

MSR1DAL

Surface Mount Super Fast Recovery Rectifier

Voltage

200 V

Current

1 A

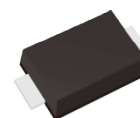
Features

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Low leakage
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SOD-123FL Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0006 ounces, 0.0173 grams

SOD-123FL



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	200	V
Maximum RMS Voltage	V _{RMS}	140	V
Maximum DC Blocking Voltage	V _{DC}	200	V
Maximum Average Forward Current	I _{F(AV)}	1	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	40	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V _R = 4 V	C _J	15	pF
Typical Thermal Resistance (Note 1) (Note 2)	R _{θJA}	200	°C/W
	R _{θJC}	40	
Operating Junction Temperature Range	T _J	-55~175	°C
Storage Temperature Range	T _{STG}	-55~175	°C



MSR1DAL

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 0.5\text{ A}, T_J = 25^\circ\text{C}$	-	0.8	-	V
		$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.95	
		$I_F = 0.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.66	-	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.73	-	
Reverse Current	I_R	$V_R = 160\text{ V}, T_J = 25^\circ\text{C}$	-	2	-	nA
		$V_R = 200\text{ V}, T_J = 25^\circ\text{C}$	-	-	1	uA
		$V_R = 200\text{ V}, T_J = 125^\circ\text{C}$	-	0.3	-	
Maximum Reverse Recovery Time ^(Note 3)	T_{RR}	---	-	-	20	ns

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard pad
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area
3. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1\text{A}$ $I_{rr}=0.25\text{A}$



