

FEATURES

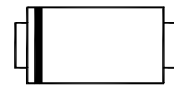
- High current capability
- High surge current capability
- Low reverse current
- Low forward voltage drop
- Fast switching for high efficiency
- Plastic material used carries Underwriters Laboratory Classification 94V-0



SOD-123FL

MECHANICAL DATA

- Case: SOD-123FL Molded plastic
- Terminals: Pure tin plated, lead free
- Polarity: Indicated by cathode band
- Weight: 11.5 mg (approx.)



Cathode

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	RS1AL	RS1BL	RS1DL	RS1GL	RS1JL	RS1KL	RS1ML	Unit	
Maximum Repetitive 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 at $T_L = 90\text{ }^\circ\text{C}$	$I_{F(A)}$	1							A	
Peak Forward Surge Current 8.3ms Single HalfSine-wave Superimposed on Rated Load (JEDEC)	I_{FSM}	30							A	
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.30							V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A = 25\text{ }^\circ\text{C}$							5	μA
		$T_A = 125\text{ }^\circ\text{C}$							150	
Maximum Reverse Recovery Time ¹⁾	t_{rr}	150				250	500		nS	
Typical Junction Capacitance ²⁾	C_J	50							pF	
Maximum Thermal Resistance (NOTE3)	$R_{\theta JA}$ $R_{\theta JC}$	50.0 16.0							$^\circ\text{C/W}$	
Operating and Storage Temperature Range	$T_{J, TS}$	- 50 to + 150							$^\circ\text{C}$	

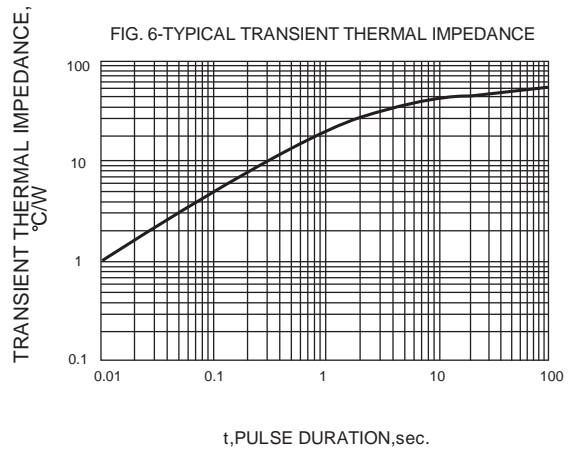
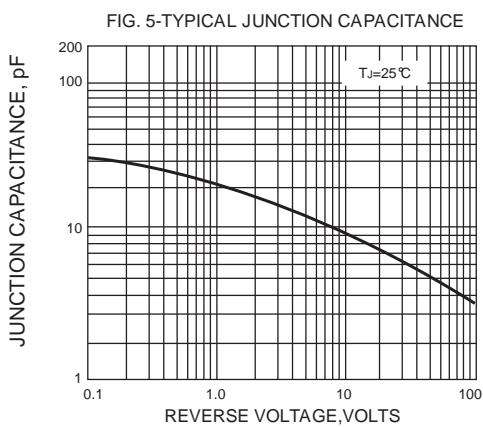
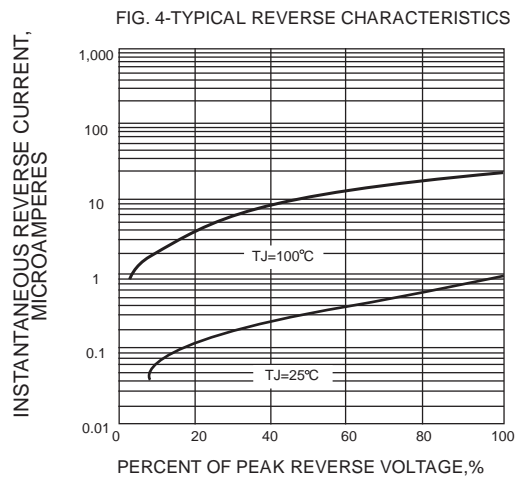
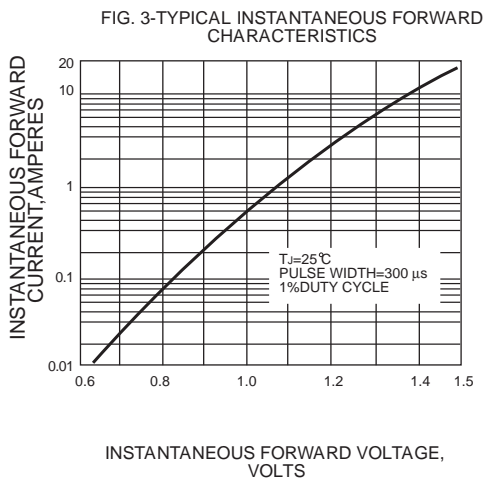
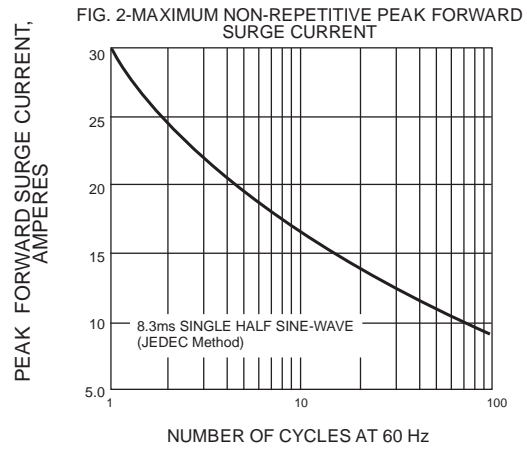
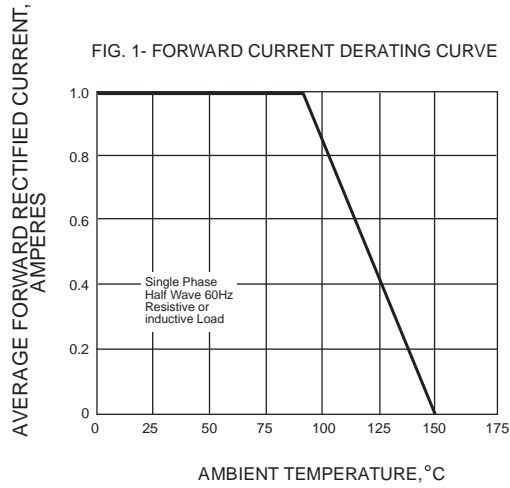
Note: 1. Reverse recovery test conditions $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

