μA	T _J =25°C	5				
			T _J =125°C	50				



FMG1AE THRU FMG1JE

■ Characteristics(Typical)

FIG1: I_o - T_c Curve

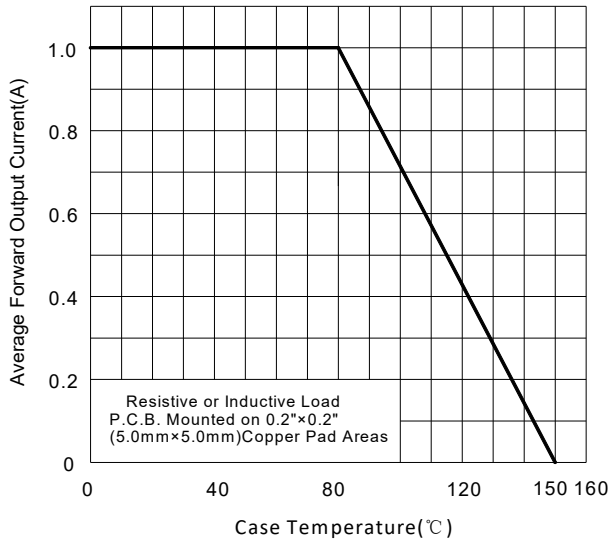


FIG2: Surge Forward Current Capability

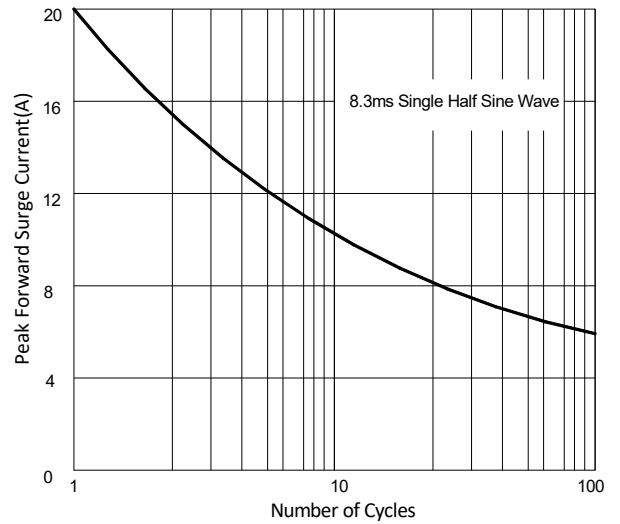


FIG.3: Forward characteristics

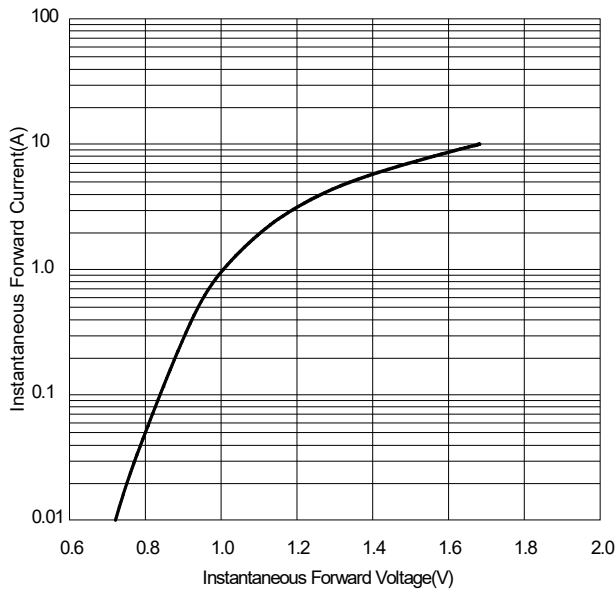
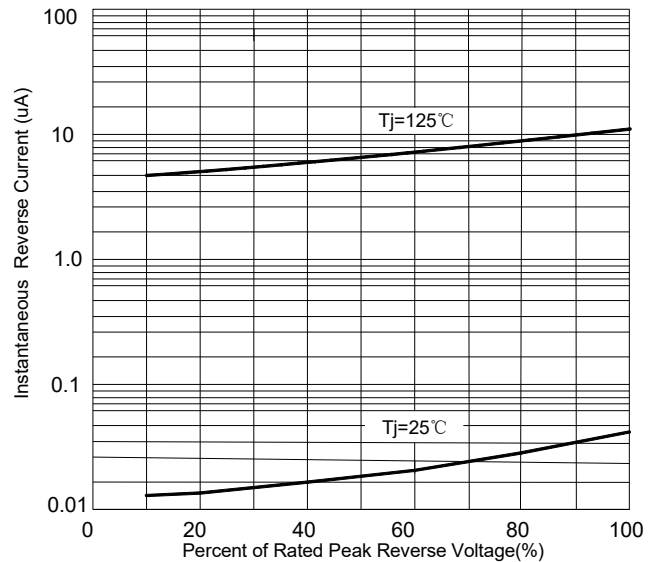


