



US1AF THRU US1MF

1.0 AMP SURFACE MOUNT FAST RECOVERY RECTIFIERS



FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Fast switching speed

MECHANICAL DATA

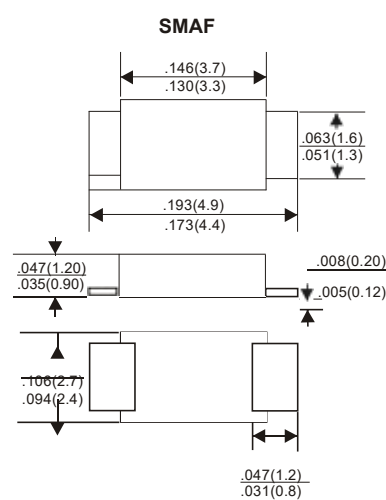
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

1.0 Ampere



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current								
.375"(9.5mm) Lead Length at Ta=55 C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30							A
Maximum Instantaneous Forward Voltage at 1.0A	1.0		1.3		1.7			V
Maximum DC Reverse Current Ta=25 °C	5.0							A
at Rated DC Blocking Voltage Ta=100°C	100							A
Maximum Reverse Recovery Time (Note 1)	50			75				nS
Typical Junction Capacitance (Note 2)	15							pF
Operating and Storage Temperature Range T _J , T _{STG}	-50—+150							°C

NOTES:

- Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (US1AF THRU US1MF)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

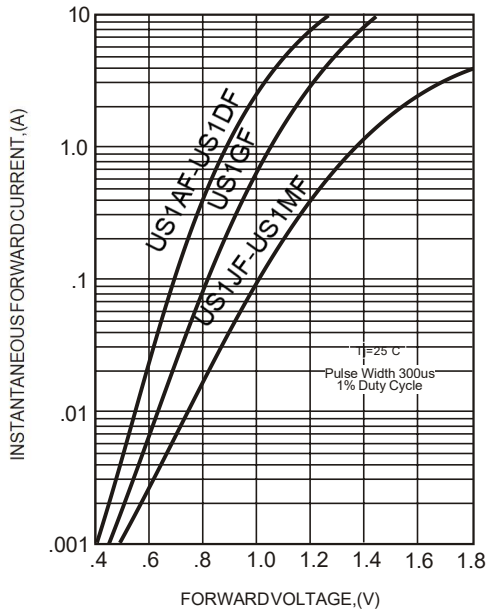


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

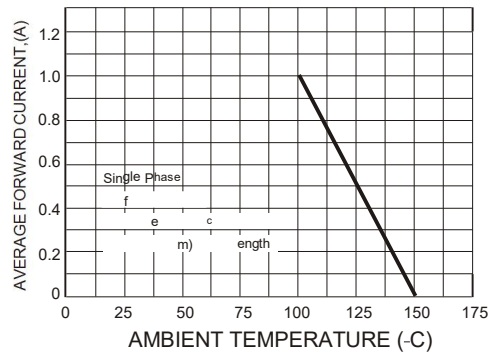
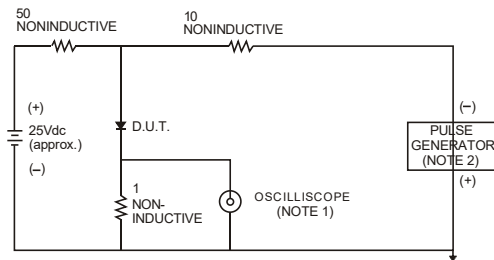


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

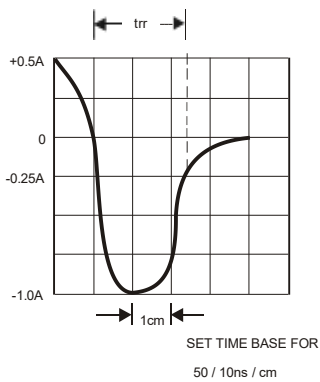


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

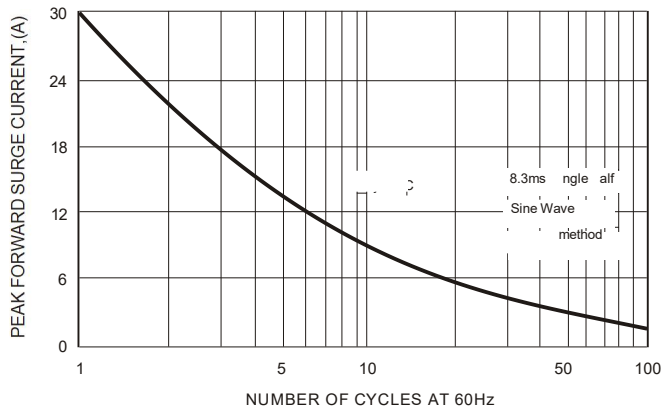
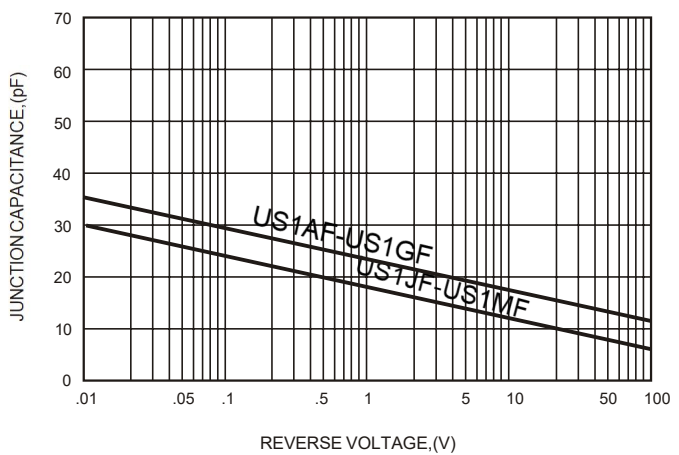


FIG.5-TYPICAL JUNCTION CAPACITANCE



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