



# MSR2DAFC

## Surface Mount Super Fast Recovery Rectifier

**Voltage** 200 V **Current** 2 A

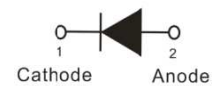
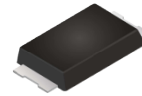
### Features

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Low reverse current
- 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 : SMAF-C Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0012 ounces, 0.034 grams

### SMAF-C



## Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	2	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	60	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	25	pF
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	150	°C/W
(Note 2)	R <sub>θJC</sub>	23	
Operating Junction Temperature Range	T <sub>J</sub>	-55~175	°C
Storage Temperature Range	T <sub>STG</sub>	-55~175	°C



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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.83	-	V
		$I_F = 2\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.95	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.67	-	
		$I_F = 2\text{ A}, T_J = 125^\circ\text{C}$	-	0.76	-	
Reverse Current <sup>(Note 3)</sup>	$I_R$	$V_R = 160\text{ V}, T_J = 25^\circ\text{C}$	-	5	-	nA
		$V_R = 200\text{ V}, T_J = 25^\circ\text{C}$	-	-	1	uA
		$V_R = 200\text{ V}, T_J = 125^\circ\text{C}$	-	1.5	-	
Reverse Recovery Time	$T_{RR}$	$I_F = 0.5\text{ A}, I_R = 1\text{ A},$ $I_{RR} = 0.25\text{ A}, T_J = 25^\circ\text{C}$	-	-	20	ns

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint
2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area
3. Short duration pulse test used to minimize self-heating effect



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## TYPICAL CHARACTERISTIC CURVES

