ER1AAFC ~ ER1JAFC Series

Surface Mount Super Fast Recovery Rectifier

Voltage 50~600 V **Current** 1 A

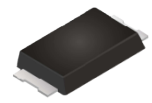
Features

- For surface mounted applications in order to optimize board space
- High temperature metallurgically bonded-no compression contacts as found in other diode-constructed rectifiers
- Glass passivated junction
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification94V-O
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

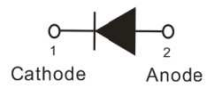
Mechanical Data

- Case : Molded plastic, SMAF-C
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0012 ounces, 0.034 grams

SMAF-C







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

PARAMETER	SYMBOL	ER1AAFC	ER1BAFC	ER1CAFC	ER1DAFC	ER1EAFC	ER1GAFC	ER1JAFC	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_R	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1							A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	30							A
Instantaneous Forward Voltage at 1A	V_F	0.95				1.25		1.7	V
Reverse Current	I_R	1							uA
Typical Junction Capacitance Measured at 1 MHz And Applied V_R = 4V	C_J	15							pF
Reverse Recovery Time(Note 1)	T_{RR}	35							ns
Typical Thermal Resistance (Note 2) (Note 3)	$R_{\theta JL}$ $R_{\theta JA}$	24 150							°C/W
Operating Junction Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1A, Recover to 0.25A
2. Mounted on a FR4 PCB, single-sided copper, with 48cm^2 copper pad area
3. Mounted on a FR4 PCB, single-sided copper, standard footprint

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TYPICAL CHARACTERISTIC CURVES

