



TAYCHIPST

Silicon Rectifier

SM4001PL THRU SM4007PL

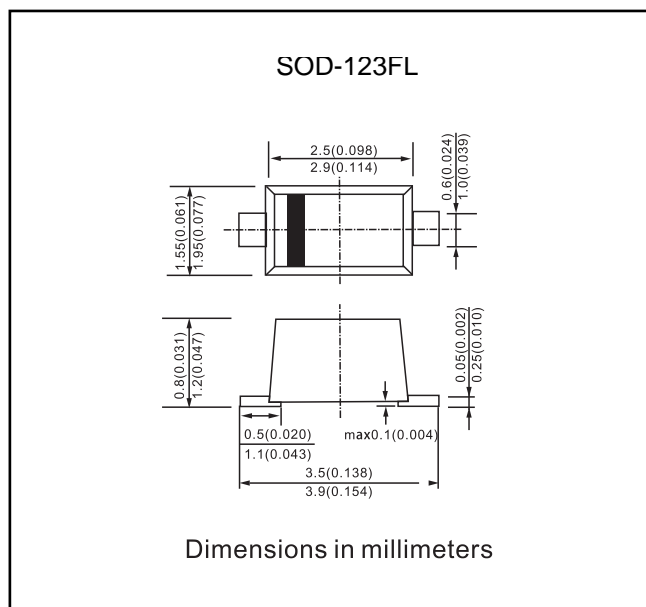
50V-1000V 1.0A

FEATURES

- ◆ Glass passivated device
- ◆ Ideal for surface mouted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:
250°C/10 seconds,0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC SOD-123FL 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.
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Catalog Number	SYMBOLS	SM4001PL A1	SM4002PL A2	SM4003PL A3	SM4004PL A4	SM4005PL A5	SM4006PL A6	SM4007PL A7	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 at T _A =65°C (NOTE 1)	I _(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T _L =25°C	I _{FSM}	25.0							Amps
Maximum instantaneous forward voltage at 1.0A	V _F	1.1							Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C	I _R	10.0 50.0							μA
Typical junction capacitance (NOTE 2)	C _J	4							pF
Typical thermal resistance (NOTE 3)	R _{θJA}	180							K/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

Note: 1. Averaged over any 20ms period.
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



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RATINGS AND CHARACTERISTIC CURVES

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FIG.1 – TYPICAL FORWARD CHARACTERISTIC

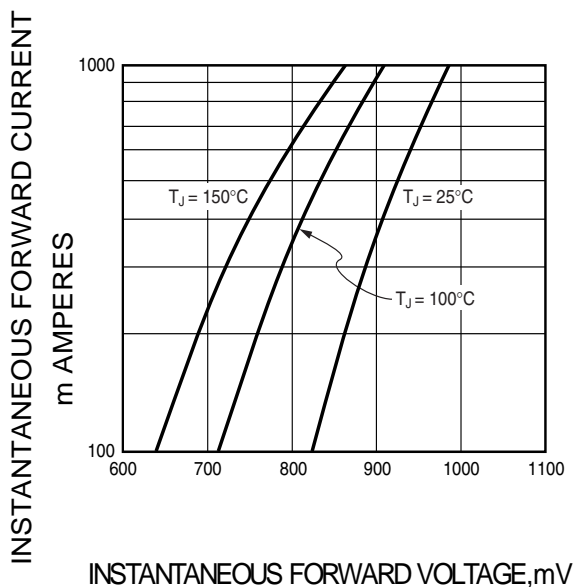


FIG.2 – TYPICAL JUNCTION CAPACITANCE

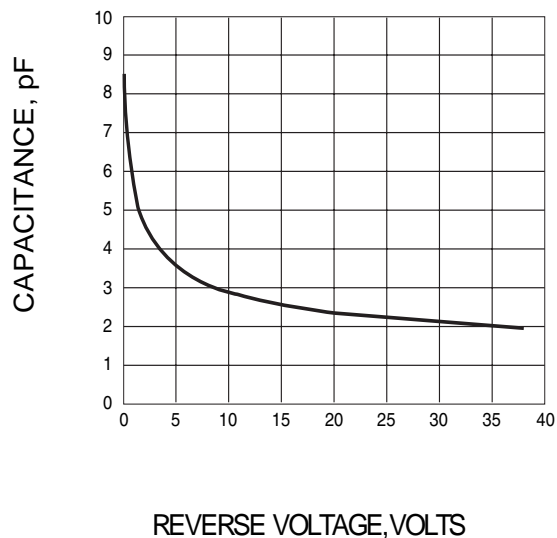


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

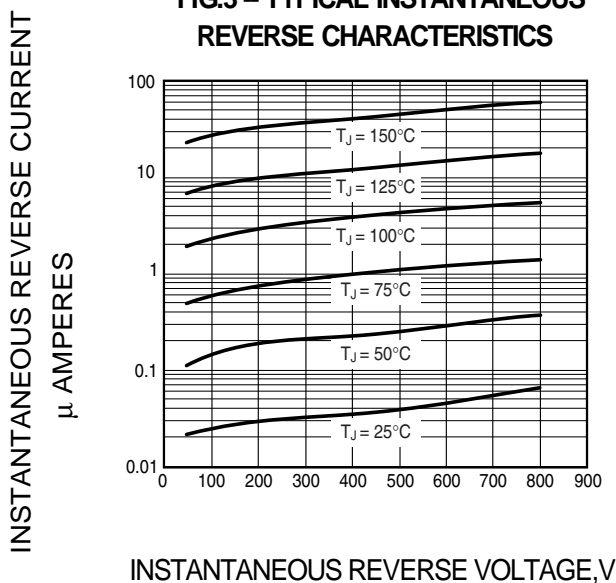


FIG.4 – FORWARD DERATING CURVE

