

Surface Mount Superfast Recovery Rectifier

UF3AC-UF3MC
50 to 1000V
3A
SMC

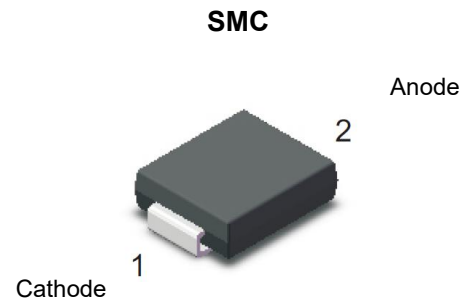
Features

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ High efficiency
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- ◆ Case : SMC.
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight : 0.22g / 0.0077oz

Functional Diagram



Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter		Symbol	UF3AC	UF3BC	UF3DC	UF3GC	UF3JC	UF3KC	UF3MC	Unit
Maximum Repetitive 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_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current		I_{F(AV)}	3							A
Peak Forward Surge Current: 8.3ms Single Half Sine Wave Superimposed on Rated Load		I_{FSM}	90							A
Maximum Forward Voltage at 3A		V_F	1.0			1.3	1.68			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _a =25℃	I_R	5							μA
	T _a =125℃		100							
Maximum Reverse Recovery Time ⁽¹⁾		t_{rr}	50				75			ns
Typical Thermal Resistance ⁽²⁾		R_{θJA} R_{θJC}	40 15							℃/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +150							℃

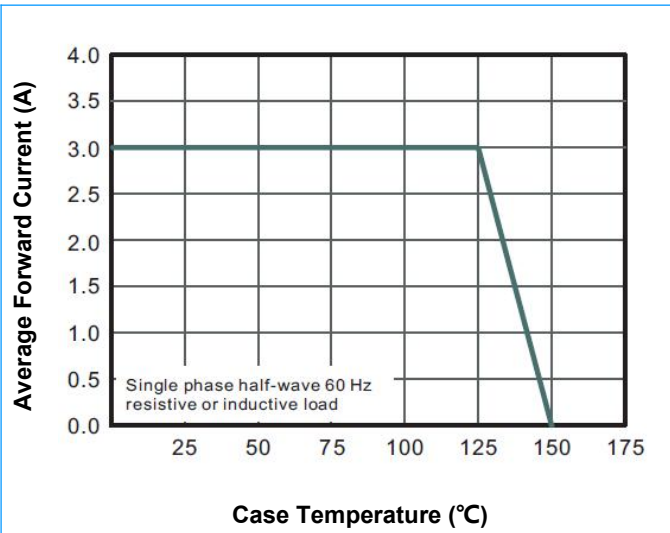
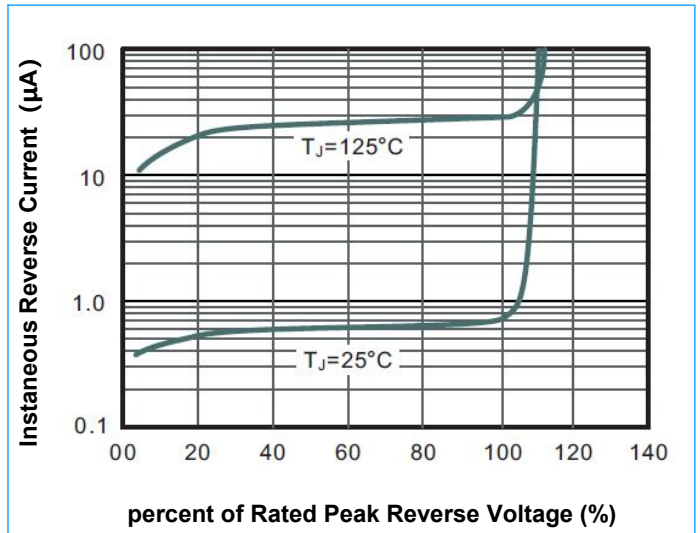
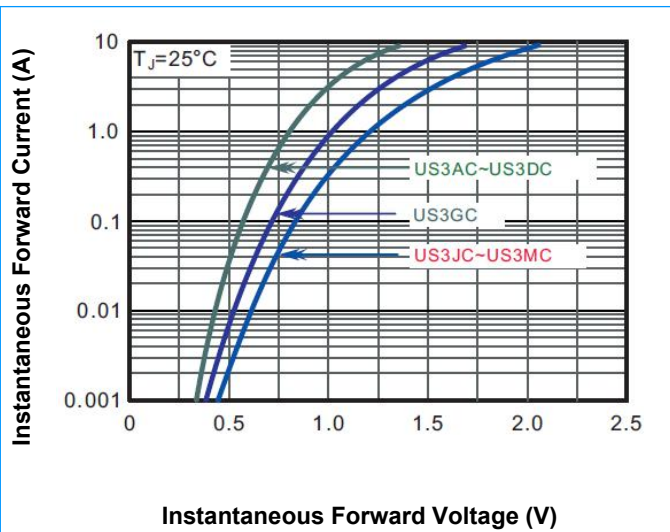
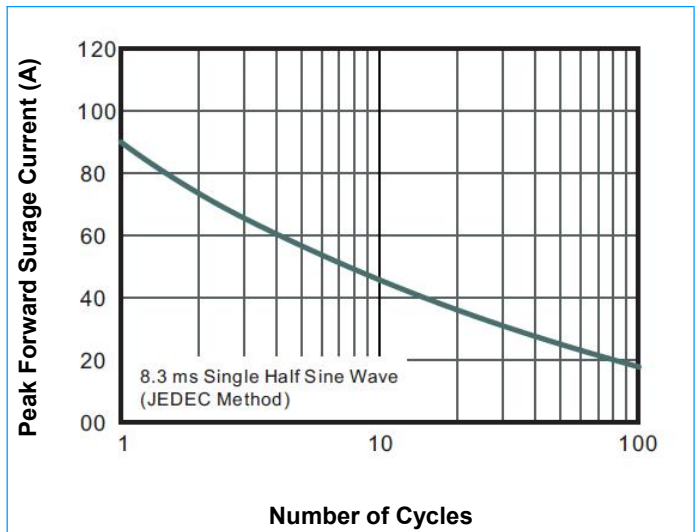
NOTES:

