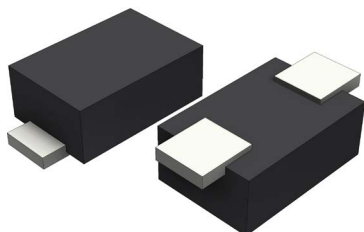


**RoHS
Compliant**



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°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°C at Rated DC Blocking Voltage @T _J =100°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 _{θJA}	180				°C/W
Typical Thermal Resistance Junction to Case	R _{θJC}	20				
Typical Thermal Resistance Junction to Lead	R _{θJL}	30				
Operating Junction Temperature Range	T _J	-55 to +150				°C
Storage Temperature Range	T _{STG}	-55 to +150				

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

2. Measured with $I_F=0.5A$, $I_R=1A$, $IRR=0.25A$

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

4. The typical data above is for reference only.

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Rating and Characteristic Curves

Fig. 1 - Forward Current Derating Curve

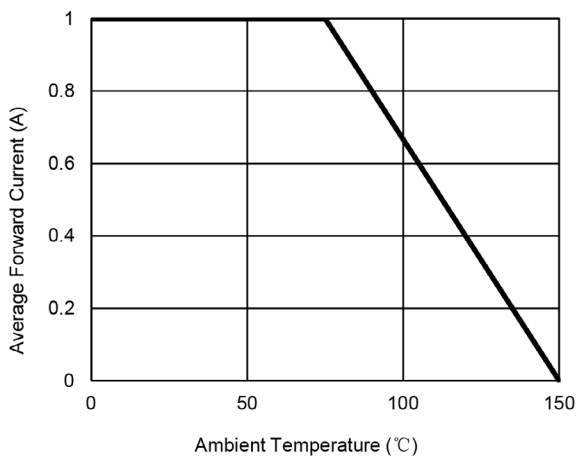


Fig. 2 - Maximum Non-Repetitive Surge Current

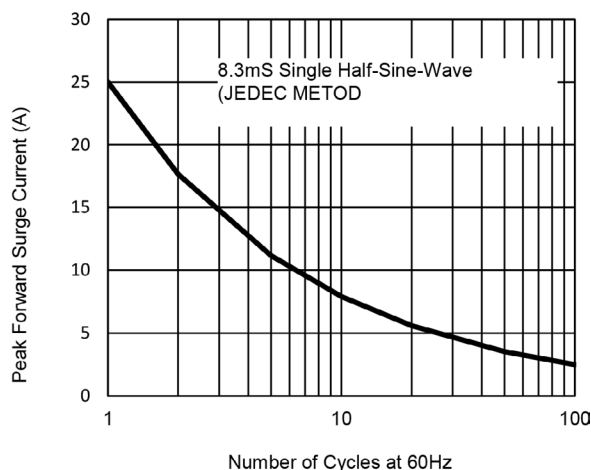


Fig. 3 - Typical Junction Capacitance

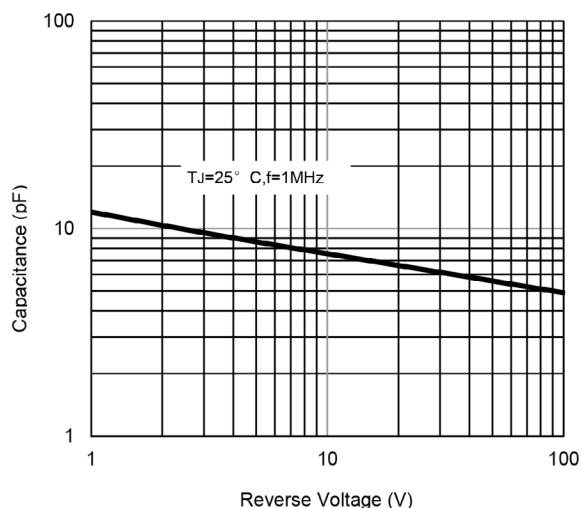
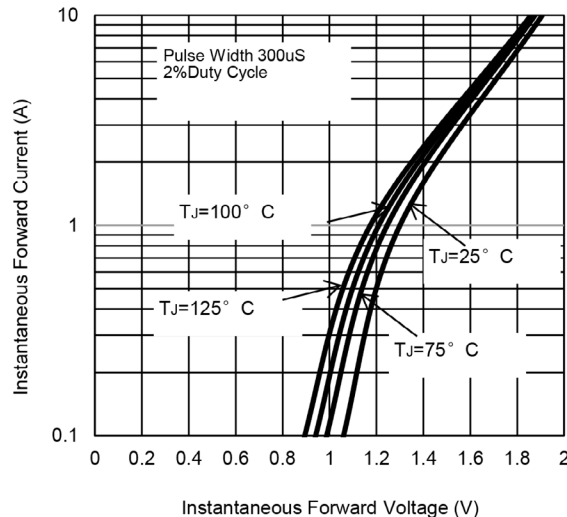
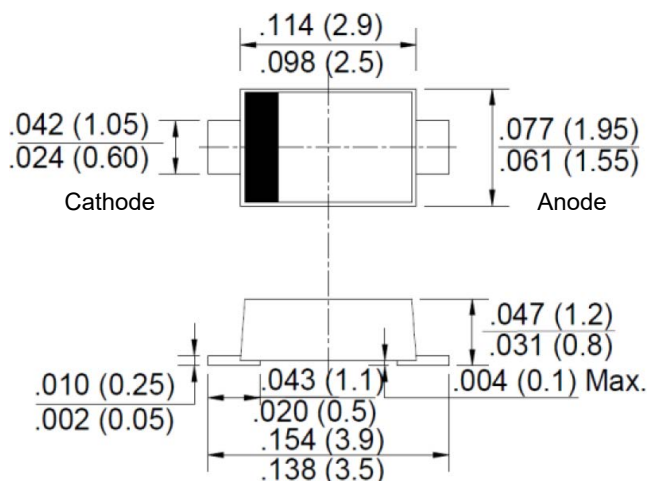


Fig. 4 - Typical Forward Characteristics



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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