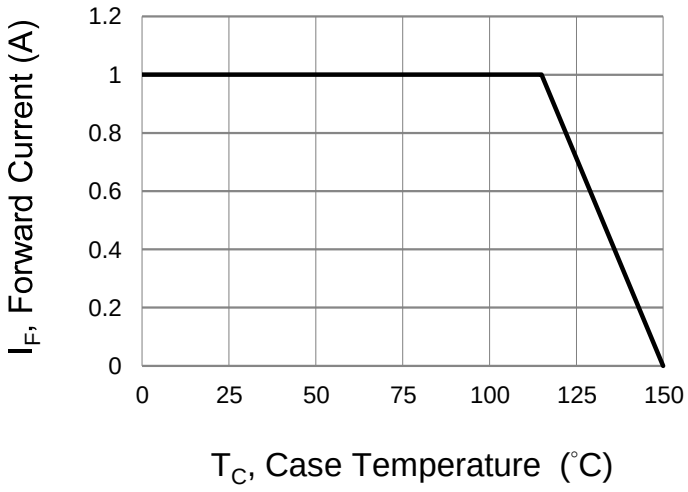


Fig.1 Forward Current Derating Curve

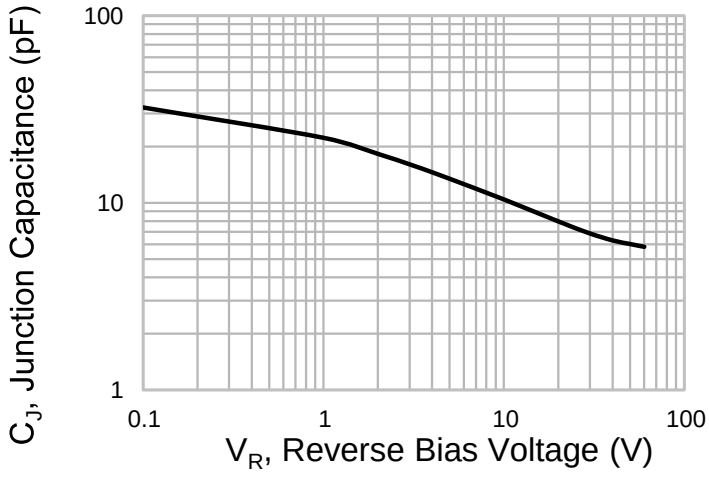


Fig.2 Typical Junction Capacitance

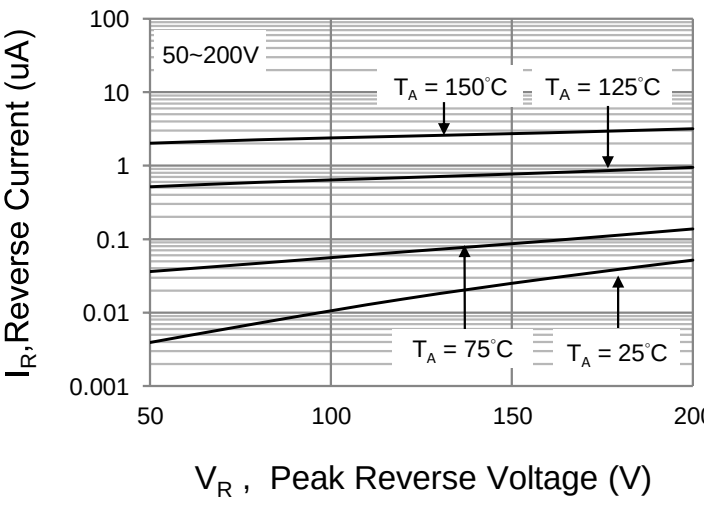


Fig.3 Typical Reverse Characteristics

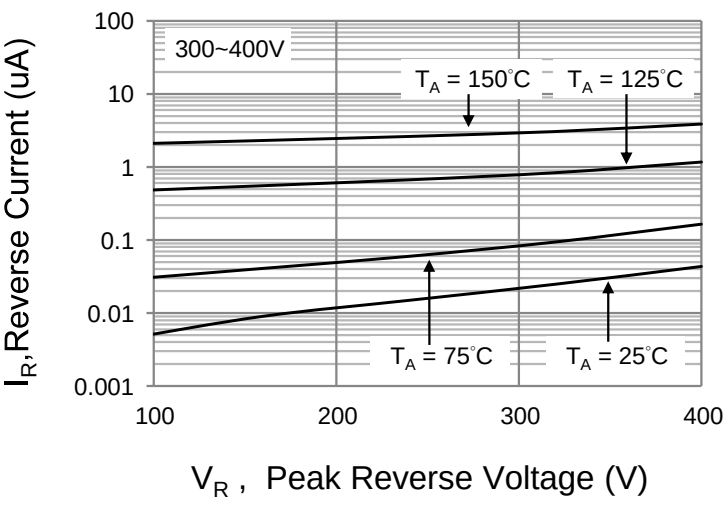


Fig.4 Typical Reverse Characteristics

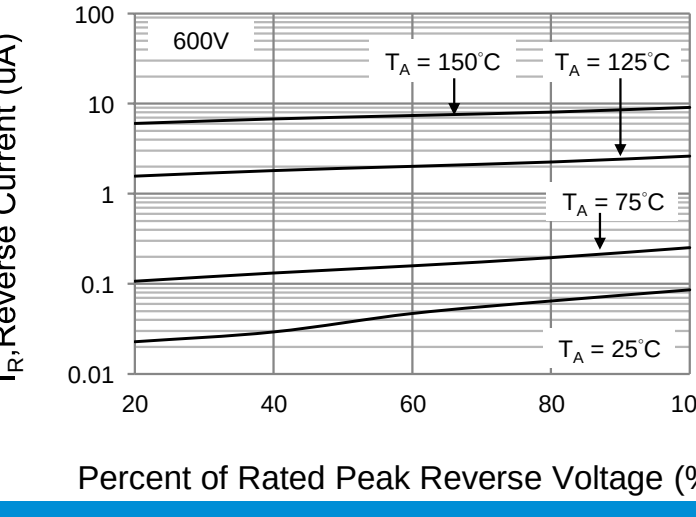


Fig.5 Typical Reverse Characteristics

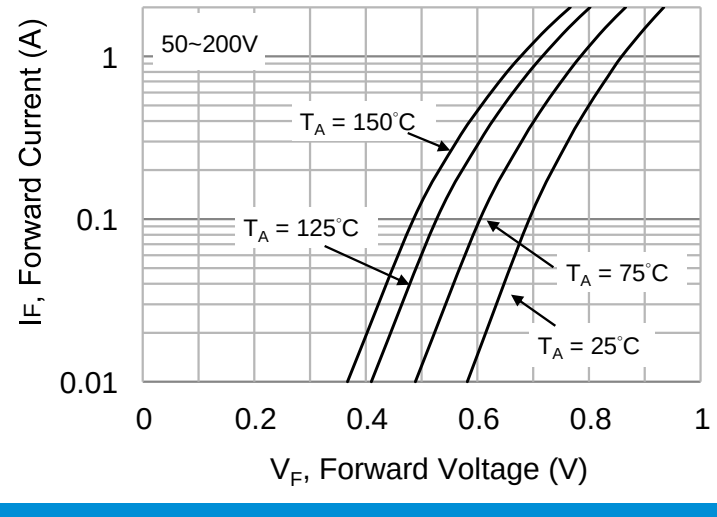


Fig.6 Typical Forward Characteristics

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TYPICAL CHARACTERISTIC CURVES

