

Pb Free Plating Product

SM4001PL thru SM4007PL



1.0 Ampere Surface Mount General Purpose Rectifier

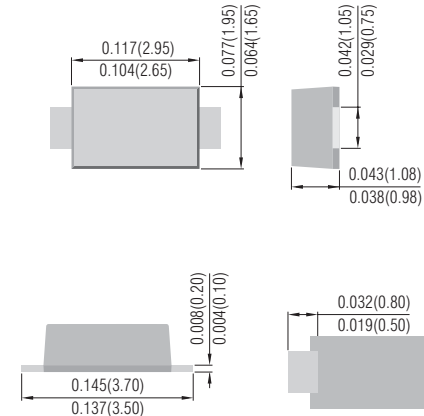
Features

- Flammability Classification 94V-0
- Plastic package has Underwriters Laboratories
- Glass passivated chip junction
- For surface mount application
- Low profile package
- Built-in strain relief, ideal for automated placement

Mechanical Data

- **Case:** JEDEC SOD-123FL, molded plastic over passivated chip
- **Terminals:** Solder plated, solderable per
- **High temperature solder:** 250°C/10 seconds at terminals
- **Polarity:** Color band denotes cathode end

SOD-123FL/Sub-SMA Unit: inch (mm)



Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	SM4001PL	SM4002PL	SM4003PL	SM4004PL	SM4005PL	SM4006PL	SM4007PL	Units
Maximum recurrent 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(AV)}	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T _L = 110 °C	I _{FSM}	40					30		A
Maximum Instantaneous forward voltage at 1.0A	V _F	1.1							V
Maximum DC reverse current at T _A = 25°C at rated DC blocking voltage at T _A = 125°C	I _R	1.0					5.0		μ A
	I _R	50							
Typical Junction Capacitance at V _R = 4.0 V, f = 1 MHz	C _{tot}	12							pF
Typical Reverse Recovery Time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	1.8							μ s
Typical thermal resistance (Note 1)	R _{θJA}	75					85		°C/W
	R _{θJL}	27					30		
Operating junction and storage temperature range	T _J , T _S	-55 to +150							°C

Notes: 1. Thermal resistance from junction to ambient from junction to lead mounted on P.C.B. with
0.2 x 0.2" (5.0 x 5.0mm²) copper pad areas

FIG.1-FORWARD DERATING CURVE

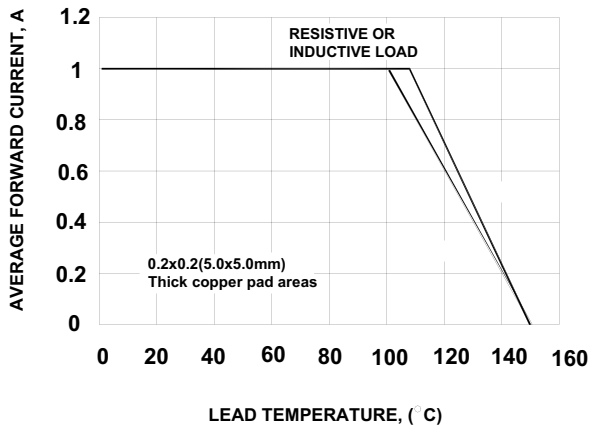


FIG.2- PEAK FORWARD SURGE CURRENT

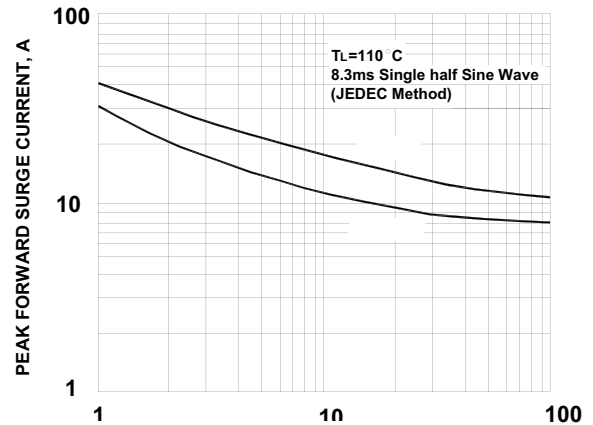


FIG.3-TYPICAL FORWARD CHARACTERISTICS

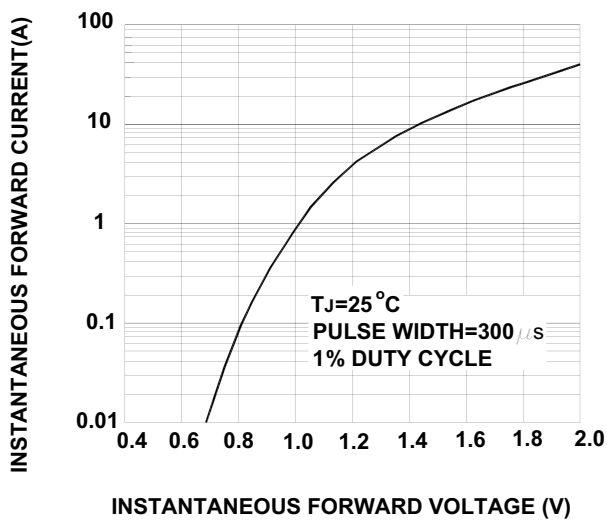


FIG.4-TYPICAL REVERSE CHARACTERISTICS

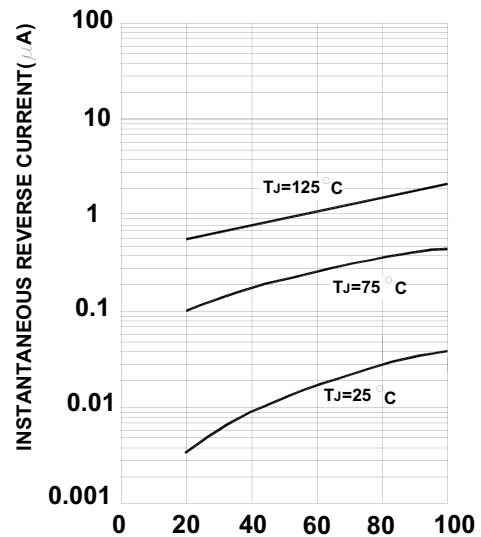


FIG.5- TYPICAL JUNCTION CAPACITANCE

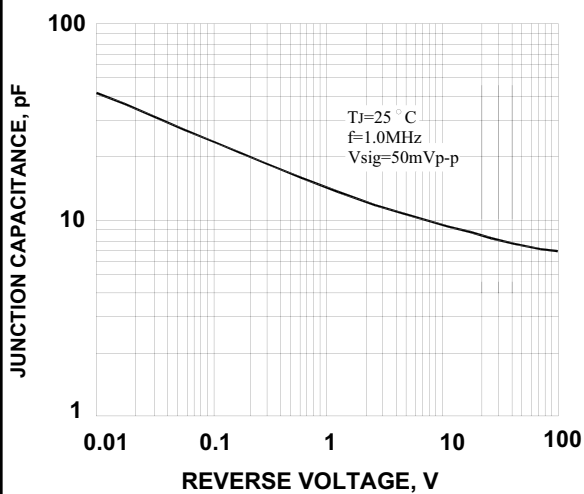


FIG.6- TRANSIENT THERMAL IMPEDANCE