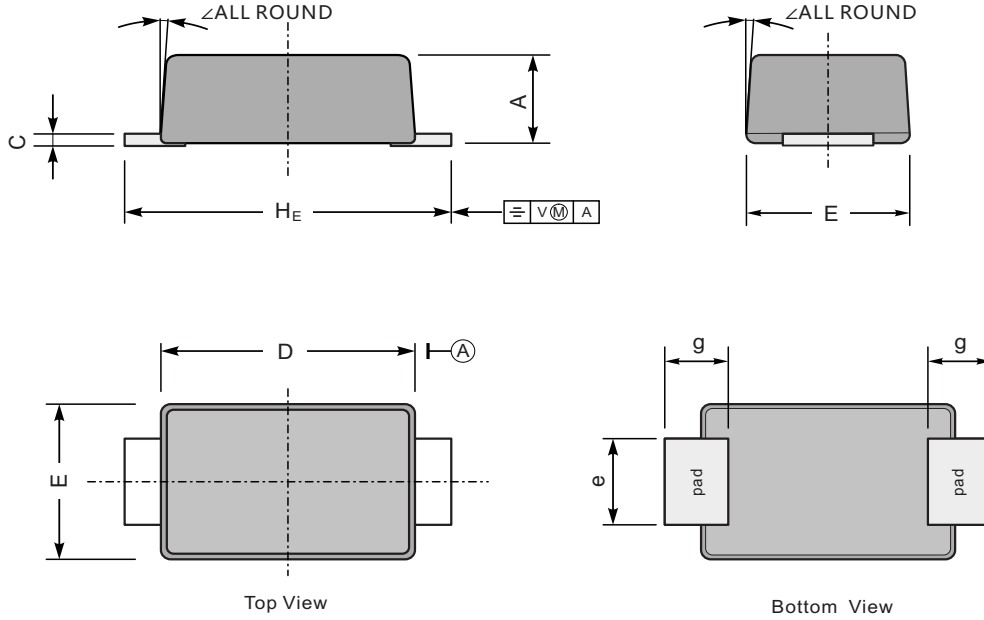
Marking

NO.	RS1AL	RS1BL	RS1DL	RS1GL	RS1J L	RS1KL	RS1ML
Marking	F1	F2	F3	F4	F5	F6	F7

Typical Characteristics



SOD-123FL Package Outline Dimensions



UNIT		A	C	D	E	e	g	H_E	\angle
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	