

Surface Mount General Purpose Rectifier

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, automotive and telecommunication.

Features

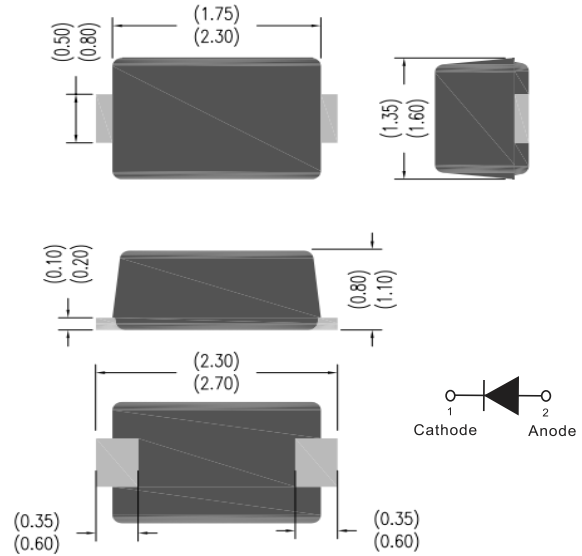
- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Data

- **Package:** SOD-323F
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

SOD-323F

Unit : mm



Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FM1DWS	FM1GWS	FM1JWS	FM1KWS	FM1MWS
Repetitive peak reverse voltage	V _{RRM}	V	200	400	600	800	1000
Maximum RMS voltage	V _{RMS}	V	140	280	420	560	700
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	20				
Current Squared Time @1ms≤t<8.3ms T _j =25°C	I ² t	A ² s	1.67				
Thermal resistance	R _{θJ-A}	°C/W	270 ⁽¹⁾				
	R _{θJ-L}		85 ⁽¹⁾				
	R _{θJ-C}		60 ⁽²⁾				
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	FM1DWS	FM1GWS	FM1JWS	FM1KWS	FM1MWS
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	20				
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM}	μA	T _J =25°C	5				
			T _J =125°C	50				

- (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.

RATING AND CHARACTERISTICS CURVES(FM1DWS THRU FM1MWS)