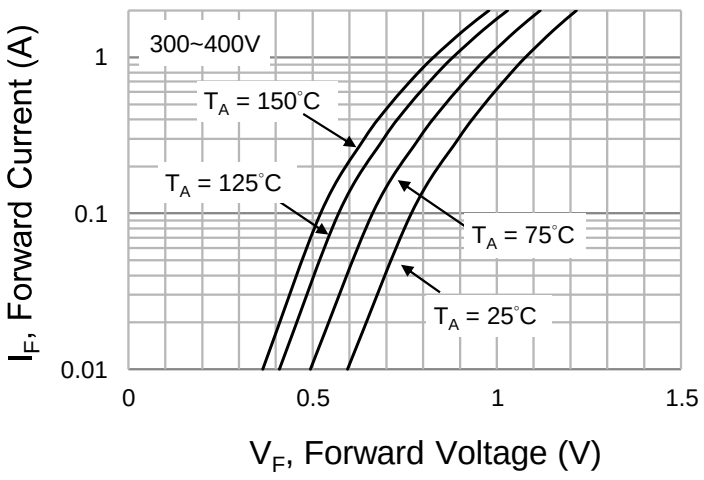


Fig.7 Typical Forward Characteristics

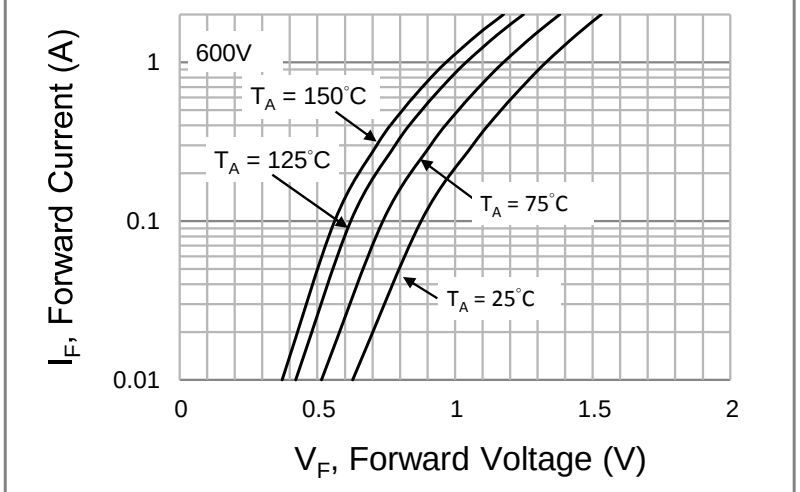


Fig.8 Typical Forward Characteristics

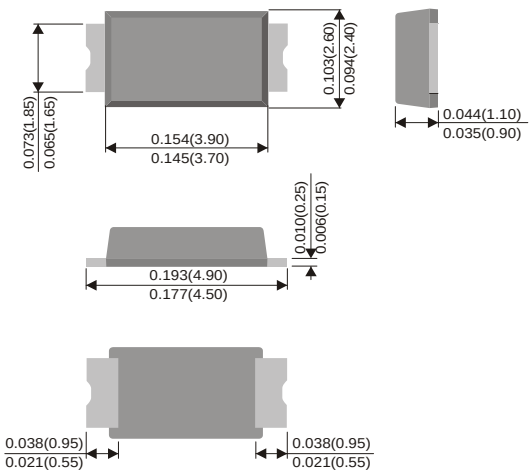
ER1AAFC ~ ER1JAFC Series

Part No. Packing Code Version

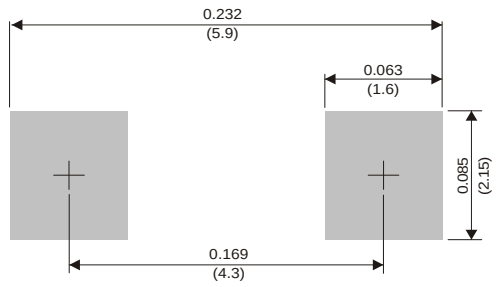
Part No. Packing Code	Package Type	Packing Type	Marking	Version
ER1AAFC_R1_00001	SMAF-C	3K pcs / 7” reel	ER1A	Halogen free
ER1BAFC_R1_00001	SMAF-C	3K pcs / 7” reel	ER1B	Halogen free
ER1CAFC_R1_00001	SMAF-C	3K pcs / 7” reel	ER1C	Halogen free
ER1DAFC_R1_00001	SMAF-C	3K pcs / 7” reel	ER1D	Halogen free
ER1EAFC_R1_00001	SMAF-C	3K pcs / 7” reel	ER1E	Halogen free
ER1GAFC_R1_00001	SMAF-C	3K pcs / 7” reel	ER1G	Halogen free
ER1JAFC_R1_00001	SMAF-C	3K pcs / 7” reel	ER1J	Halogen free

Packaging Information & Mounting Pad Layout

SMAF-C Dimension — Unit: inch(mm)



SMAF-C Pad Layout — Unit: inch(mm)



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