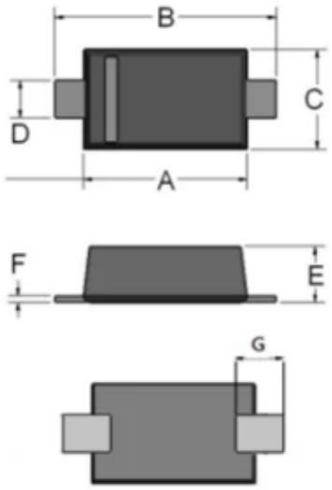
SMD General Rectifier Diode

Primary characteristics		
Parameter	**Value**	**Unit**
Maximum Repetitive Peak Reverse Voltage	50 ~ 1000	V
Maximum Average Forward Rectified Current	1.0	A

Features

- **SOD-123FL** case for easy automatic insertion
- Pb-free and **RoHS** compliant
- Glass passivated device
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed: 250°C/10 seconds/.375" (9.5mm) lead length at 5 lbs (2.3kg) tension
- Solderable per MIL-STD-750, Method 2026
- Weight: 0.00053 ounce, 0.015 grams

Case dimensions



Marking indicates the cathode

SOD-123FL

Unit	A	B	C	D	E	F	G
mm	2.75 ±0.15	3.65 ±0.15	1.8 ±0.1	0.95 ±0.15	1.0 ±0.1	0.16 ±0.04	0.8 ±0.1

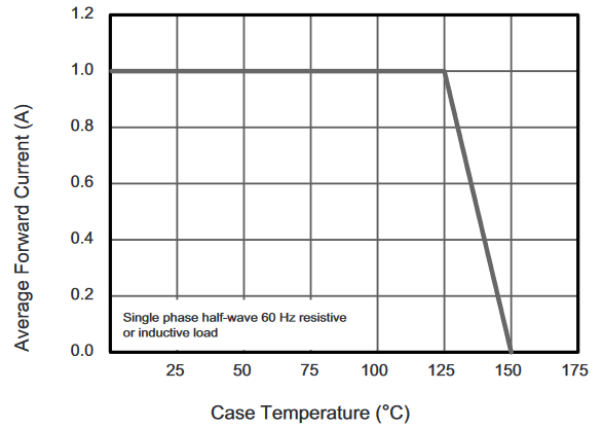
Absolute maximum ratings and general electrical characteristics (T_a = 25°C)

Parameter		Symbol	Value							Unit
			SM4001PL	SM4002PL	SM4003PL	SM4004PL	SM4005PL	SM4006PL	SM4007PL	
Marking code			A1	A2	A3	A4	A5	A6	A7	
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	
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	
Maximum average forward rectified current [1]		$I_{(AV)}$	1.0							A
Peak forward surge current 8.3mS single half sine wave superimposed on rated load (JEDEC method)		I_{FSM}	25							
Maximum instantaneous forward voltage @1.0A		V_F	1.1							V
Maximum DC reverse current at rated DC blocking voltage per element	T_a=25°C	I_R	10							μA
	T_a=125°C		50							

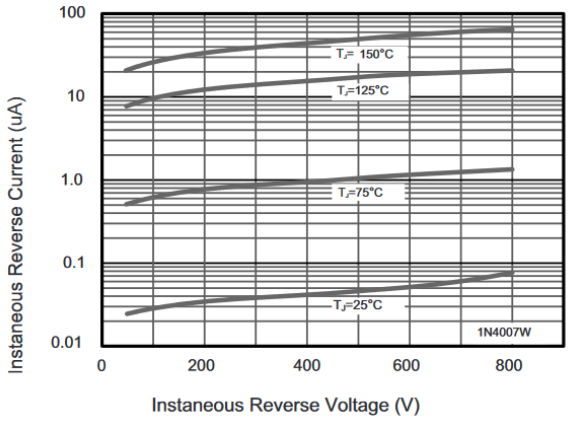
Absolute maximum ratings and general electrical characteristics (T_a = 25°C)			
Parameter	**Symbol**	**Value**	**Unit**
Typical junction capacitance [2]	C_J	4.0	pF
Typical thermal resistance [3]	$R_{\theta JA}$	180	°C/W
Operating junction and storage temperature range	T_j, T_{STG}	-55 ~ 150	°C

Notes:
1) Averaged over any 20ms period
2) Measured at 1.0MHz and applied reverse voltage of 4.0VDC
3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, PCB mounted

