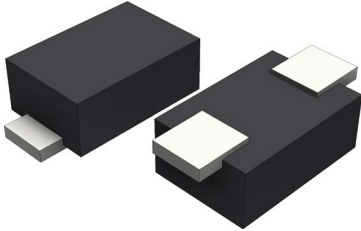


**RoHS
Compliant**



Features

- Fast switching for high efficiency
- Low reverse leakage current
- High current capability
- Low forward voltage drop
- Low cost
- Meet UL flammability classification 94V-0

Mechanical Data

- Case: JEDEC SOD-123FL molded plastic
- Polarity: Colour band denotes cathode
- Mounting position: Any

Applications

- For use in SMPS, high frequency inverters, PWM and polarity protection applications

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, halfwave, 60Hz, resistive or inductive load. For capacitive load, derate by 20%.

Characteristics	Symbol	RS1DL	RS1GL	RS1JL	RS1ML	Unit
	Marking	R1DL	R1GL	R1JL	R1ML	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	1000	V
Maximum RMS Voltage	V_{RMS}	140	280	420	700	
Maximum DC Blocking voltage	V_{DC}	200	400	600	1000	
Maximum Average Forward Rectified Current @ $T_A=75^{\circ}C$	$I_{(AV)}$	1				A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	25				
Peak Forward Voltage at 1.0A DC (Note1)	V_F	1.3				V
Maximum DC Reverse Current @ $T_J=25^{\circ}C$ at Rated DC Blocking Voltage @ $T_J=100^{\circ}C$	I_R	5				μA
		100				
Maximum Reverse Recovery Time (Note 2)	T_{rr}	150	250	500	nS	
Typical Junction Capacitance (Note 3)	C_J	9				pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	180				$^{\circ}C/W$
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	20				
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	30				
Operating Junction Temperature Range	T_J	-55 to +150				$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150				

NOTE: 1. 300uS pulse width, 2%duty cycle.