MSR1DAL

TYPICAL CHARACTERISTIC CURVES

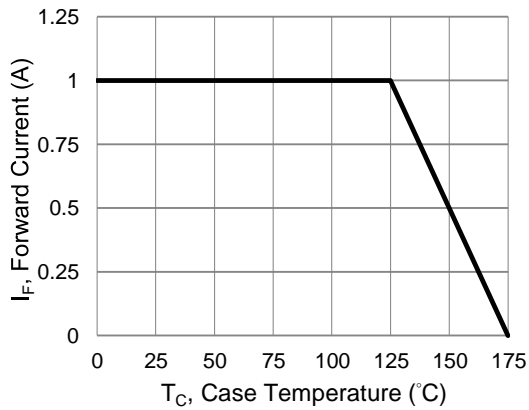


Fig.1 Forward Current Derating Curve

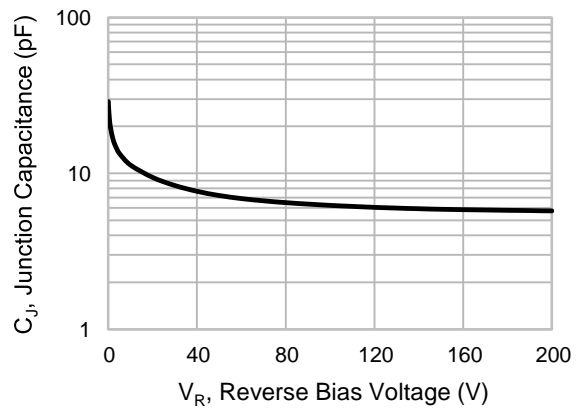


Fig.2 Typical Junction Capacitance

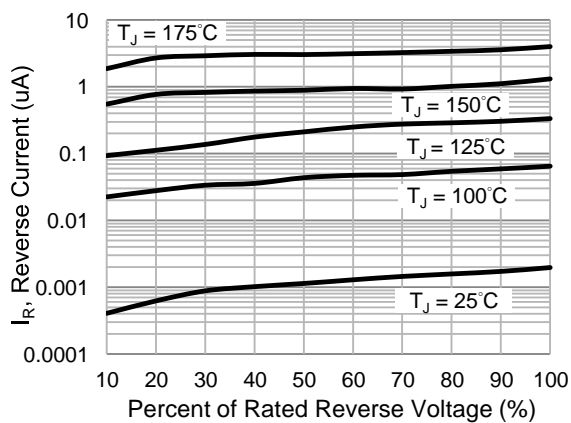


Fig.3 Typical Reverse Characteristics

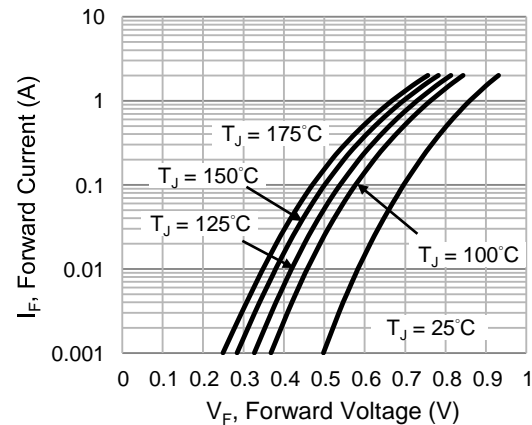


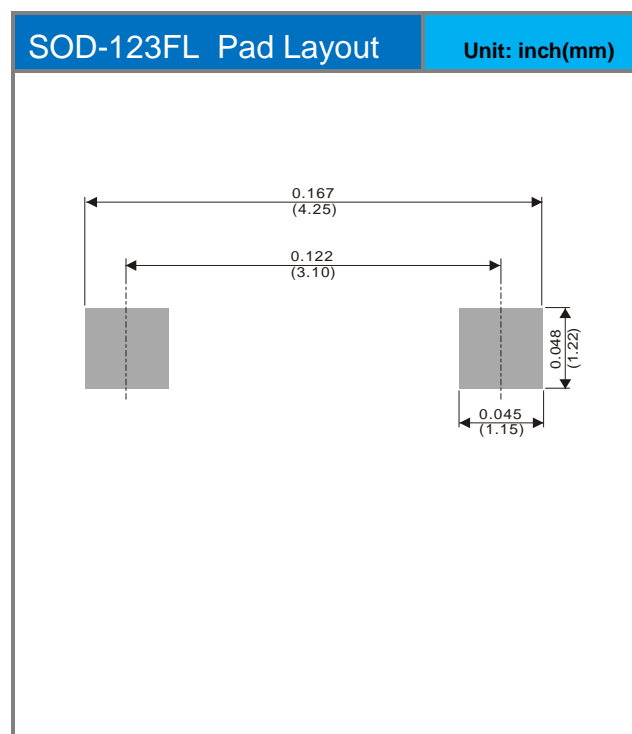
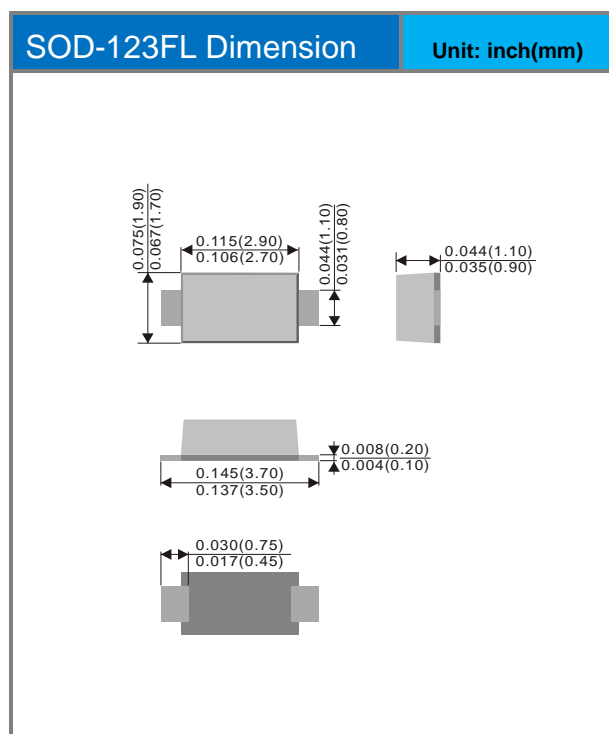
Fig.4 Typical Forward Characteristics

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Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
MSR1DAL_R1_00001	SOD-123FL	3K / 7" Reel	M1A	Halogen free

Packaging Information & Mounting Pad Layout





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