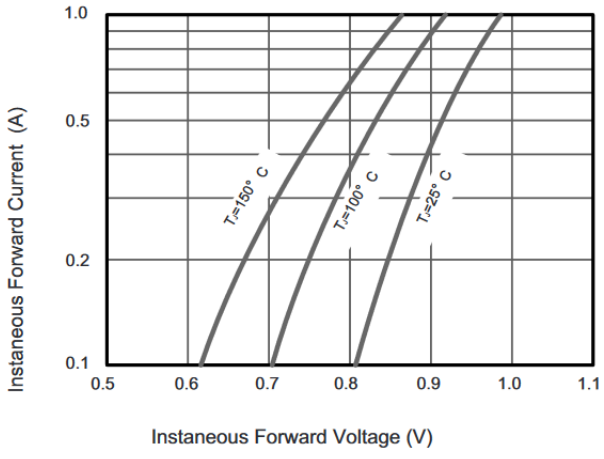
Forward current derating curve



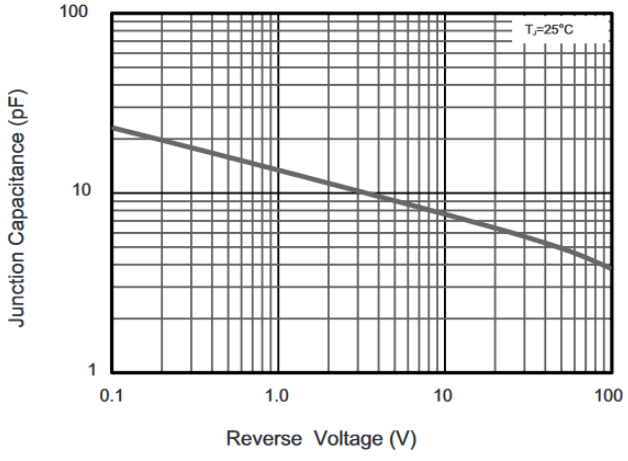
Typical instantaneous reverse characteristics



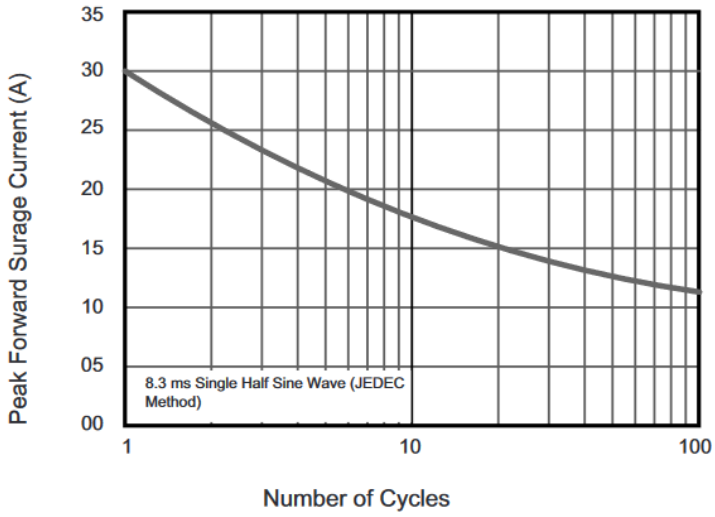
Typical forward characteristic

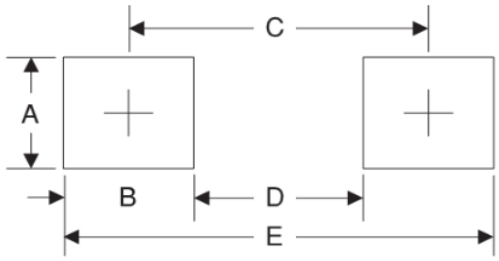


Typical junction capacitance



Typical instantaneous forward characteristics



Suggested soldering pad layout


SOD-123FL					
Unit	**A**	**B**	**C**	**D**	**E**
mm	1.2	1.2	3.2	2.0	4.4

Ordering information			
Part Number	**Package**	**Shipping Quantity**	**Dimensions**
SM4001PL ~ SM4007PL	SOD-123FL	**3 000 pcs / 7' reel** **45 000 pcs / small box** **180 000 pcs / big box**	--- 210 x 208 x 203 mm 430 x 430 x 235 mm / 9 kg

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