2. Measured with $I_F=0.5A, I_R=1A, I_{RR}=0.25A$

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

4. The typical data above is for reference only.

Rating and Characteristic Curves

Fig. 1 - Forward Current Derating Curve

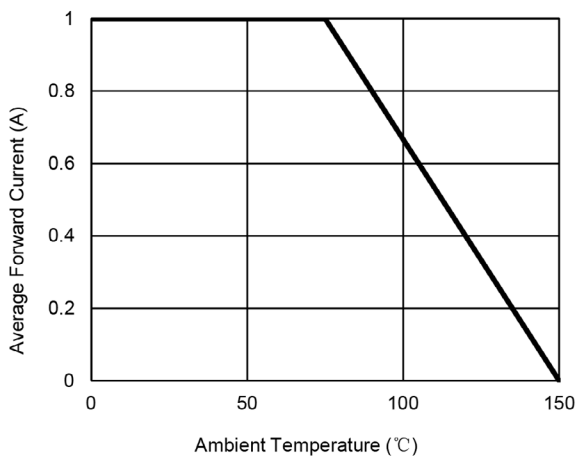


Fig. 2 - Maximum Non-Repetitive Surge Current

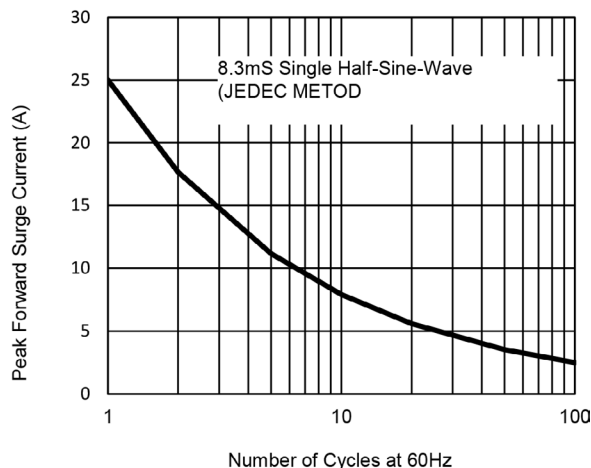


Fig. 3 - Typical Junction Capacitance

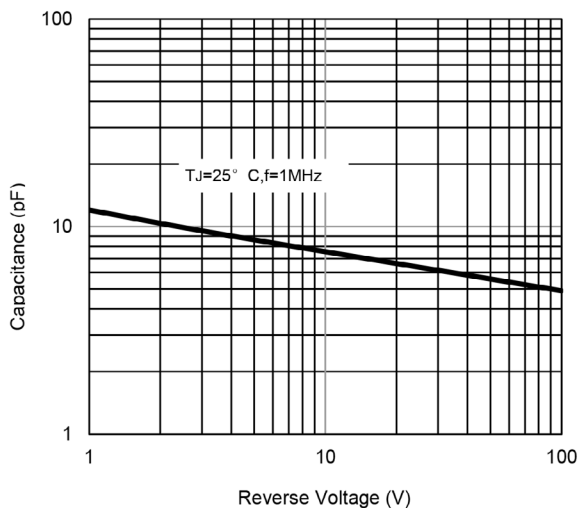
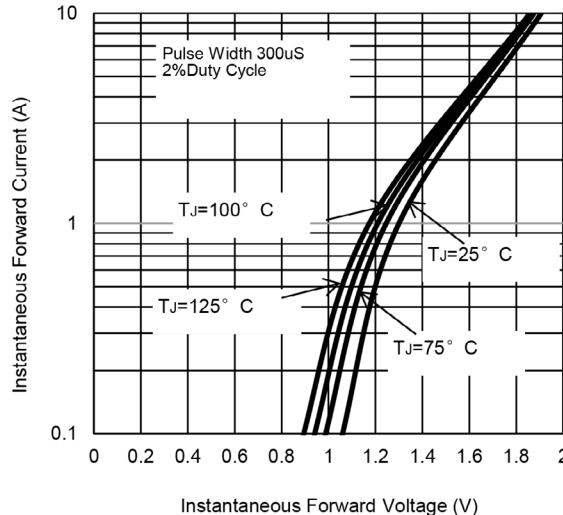
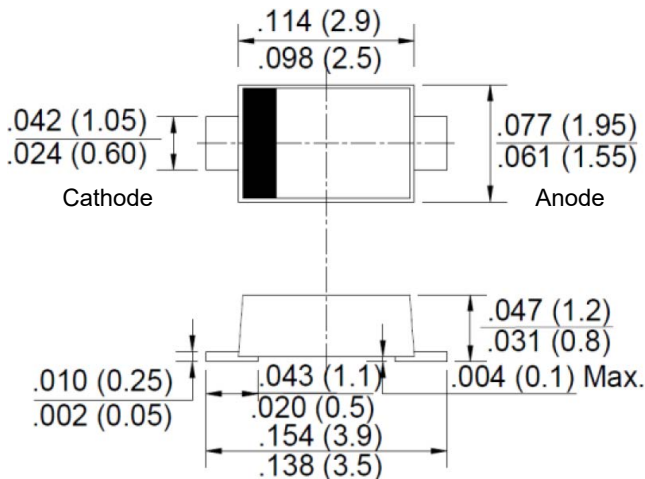


Fig. 4 - Typical Forward Characteristics



Packaging Dimensions



SOD-123FL

Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Rectifier Diode, Fast Recovery, 1A, 200V, 150ns, SOD-123FL	RS1DL
Rectifier Diode, Fast Recovery, 1A, 400V, 150ns, SOD-123FL	RS1GL
Rectifier Diode, Fast Recovery, 1A, 600V, 250ns, SOD-123FL	RS1JL
Rectifier Diode, Fast Recovery, 1A, 1000V, 500ns, SOD-123FL	RS1ML

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