



FR1AAFC ~ FR1MAFC Series

Surface Mount Fast Recovery Rectifier

Voltage

50~1000 V

Current

1 A

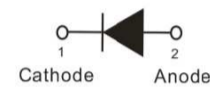
Features

- Glass passivated chip junction
- Fast reverse recovery time
- Low forward voltage drop
- Low switching losses, high efficiency
- High forward surge capability
- 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	FR1AAFC	FR1BAFC	FR1DAFC	FR1GAFC	FR1JAFc	FR1KAFC	FR1MAFC	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _R	50	100	200	400	600	800	1000	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	1.3							V
Reverse Current T _J = 25°C T _J = 125°C	I _R	1 150							uA
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4V	C _J	15				7			pF
Reverse Recovery Time ^(Note 1)	T _{RR}	150				250	500		ns
Typical Thermal Resistance ^(Note 2)	R _{θJL}	31							°C/W
^(Note 3)	R _{θJA}	150							
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 48cm² copper pad area
3. Mounted on a FR4 PCB, single-sided copper, standard footprint



FR1AAFC ~ FR1MAFC Series

TYPICAL CHARACTERISTIC CURVES

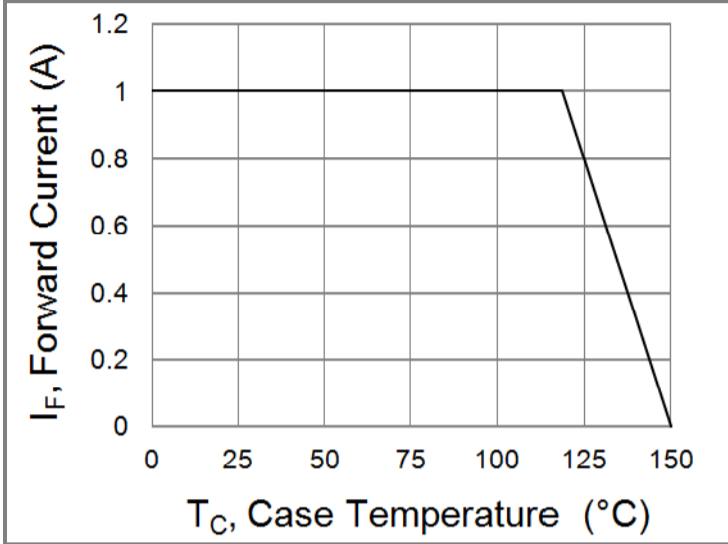


Fig.1 Forward Current Derating Curve

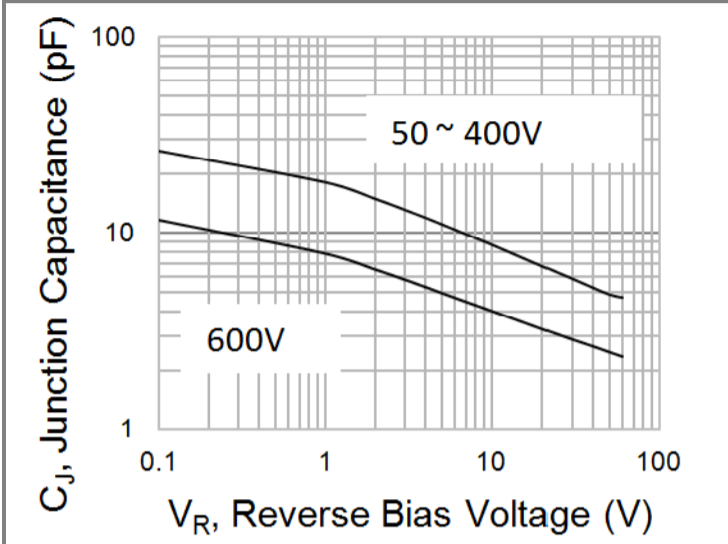


Fig. 2 Typical Junction Capacitance

