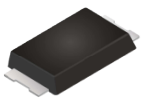
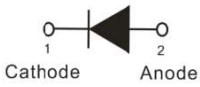
MSR2DAFC

Surface Mount Super Fast Recovery Rectifier

Voltage	200 V	Current	2 A

SMAF-C





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

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	$I_{F(AV)}$	2	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	60	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V_R = 4 V	C_J	25	pF
Typical Thermal Resistance (Note 1) (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	150 23	°C/W
Operating Junction Temperature Range	T_J	-55~175	°C
Storage Temperature Range	T_{STG}	-55~175	°C

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 1 A, T_J = 25 °C	-	0.83	-	V
		I_F = 2 A, T_J = 25 °C	-	-	0.95	
		I_F = 1 A, T_J = 125 °C	-	0.67	-	
		I_F = 2 A, T_J = 125 °C	-	0.76	-	
Reverse Current(Note 3)	I_R	V_R = 160 V, T_J = 25 °C	-	5	-	nA
		V_R = 200 V, T_J = 25 °C	-	-	1	uA
		V_R = 200 V, T_J = 125 °C	-	1.5	-	
Reverse Recovery Time	T_{RR}	I_F = 0.5 A, I_R = 1 A, I_{RR} = 0.25 A, T_J = 25 °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^2 copper pad area
3. Short duration pulse test used to minimize self-heating effect

MSR2DAFC

TYPICAL CHARACTERISTIC CURVES

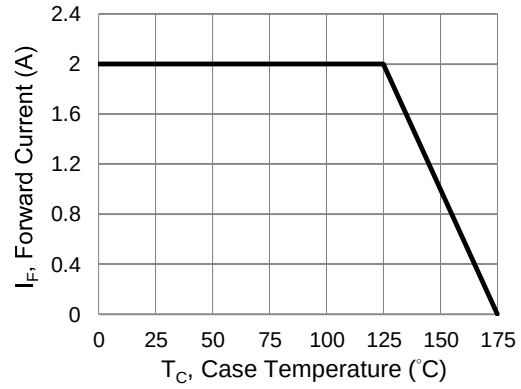


Fig.1 Forward Current Derating Curve

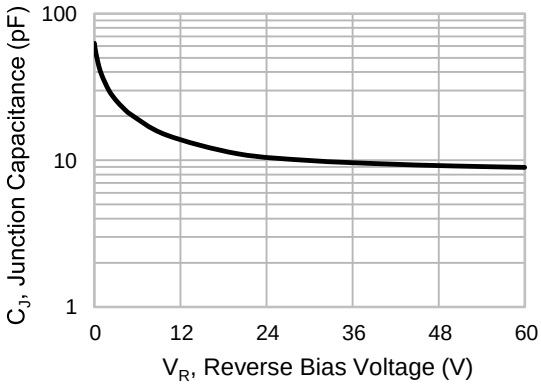


Fig.2 Typical Junction Capacitance

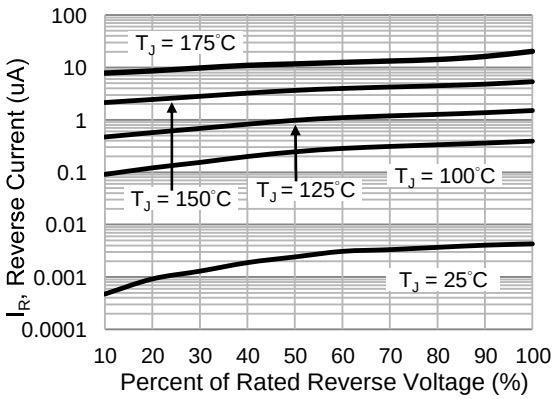


Fig.3 Typical Reverse Characteristics

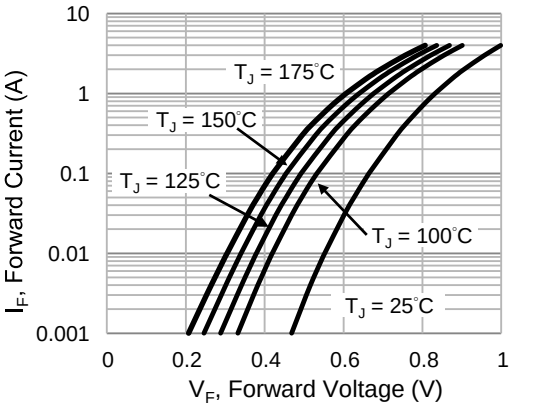


Fig.4 Typical Forward Characteristics

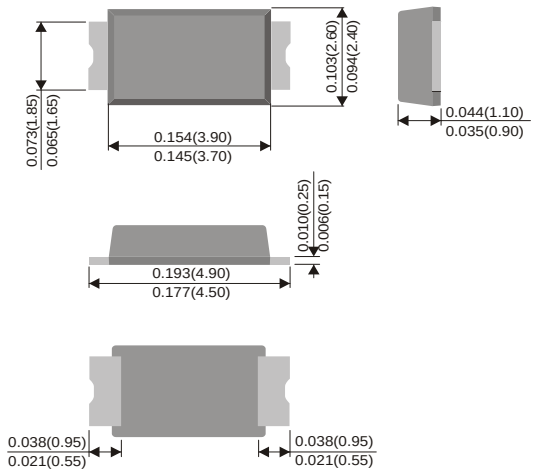
MSR2DAFC

Part No. Packing Code Version

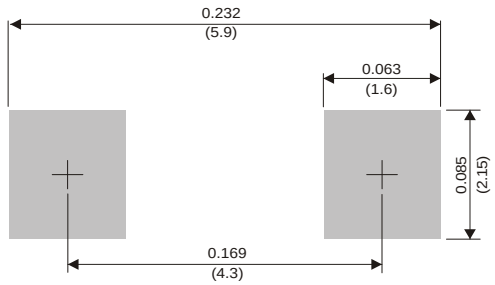
Part No. Packing Code	Package Type	Packing Type	Marking	Version
MSR2DAFC_R1_00001	SMAF-C	3K / 7" Reel	MSR2D	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout

SMAF-C Dimension — Unit: inch(mm)



SMAF-C Pad Layout — Unit: inch(mm)



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