

I. General Purpose Rectifier

1.0A Surface Mount Silicon Rectifier DS1A~DS1M

(Package: SOD-123FL)

<p>FEATURES</p> <ul style="list-style-type: none"> • Glass passivated device • Ideal for surface mounted applications • Low reverse leakage • Metallurgically bonded construction • High temperature soldering guaranteed : 250 / 10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kgs) tension <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : JEDEC SOD-123FL molded plastic body over passivated chip • Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 • Polarity : Color band denotes cathode end • Mounting Position : Any • Weight : 0.020 grams 	<p>Case: SOD-123FL Dimensions in millimetres</p>
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Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristics	Symbol	DS1A	DS1B	DS1D	DS1G	DS1J	DS1K	DS1M	Units
	Marking Code	S1A	S1B	S1D	S1G	S1J	S1K	S1M	
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 $T_a = 65$ (Note 1)	I_o	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L = 25$	I_{FSM}	25.0							Amps
Maximum instantaneous forward voltage at 1.0 A	V_F	1.1							Volts
Maximum DC reverse current $T_a = 25$ at rated DC blocking voltage $T_a = 125$	I_R	10.0 50.0							μA
Typical junction capacitance (Note 2)	C_j	4							PF
Typical thermal resistance (Note 3)	R_{th-JA}	180							/W
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +150							

Notes:

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

Ratings and Characteristic Curves of DS1A~DS1M

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

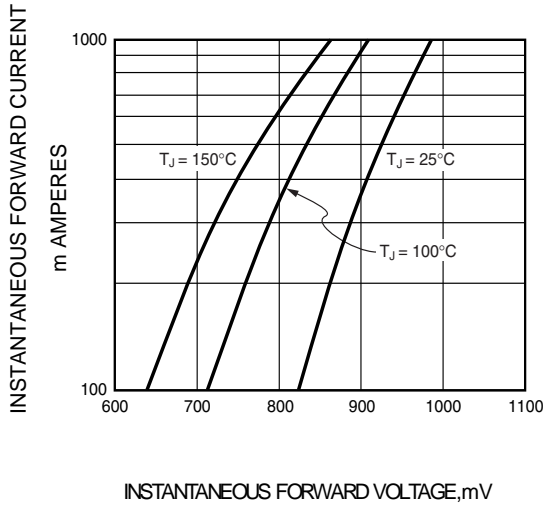


FIG.2 – TYPICAL JUNCTION CAPACITANCE

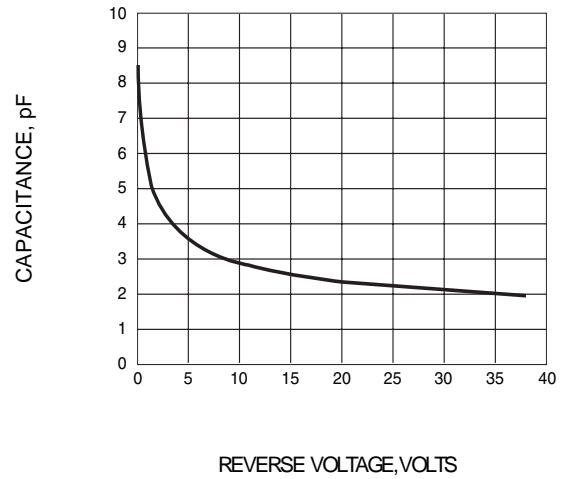


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

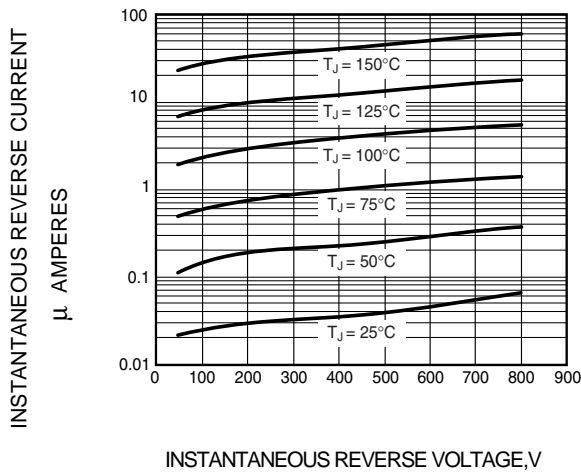


FIG.4 – FORWARD DERATING CURVE