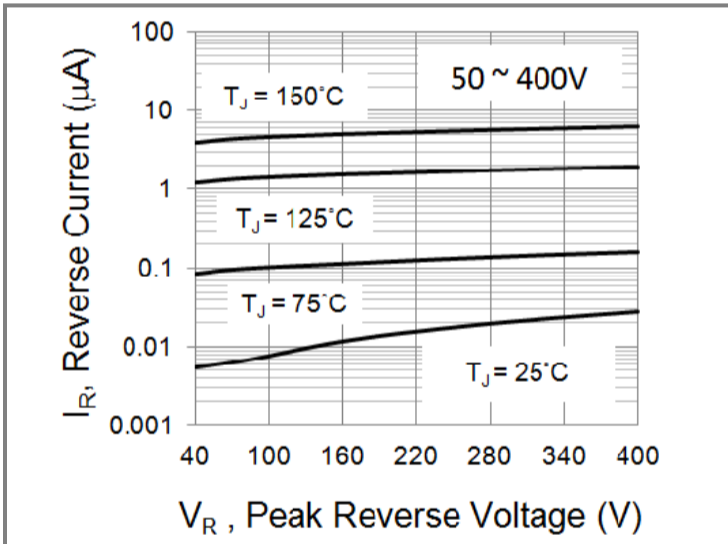


Fig.3 Typical Reverse Characteristics

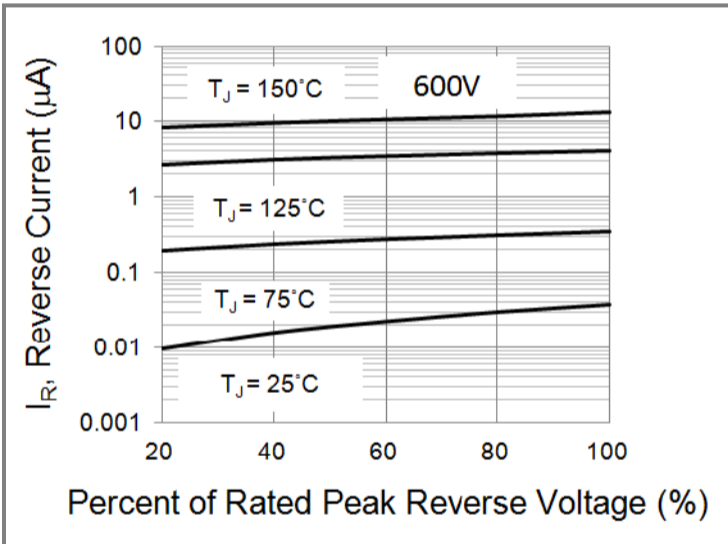


Fig.4 Typical Reverse Characteristics

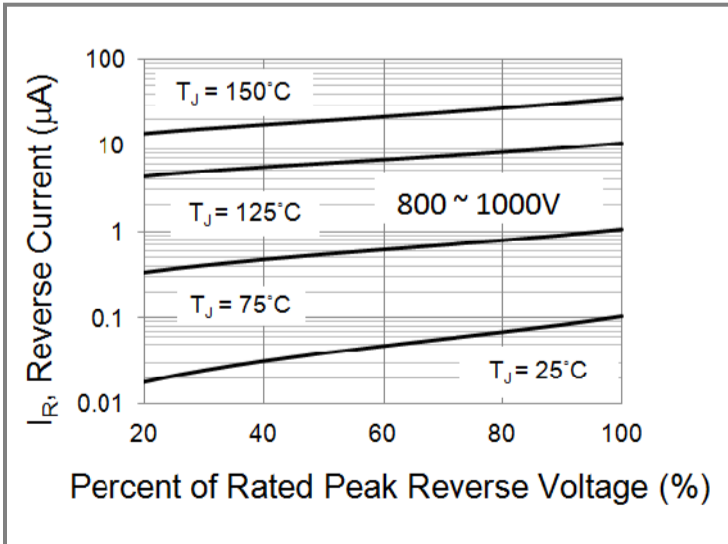


Fig.5 Typical Reverse Characteristics

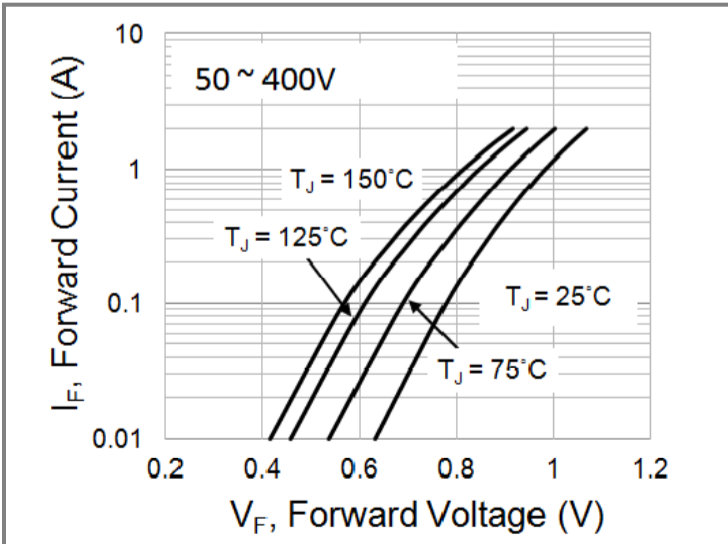


Fig.6 Typical Forward Characteristics



FR1AAFC ~ FR1MAFC Series

TYPICAL CHARACTERISTIC CURVES

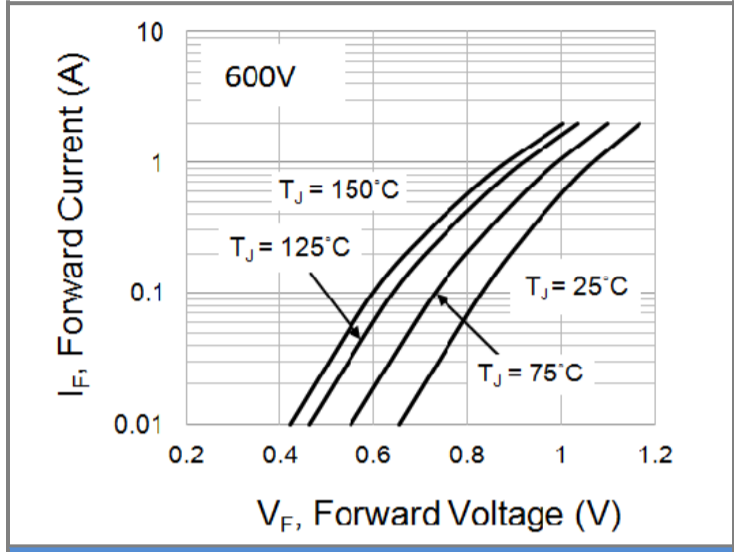


Fig.7 Typical Forward Characteristics

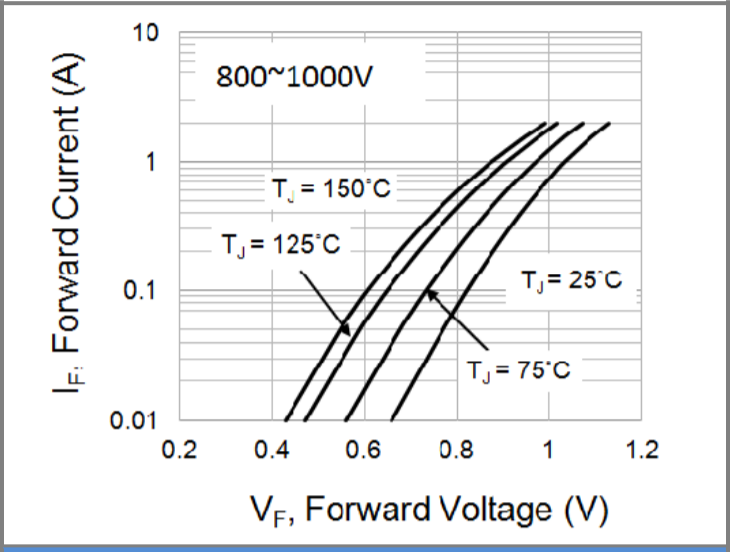


Fig.8 Typical Forward Characteristics

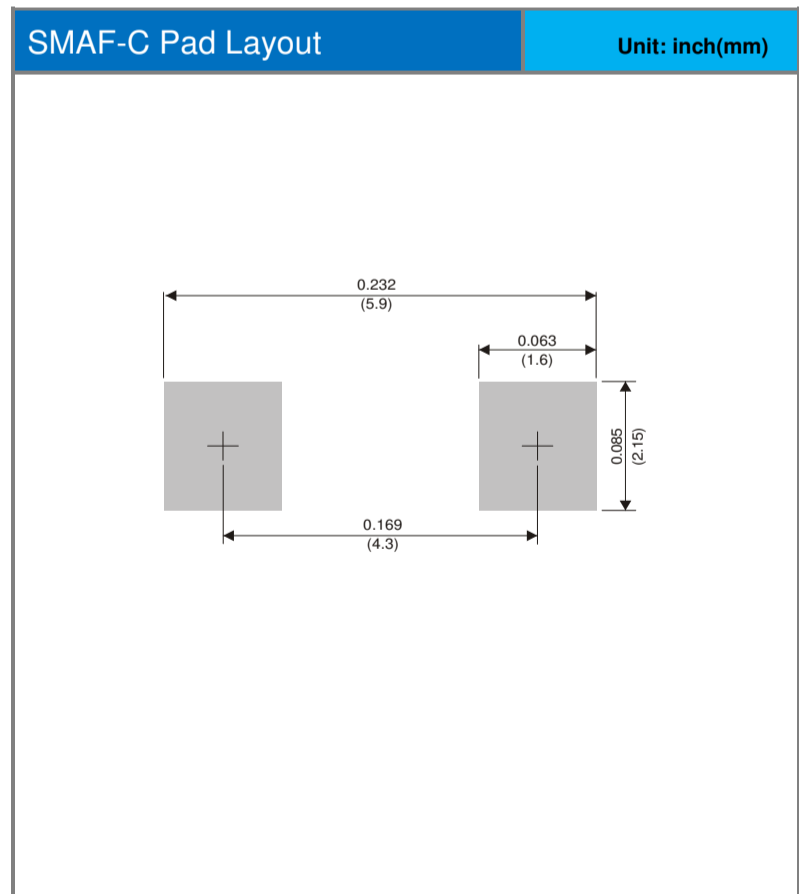
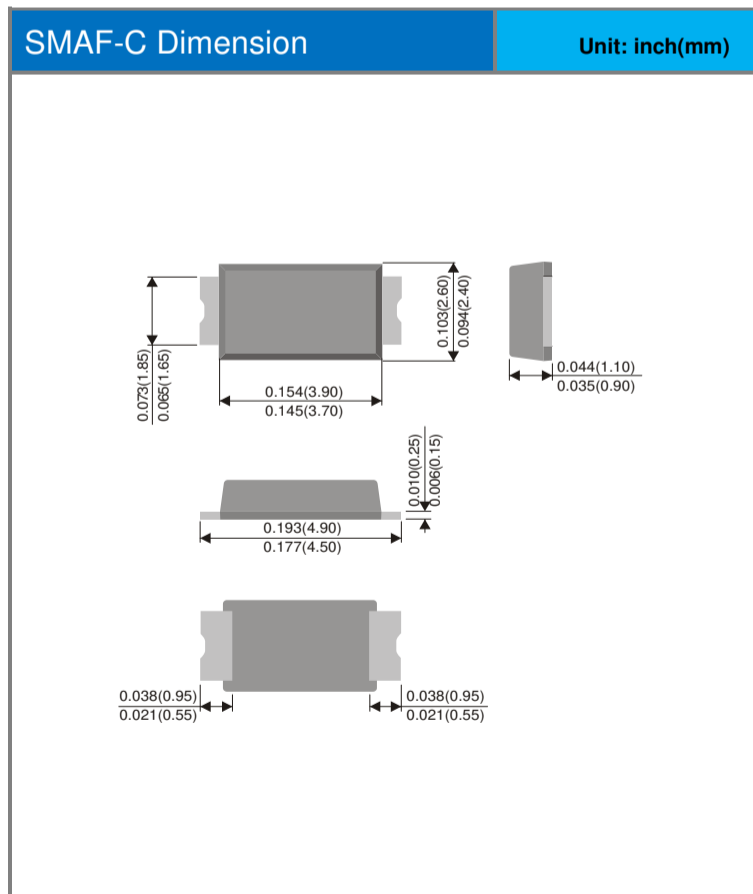


FR1AAFC ~ FR1MAFC Series

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
FR1AAFC_R1_00001	SMAF-C	3K pcs / 7" reel	FR1A	Halogen free
FR1BAFC_R1_00001	SMAF-C	3K pcs / 7" reel	FR1B	Halogen free
FR1DAFC_R1_00001	SMAF-C	3K pcs / 7" reel	FR1D	Halogen free
FR1GAFC_R1_00001	SMAF-C	3K pcs / 7" reel	FR1G	Halogen free
FR1JAFC_R1_00001	SMAF-C	3K pcs / 7" reel	FR1J	Halogen free
FR1KAFC_R1_00001	SMAF-C	3K pcs / 7" reel	FR1K	Halogen free
FR1MAFC_R1_00001	SMAF-C	3K pcs / 7" reel	FR1M	Halogen free

Packaging Information & Mounting Pad Layout





FR1AAFC ~ FR1MAFC Series

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.