FIG4: Typical Reverse Characteristics



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

PARAMETER	SYMBOL	UNIT	FMG1AE	FMG1BE	FMG1DE	FMG1GE	FMG1JE		
Thermal resistance	$R_{\theta J-A}$	$^{\circ}\text{C}/\text{W}$	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.

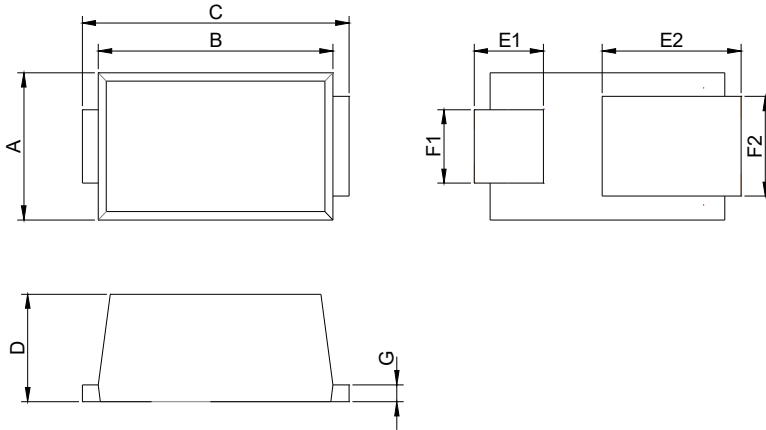


FMG1AE THRU FMG1JE

Ordering Information (Example)

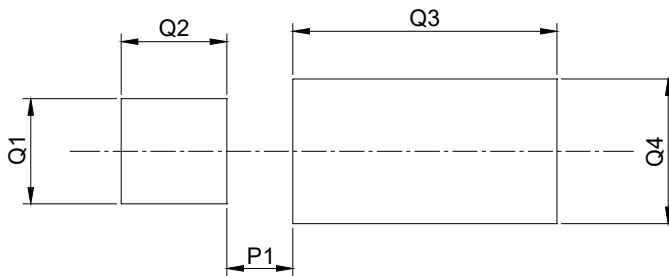
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FMG1AE~ FMG1JE	F1	Approximate 0.008	3000	120000	7" reel

Outline Dimensions



SOD-323HE		
Dim	Millimeters	
	Min	Max
A	1.20	1.40
B	2.10	2.30
C	2.30	2.70
D	0.90	1.00
E1	0.55	0.75
E2	1.10	1.50
F1	0.55	0.75
F2	0.78	0.98
G	0.12	0.27

Suggested pad layout



SOD-323HE	
Dim	Millimeters
P1	0.50
Q1	0.80
Q2	0.80
Q3	2.00
Q4	1.10



FMG1AE THRU FMG1JE

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