

US1XF SERIES

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

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US1AF THRU US1MF



康比電子
HORNBY ELECTRONIC

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

REVERSE VOLTAGE: 50 to 1000 VOLTS

FORWARD CURRENT: 1.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Ultrafast recovery times for high efficiency
- High temperature soldering : 250°C /10 seconds at terminals

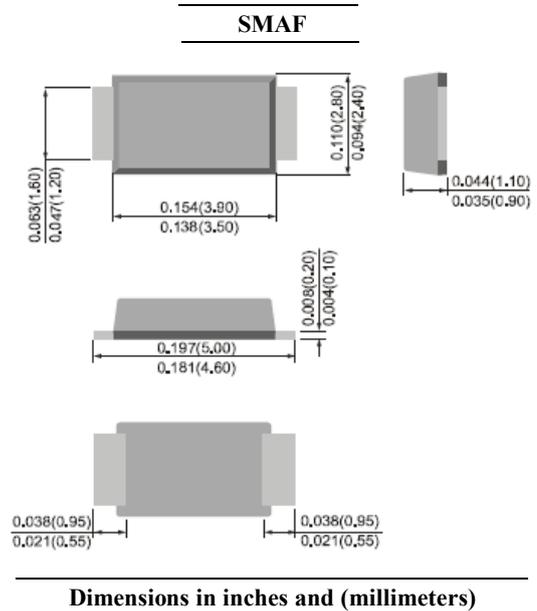
MECHANICAL DATA

Case: Molded plastic, SMAF

Terminals: Solder plated, solderable per MIL-STD-750, method 2026 guaranteed

Polarity: Color band denotes cathode end

Packaging: 12mm tape per EIA STD RS-481



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current See Fig.1	$I_{(AV)}$	1.0							Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amp	
Maximum Forward Voltage at 1.0A	V_F	1.0		1.3		1.7			Volts	
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	I_R	5.0				100				μAmp
Typical Junction Capacitance (Note 1)	C_J	17								pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	80								$^\circ\text{C/W}$
Maximum Reverse Recovery Time (Note 3)	T_{RR}	50				75				nS
Operating Junction Temperature Range	T_J	-55 to +150							$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	-55 to +150							$^\circ\text{C}$	

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to ambient mounted on P.C.B. with 5.0 x 5.0mm copper pad areas

3- Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$.

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

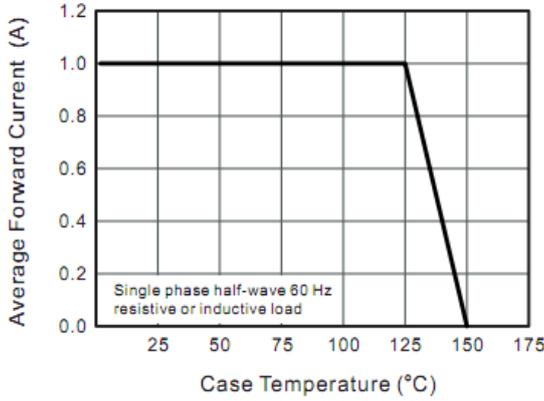


Fig.2 Typical Reverse Characteristics

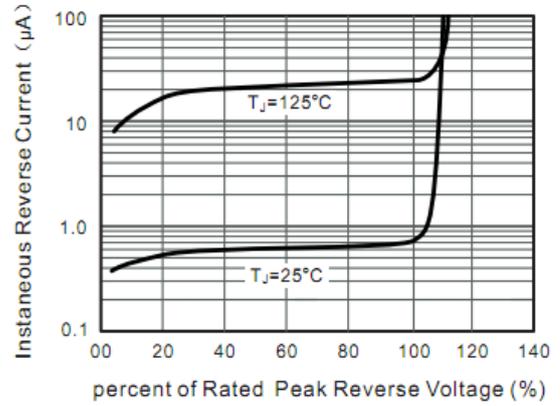


Fig.3 Typical Forward Characteristics

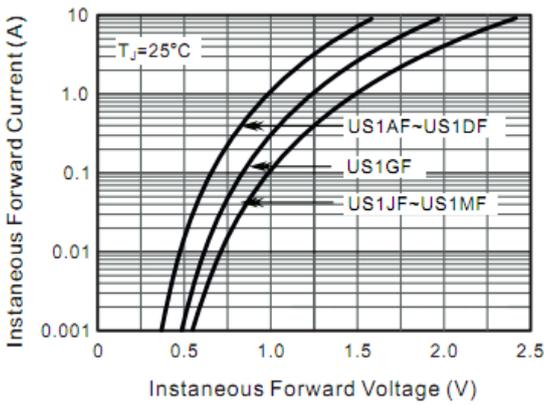


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