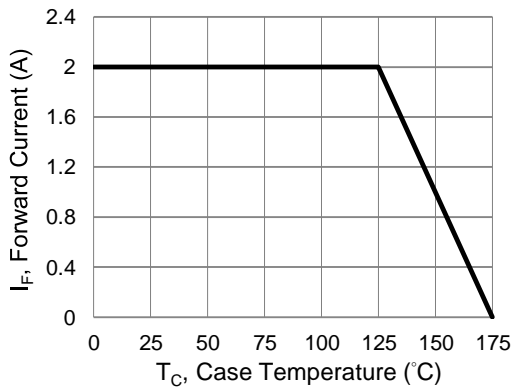


Fig.1 Forward Current Derating Curve

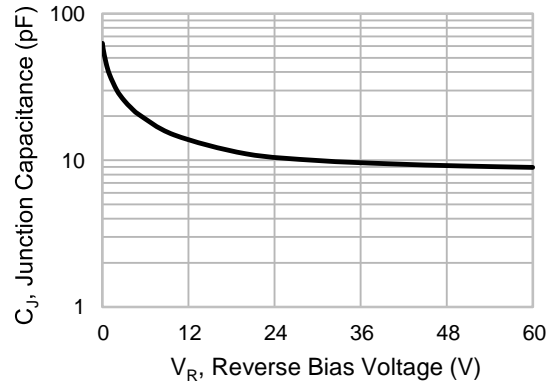


Fig.2 Typical Junction Capacitance

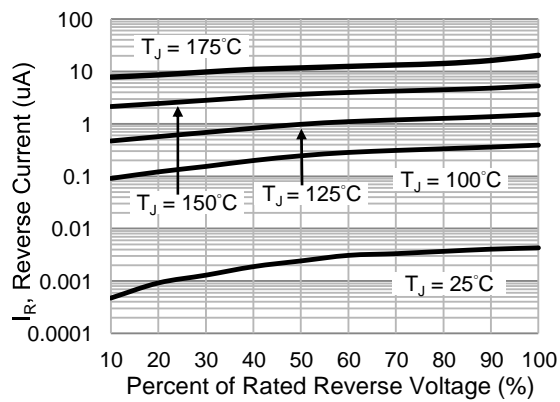


Fig.3 Typical Reverse Characteristics

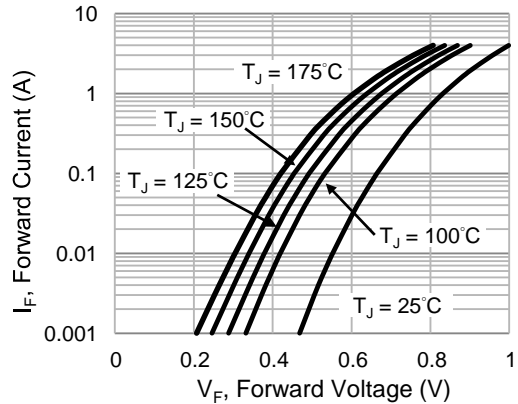


Fig.4 Typical Forward Characteristics

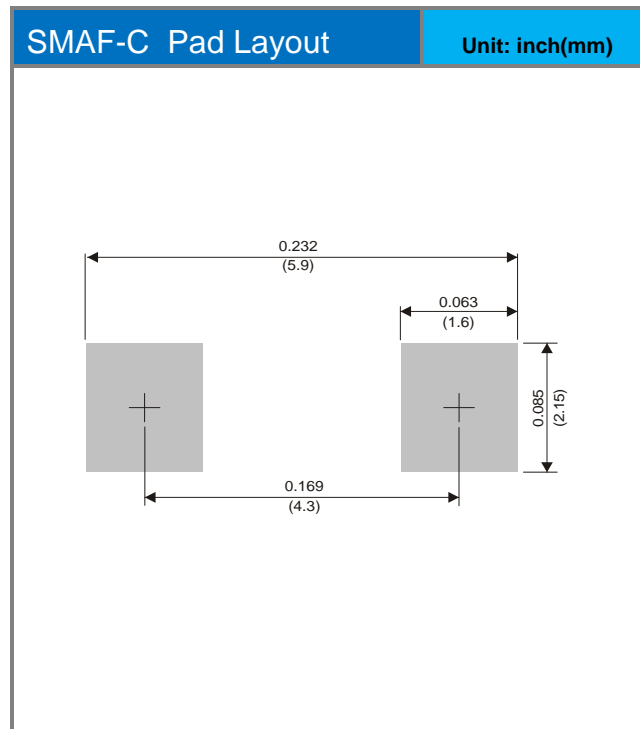
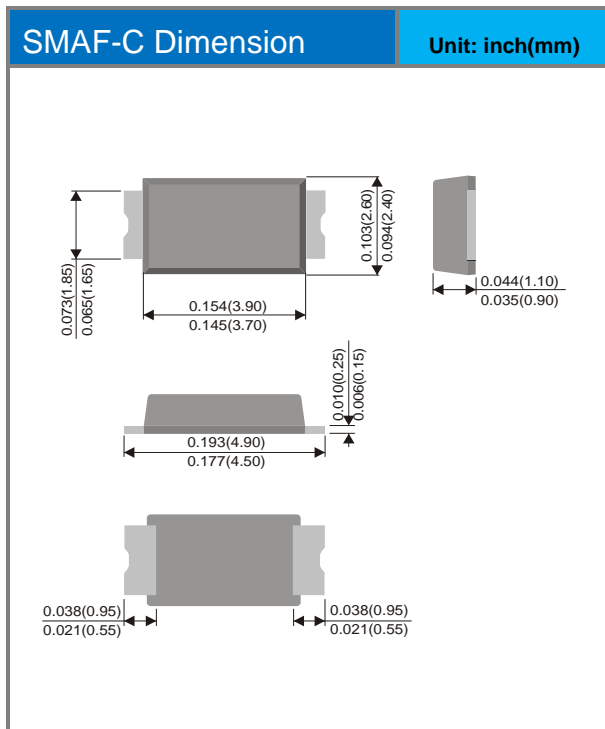


# MSR2DAFC

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
MSR2DAFC_R1_00001	SMAF-C	3K / 7" Reel	MSR2D	Halogen free RoHS compliant

## Packaging Information & Mounting Pad Layout





## MSR2DAFC

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