

I. General Purpose Rectifier

1.0A Surface Mount Silicon Rectifier

DS1A~DS1M

(Package: SOD-123FL)

<p><u>FEATURES</u></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°C/ 10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kgs) tension <p><u>MECHANICAL DATA</u></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°C 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 $T_a = 65^\circ\text{C}$. (Note 1)	I_o	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L = 25^\circ\text{C}$	I_{FSM}	25.0							Amps
Maximum instantaneous forward voltage at 1.0 A	V_F	1.1							Volts
Maximum DC reverse current at rated DC blocking voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	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							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{stg}	-55 to +150							$^\circ\text{C}$

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.

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Ratings and Characteristic Curves of DS1A~DS1M

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

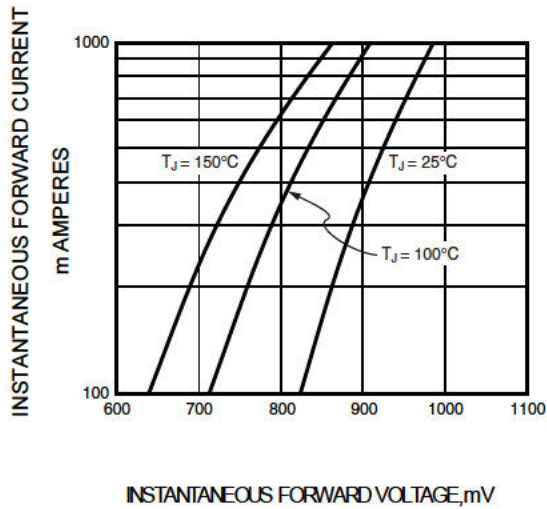


FIG.2 – TYPICAL JUNCTION CAPACITANCE

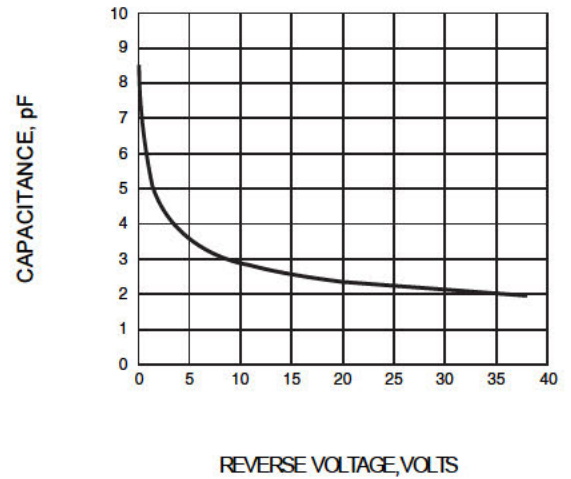


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

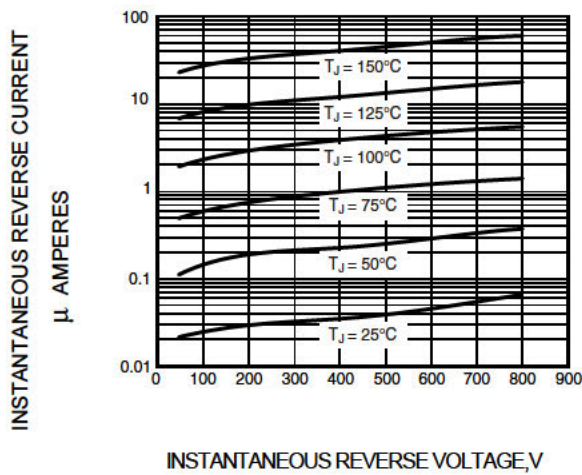


FIG.4 – FORWARD DERATING CURVE

