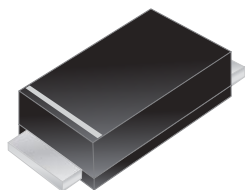


General Purpose Rectifiers Glass Passivation Junction



SOD-123F

Primary Characteristics		
I_F	1	A
V_{RRM}	50~1000	V
I_{FSM}	30	A
V_F	1.1	V
$T_J \text{ max}$	150	°C

Features
• High current capability • High surge current capability • Low reverse current • Component in accordance to RoHS 2002/95/EC

Mechanical Data
• Cases: SOD-123F • Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 • Terminals: Lead free Plating (Tin Finish) Solderable per MIL-STD-202, Method 208 • Polarity: Cathode Band • Weight: 0.022 grams (approximate)

Ordering Information			
Part No.	Remark	Package	Packing
SM400xFL	General	SOD-123F	3000 / Tape & Reel
SM400xFL-H	Halogen Free		
SM400xFL-Q	AEC-Q101 qualified		

Maximum Ratings (TA=25°C unless otherwise noted)									
PARAMETER	SYMBOL	SM 4001FL	SM 4002FL	SM 4003FL	SM 4004FL	SM 4005FL	SM 4006FL	SM 4007FL	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I_F	1							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage IF=1A @ 25°C	V_F	1.1							V
Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=125°C	I_R	10 100							uA
Typical Junction Capacitance(NOTE1)	C_j	10							pF
Typical Thermal Resistance	$R_{\theta JC}$	50							°C/W
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C
Marking Code		D1	D2	D3	D4	D5	D6	D7	

NOTES:

1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC

General Purpose Rectifiers Glass Passivation Junction

Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

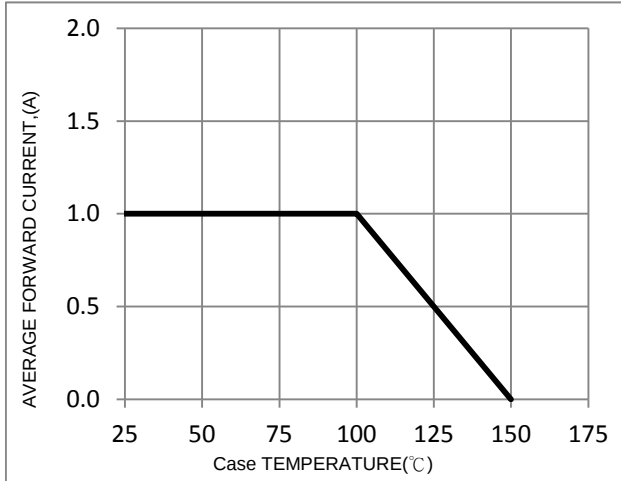


FIG. 2-Typical Forward Characteristics

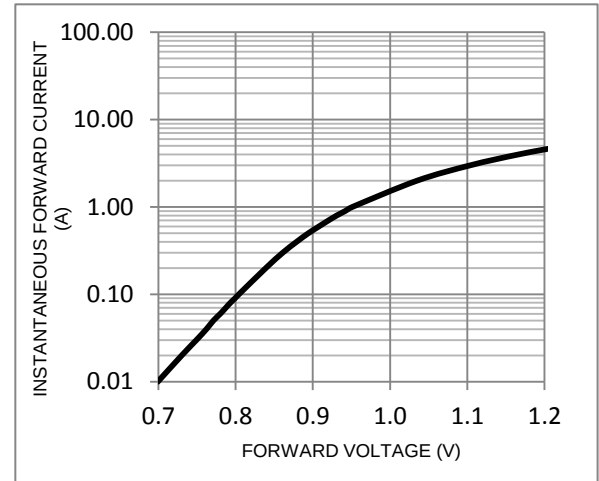


FIG. 3-Maximum Non-Repetitive Forward Surge Current

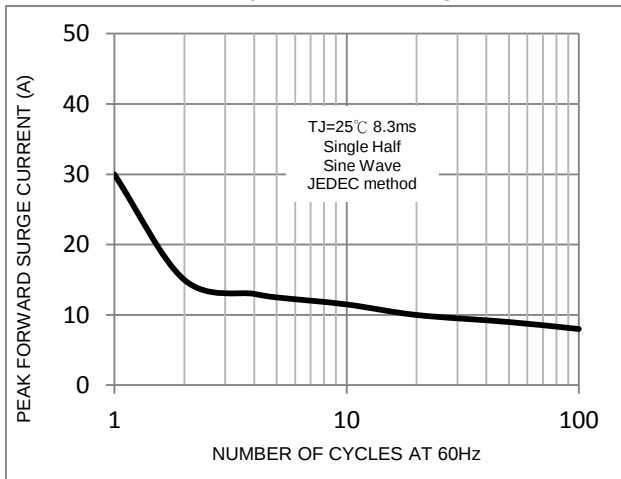


FIG. 4-Typical Reverse Characteristics

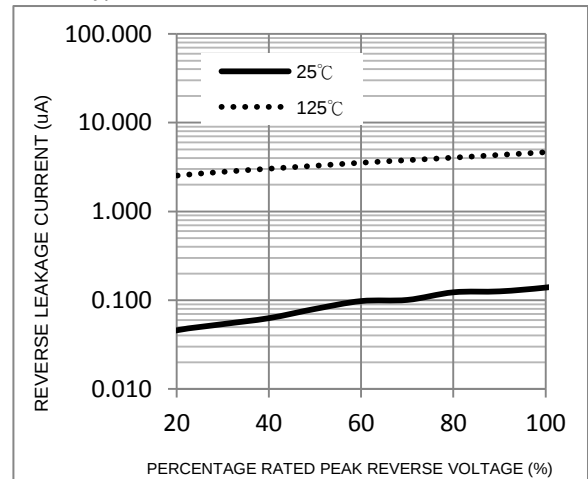
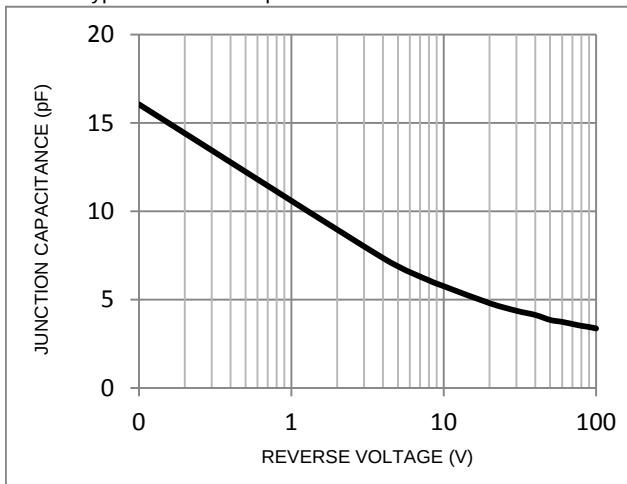
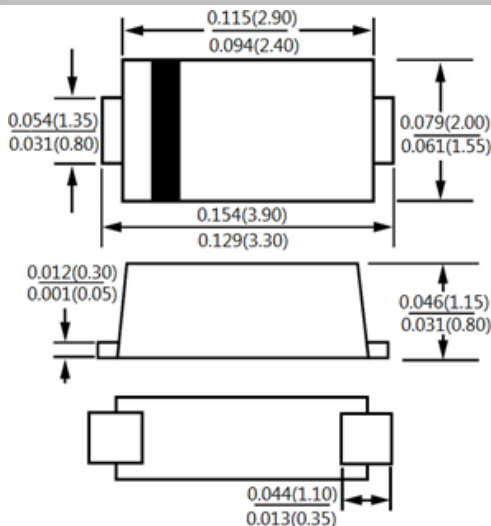


FIG. 5-Typical Junction Capacitance



General Purpose Rectifiers Glass Passivation Junction

Package Outline Dimensions

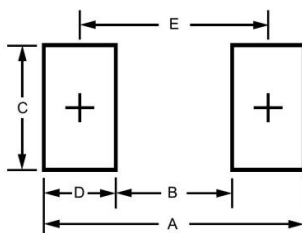


SOD-123F

Dimensions in inches and (millimeters)

Suggested Pad Layout

Dimension	Outline	SOD123F (mm)
A		4.20
B		1.52
C		1.80
D		1.34
E		2.86



Tape & Reel Specification

ITEM	SYMBOL	SOD123F (mm)
Carrier width	A	1.9±0.1
Carrier length	B	4.01±0.1
Carrier depth	C	1.32±0.1
Sprocket hole	d	1.5±0.1
Reel outside diameter	D	178max
Reel inner diameter	D1	60.3±1
Feed Hole diameter	D2	13.3±0.1
Sprocket hole position	E	1.75±0.1
Punch hole position	F	3.5±0.05
Punch hole pitch	P	4.0±0.1
Sprocket hole pitch	P0	4.0±0.1
Embossment center	P1	2.0±0.05
Overall tape thickness	T	0.23±0.02
Tape width	W	8+0.3/-0.1
Reel width	W1	9.3±1

