

Surface Mount Schottky Rectifier

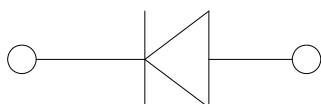


Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- 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-323HE
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_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FM24E
Device marking code			24
Repetitive peak reverse voltage	VRRM	V	40
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	IO	A	2.0
Surge(non-repetitive)forward current @ 60Hz half-sine wave, 1 cycle, T _j =25°C	IFSM	A	35
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			70
Current squared time @1ms≤t≤8.3ms T _j =25°C. Rating of per diode	I ² t	A ² S	5.08
Storage temperature	T _{stg}	°C	-55 ~+150
Junction temperature	T _j	°C	-55 ~+150

FM24E

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	V _F	V	I _{FM} =2.0A T _j =25°C	-	0.56	0.60
Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =V _{R_{RM}}	I _{RRM1}	mA	V _{RM} =V _{R_{RM}} T _j =25°C	-	-	0.05
	I _{RRM2}		V _{RM} =V _{R_{RM}} T _j =100°C	-	-	10

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS

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

PARAMETER	SYMBOL	UNIT	FM24E
Thermal Resistance	R _{θJ-A}	°C/W	270
	R _{θJ-L}		45

■ Characteristics(Typical)

FIG1: I_o-T_L Curve

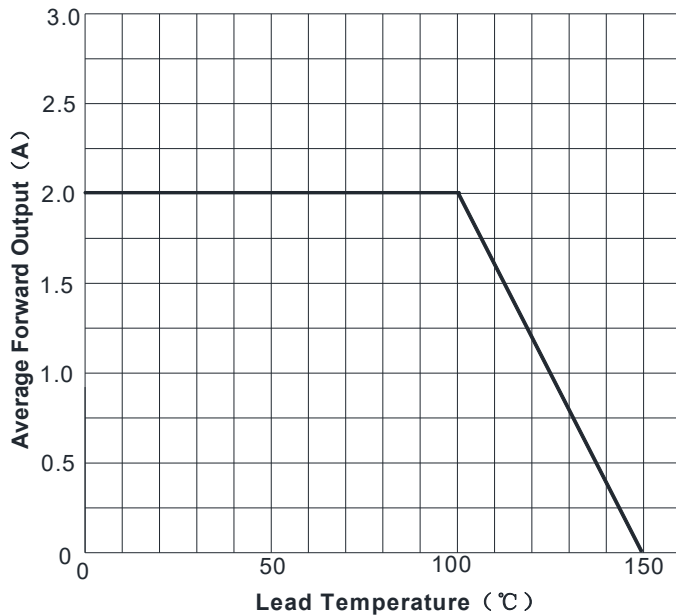


FIG2: Surge Forward Current Capability

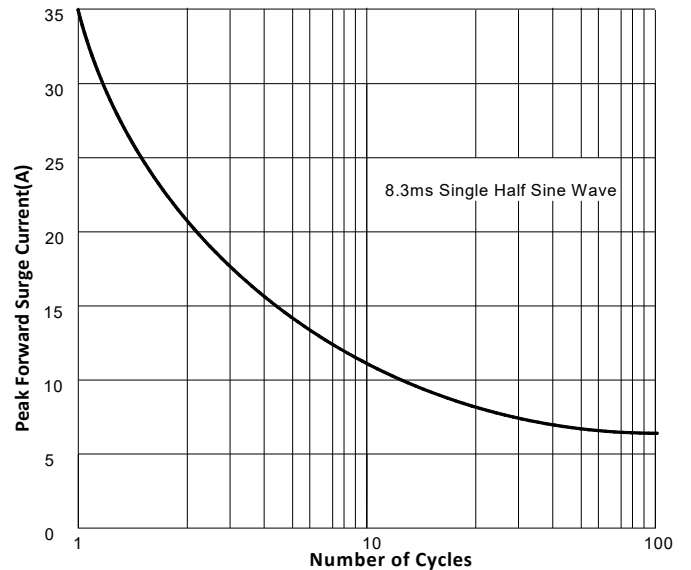


FIG.3: Forward Voltage

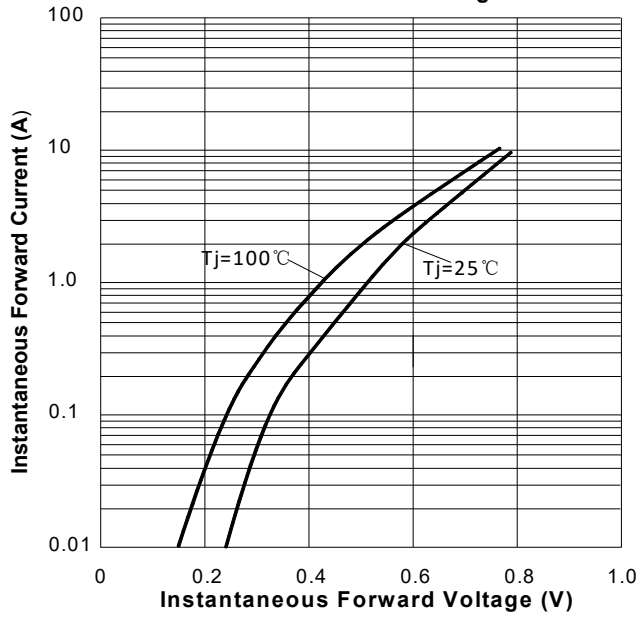
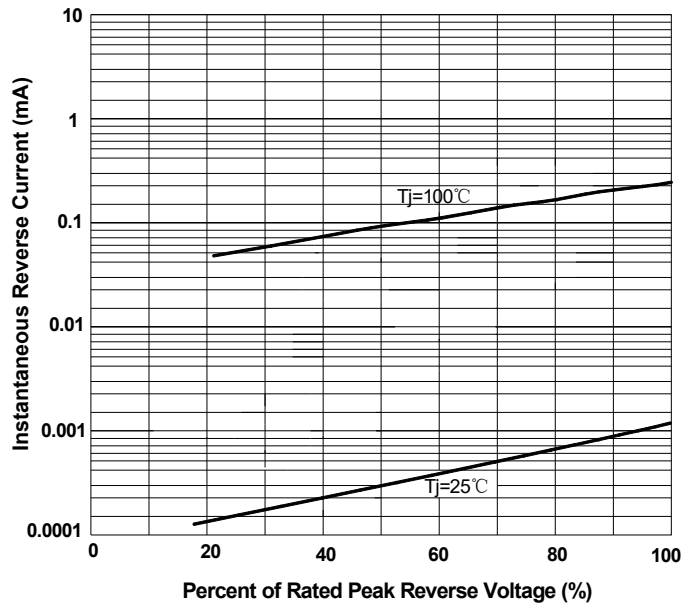


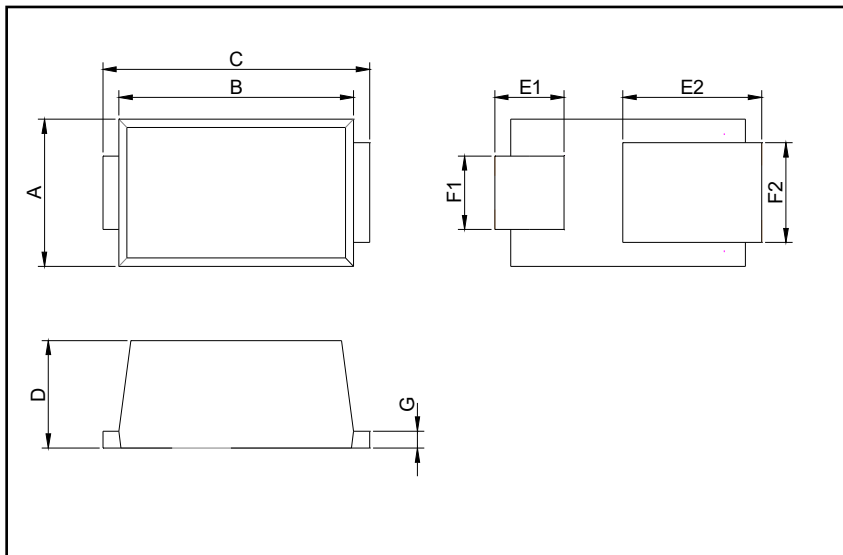
FIG.4: Instantaneous Reverse Characteristics



■ Ordering Information (Example)

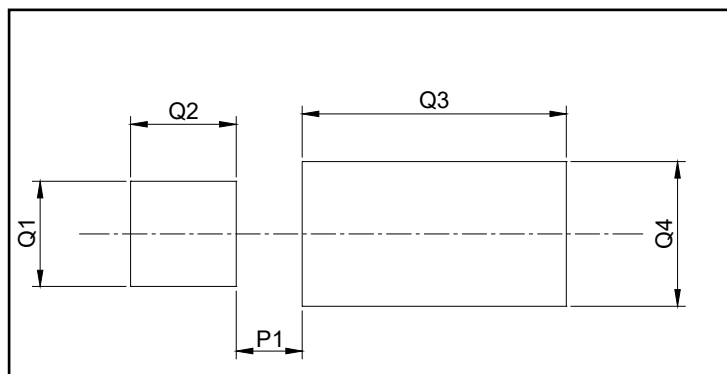
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FM24E	F1	Approximate 0.008	3000	120000	7" reel

■ Outline Dimensions



SOD-323HE		
Dim	Millimeters	
	Min	Max
A	1.2	1.4
B	2.1	2.3
C	2.3	2.7
D	0.9	1.0
E1	0.55	0.75
E2	1.1	1.5
F1	0.55	0.75
F2	0.78	0.98
G	0.12	0.27

■ Suggested pad layout



SOD-323HE	
Dim	Millimeters
P1	0.5
Q1	0.8
Q2	0.8
Q3	2
Q4	1.1

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