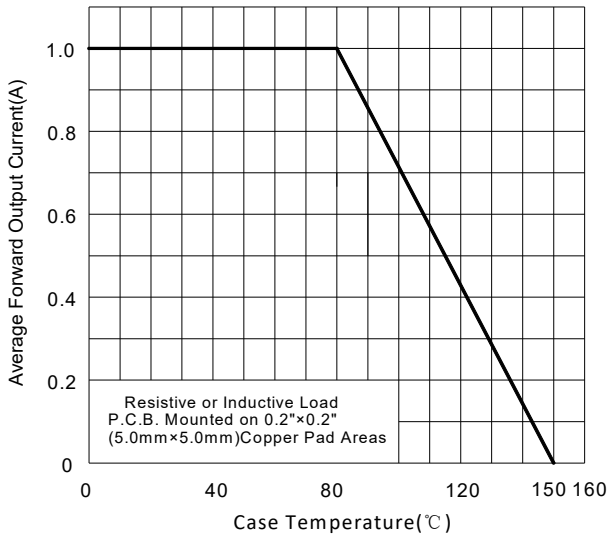


FIG1: I_o - T_c Curve

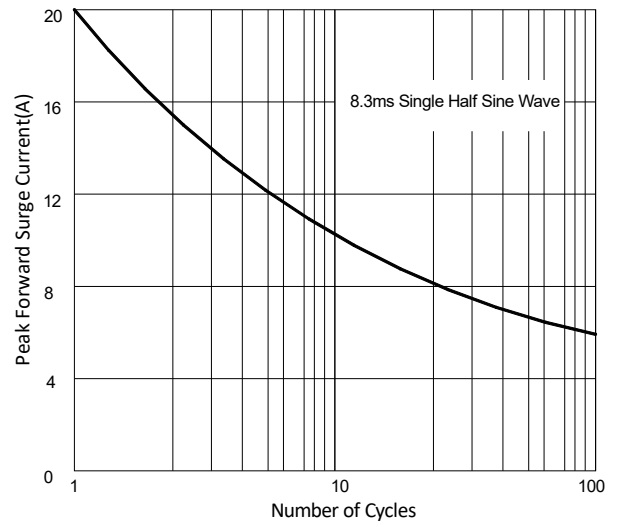


FIG2: Surge Forward Current Capability

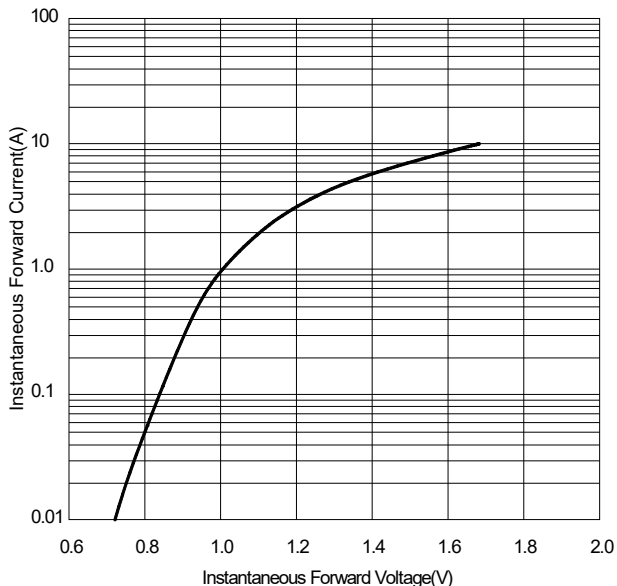


FIG3: Forward characteristics

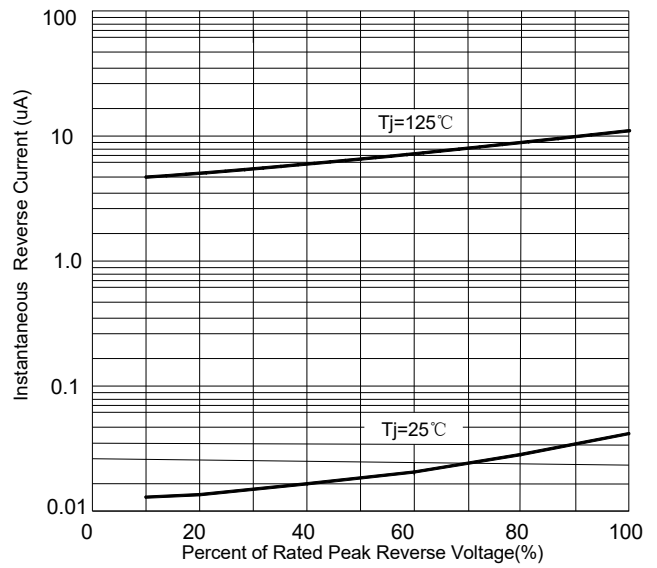
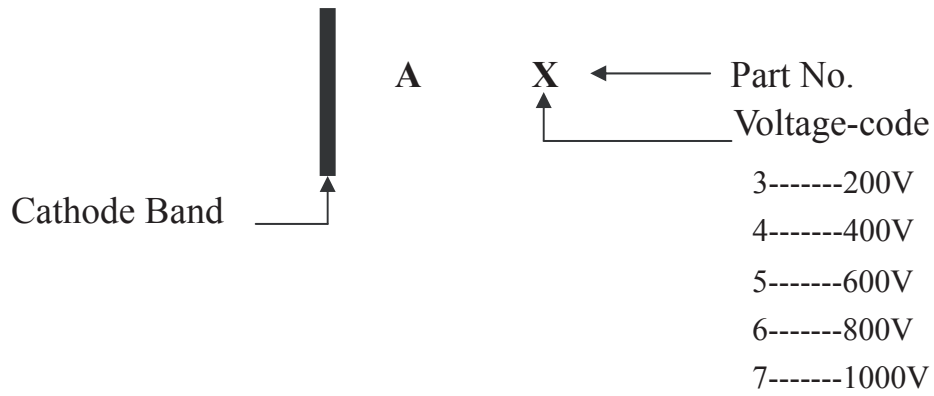
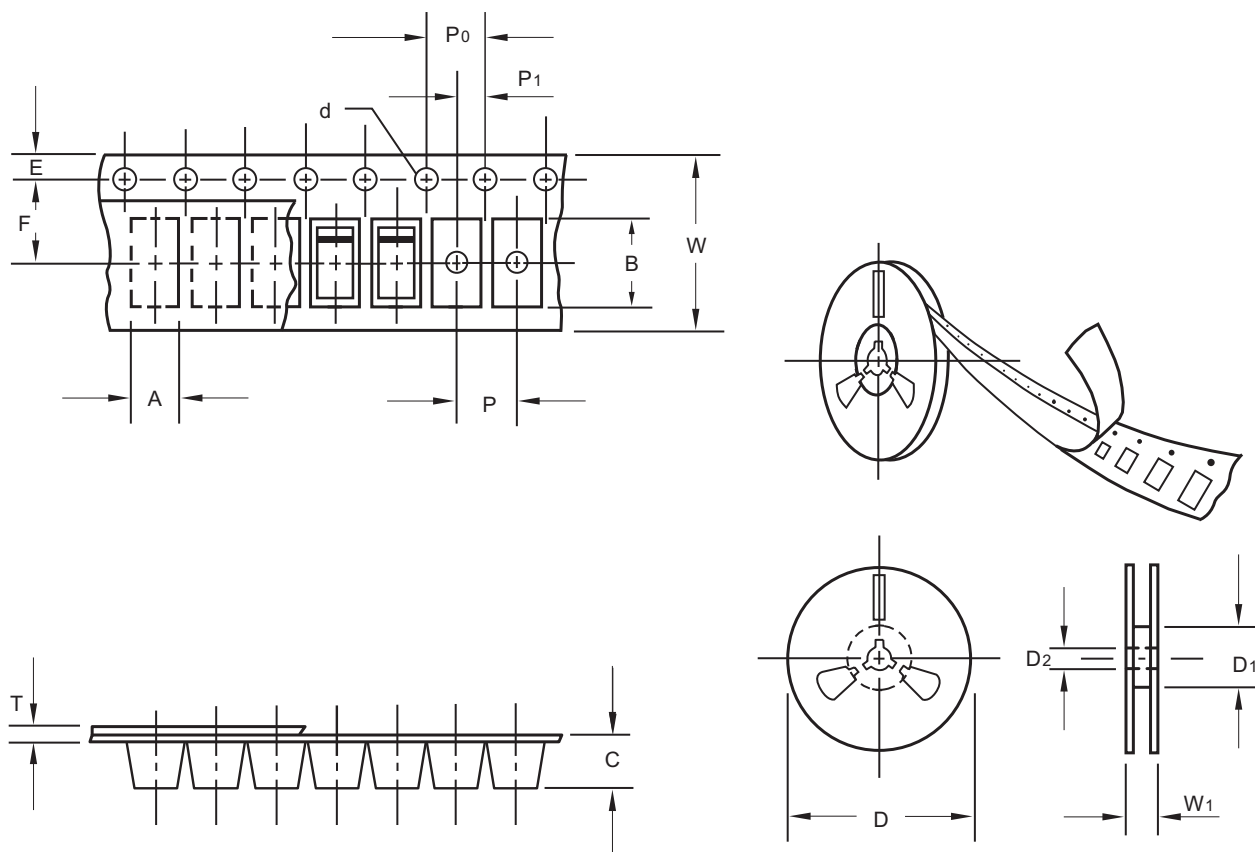


FIG4: Typical Reverse Characteristics

Marking Description



Packing information



unit:mm

Item	Symbol	Tolerance	
Carrier width	A	0.1	1.47
Carrier length	B	0.1	2.95
Carrier depth	C	0.1	1.15
Sprocket hole	d	0.1	1.50
13" Reel outside diameter	D	2.0	-
13" Reel inner diameter	D ₁	min	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	62.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.23
Tape width	W	0.3	8.00
Reel width	W ₁	1.0	11.40

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL CODE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-323F	-T	3,000	4.0	30,000	183*123*183	178	382*257*387	240,000	8.0

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