- (1) Measured with $I_F = 0.5 A$, $I_R = 1 A$, $t_{rr} = 0.25 A$.
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

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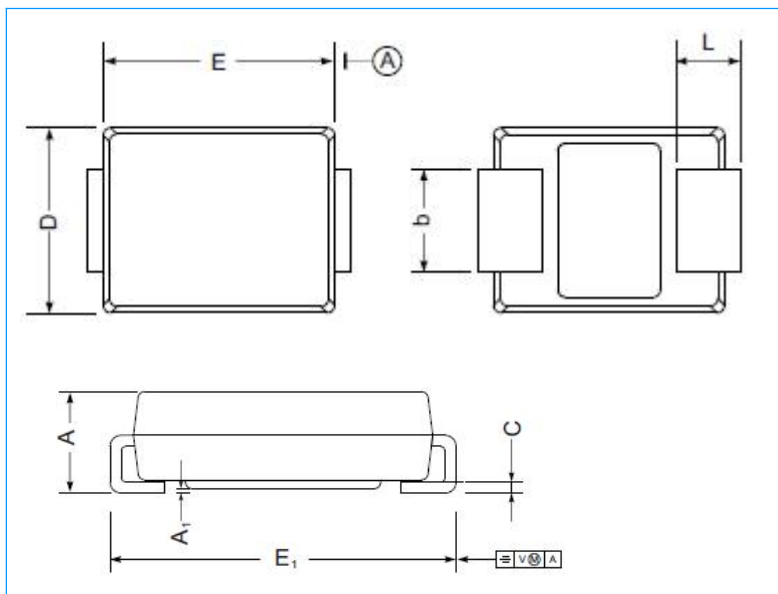
Rating and Characteristic Curves

Fig1. Maximum Average Forward Current Rating

Fig2. Typical Reverse Characteristics

Fig3. Typical Forward Characteristics

Fig4. Maximum Non-Repetitive Peak Forward Surge Current


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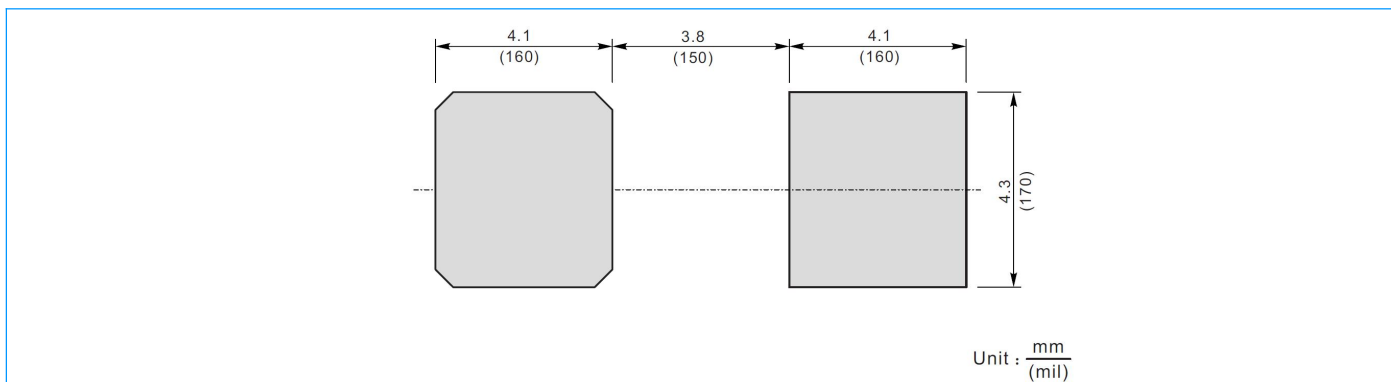
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SMC Package Outline

Plastic surface mounted package; 2 leads


Symbol	mm		mil	
	min.	max.	min.	max.
A	2.00	2.62	79	103
E	6.5	7.0	256	276
D	5.6	6.2	220	244
E₁	7.6	8.0	299	315
A₁	0.05	0.21	2.0	8.3
L	0.9	1.6	35	63
C	0.15	0.31	5.9	12
b	2.75	3.25	108	128

The Recommended Mounting Pad Size



Marking

Part Number	UF3AC	UF3BC	UF3DC	UF3GC	UF3JC	UF3KC	UF3MC
Marking	US3A	US3B	US3D	US3G	US3J	US3K	US3M

Packaging Information

Part Number	Component Package	Quantity
UF3AC-UF3MC	SMC	3000 PCS