



**THE DATASHEET OF
SM4007PL A7**

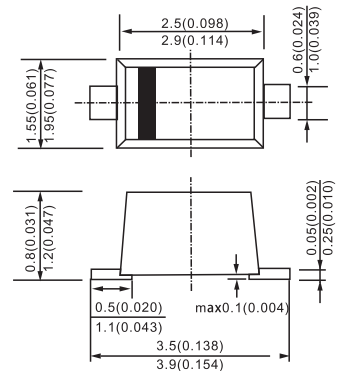


GENERAL PURPOSE PLASTIC RECTIFIER

FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

SOD-123FL



Dimensions in millimeters

MECHANICAL DATA

Case: JEDEC SOD-123 molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SM 4001PL	SM 4002PL	SM 4003PL	SM 4004PL	SM 4005PL	SM 4006PL	SM 4007PL	UNITS
*Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
*Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
*Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
*Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A =75°C	I _(AV)	1.0							Amp
*Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T _A =75°C	I _{FSM}	30.0							Amps
*Maximum instantaneous forward voltage at 1.0A	V _F	1.1							Volts
*Maximum full load reverse current full cycle average 0.375" (9.5mm) lead length at T _L =75°C	I _{R(AV)}	30.0							μA
*Maximum DC reverse current at rated DC blocking voltage	I _R	5.0 50.0							μA
Typical reverse recovery time (NOTE 1)	t _{rr}	30.0							μs
Typical junction capacitance (NOTE 2)	C _J	15.0							pF
Typical thermal resistance (NOTE 3)	R _{θJA} R _{θJL}	50.0 25.0							°C/W
Maximum DC blocking voltage temperature	T _A	+150							°C
*Operating junction and storage temperature range	T _J , T _{STG}	-50 to +175							°C

NOTES:

- (1) Measured on Tektronix Type "S" recovery plug-in. Tektronix 545 Scope or equivalent, I_{FM}=20mA, I_{RM}=1mA
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

SM4001 THRU SM4007

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

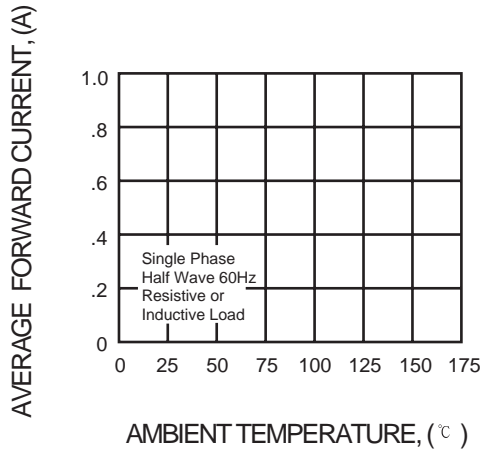


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

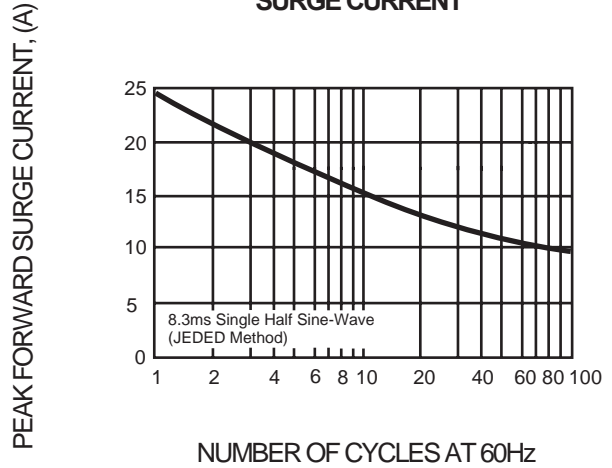


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

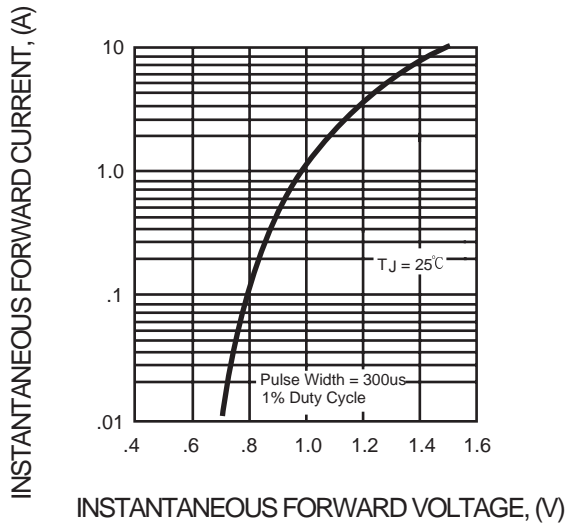


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

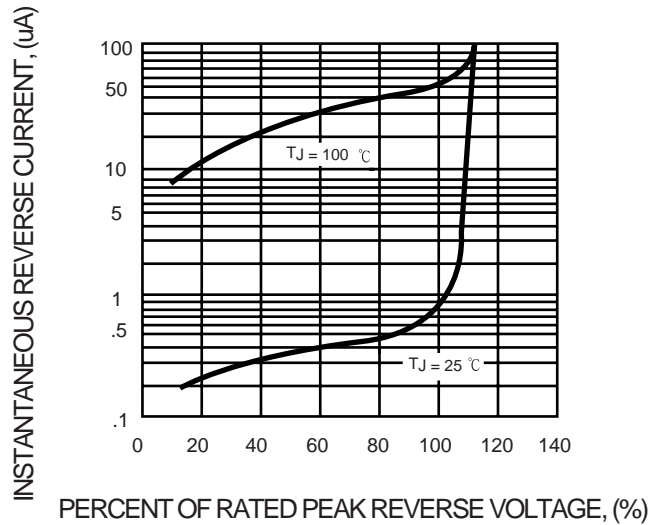
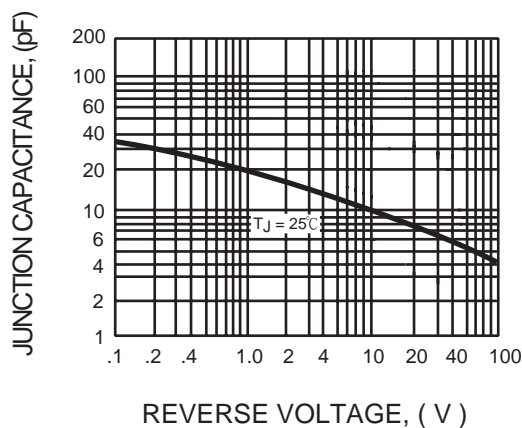


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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