



STR5100AFC

Surface Mount Low V_F Schottky Barrier Rectifier

Voltage 100 V **Current** 5 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 : SMAF-C Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.034 grams

SMAF-C



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

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	100	V
Maximum RMS Voltage	V _{RMS}	70	V
Maximum DC Blocking Voltage	V _{DC}	100	V
Maximum Average Forward Current	I _{F(AV)}	5	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	100	A
Typical Thermal Resistance	(Note 1) R _{θJA}	150	°C/W
	(Note 2) R _{θJC}	20	
	(Note 2) R _{θJL}	25	
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C



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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.45	-	V
		$I_F = 3\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.58	-	V
		$I_F = 5\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	-	0.74	V
		$I_F = 1\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.37	-	V
		$I_F = 3\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.54	-	V
		$I_F = 5\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.62	-	V
Reverse Current ^(Note 3)	I_R	$V_R = 80\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	1.4	-	uA
		$V_R = 100\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	-	50	
		$V_R = 100\text{ V}, T_J = 125\text{ }^\circ\text{C}$	-	1.9	-	mA

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area.
3. Short duration pulse test used to minimize self-heating effect.



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TYPICAL CHARACTERISTIC CURVES

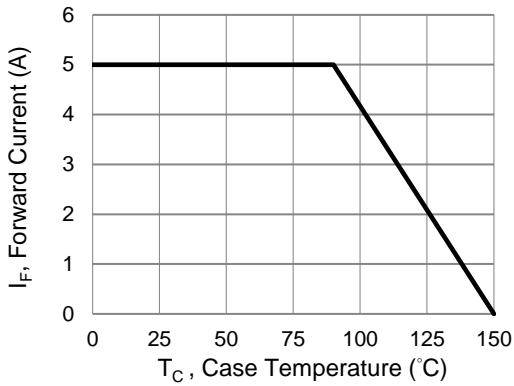


Fig.1 Forward Current Derating Curve

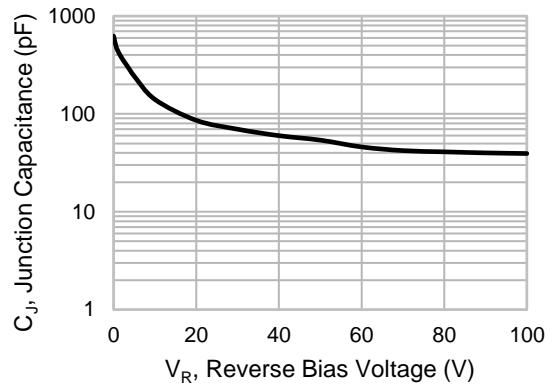


Fig.2 Typical Junction Capacitance

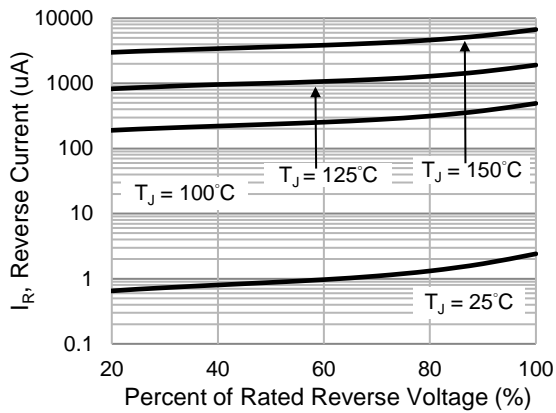


Fig.3 Typical Forward Characteristics

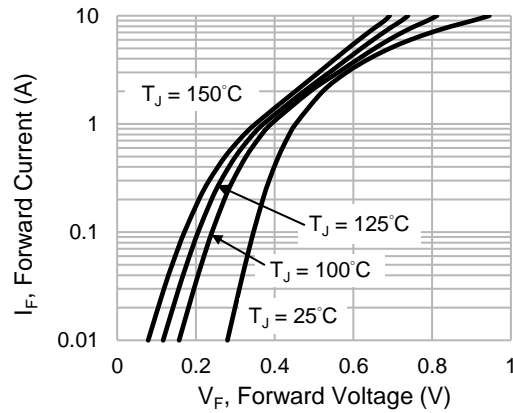


Fig.4 Typical Forward Characteristics

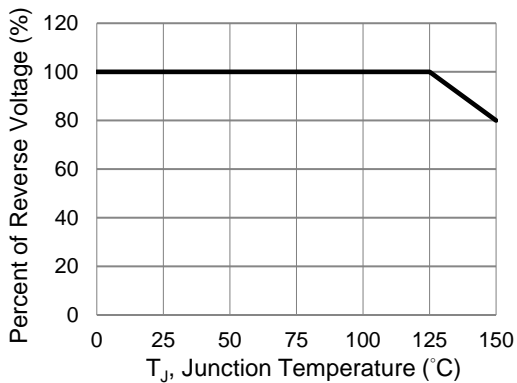


Fig.5 Operating Temperature Derating Curve

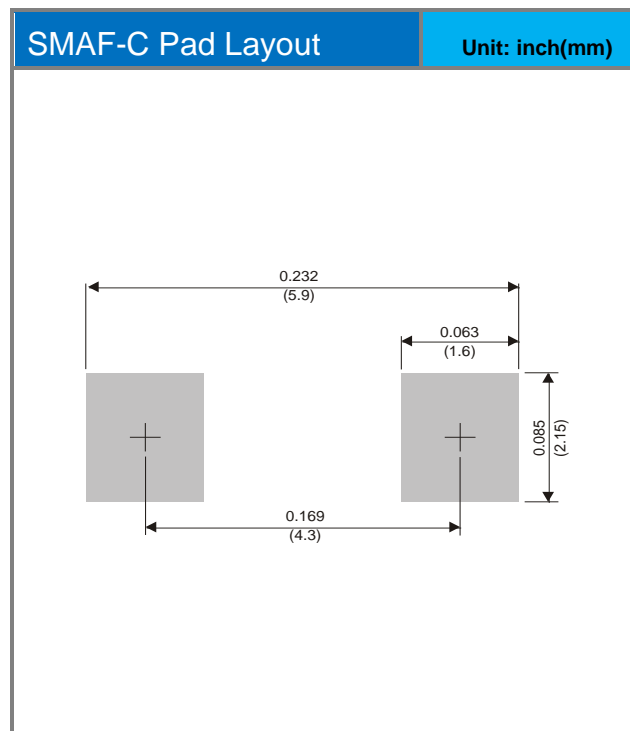
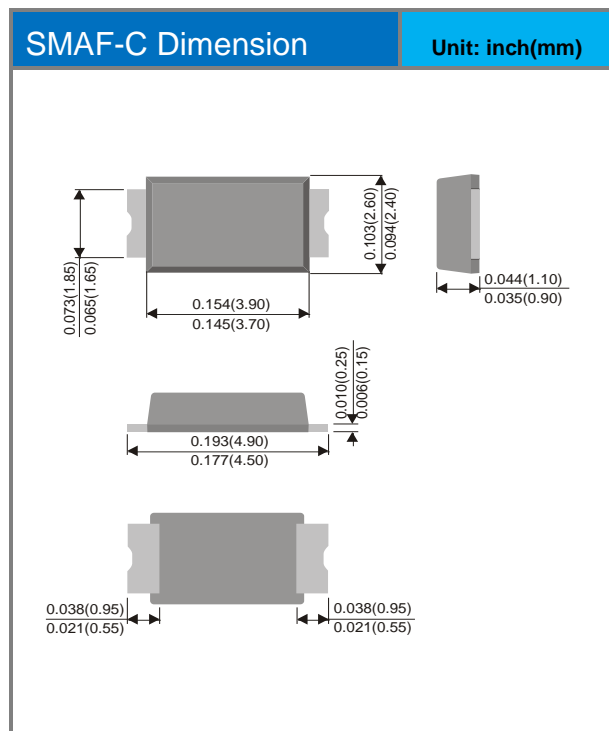


STR5100AFC

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
STR5100AFC_R1_00701	SMAF-C	3K / 7" Reel	STR5100	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout





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