



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

US3AF
THRU
US3MF

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT ULTRA FAST RECTIFIER
VOLTAGE RANGE 50 to 1000 Volts **CURRENT 3.0 Amperes**

FEATURES

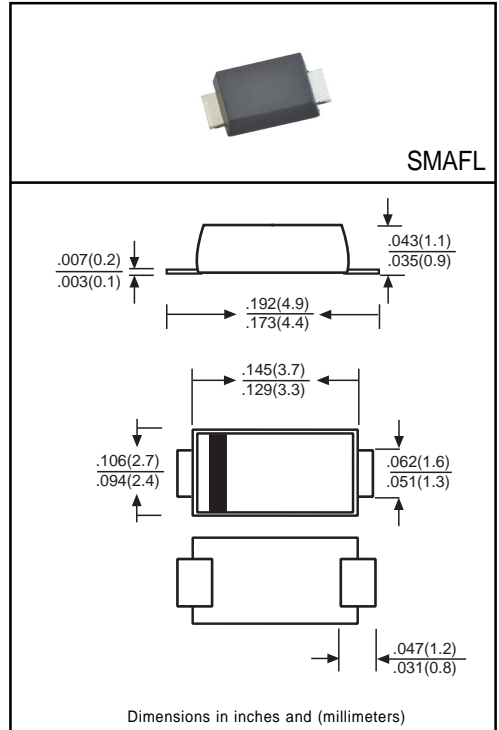
- * Ideal for surface mounted applications
- * Low leakage current
- * Glass passivated junction
- * High efficiency

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.03 gram

MAXIMUM RATINGS AND ELECTRICAL 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%.



	SYMBOL	US3AF	US3BF	US3DF	US3GF	US3JF	US3KF	US3MF	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 at TA = 65°C	I _O	3.0							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	100							Amps
Maximum Forward Voltage at 3.0A DC	V _F	1.0		1.3		1.65			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@TA = 25°C							μAmps
		@TA = 125°C							
Maximum Reverse Recovery Time (Note 1)	t _{rr}	50			100				nSec
Typical Thermal Resistance (Note 2)	R _{θJA}	60							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

NOTES : 1. Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.
2. P.C.B. mounted with 0.5x0.5 in² (12.7x12.7mm²) copper pads to each terminal.

RATING AND CHARACTERISTIC CURVES (US3AF THRU US3MF)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

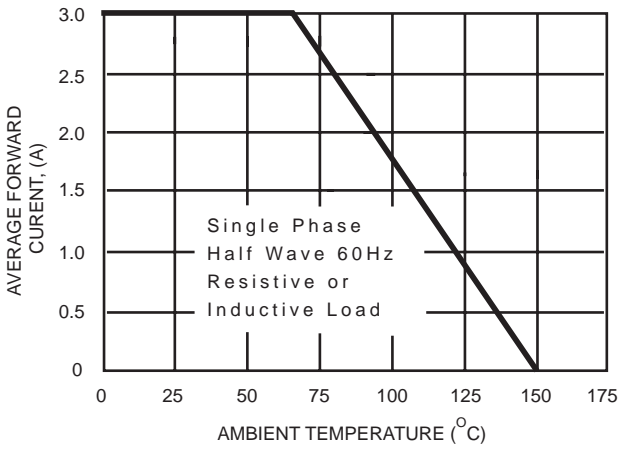


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

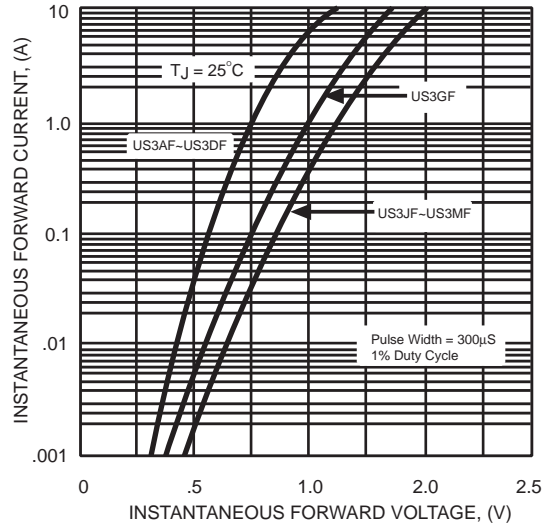


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

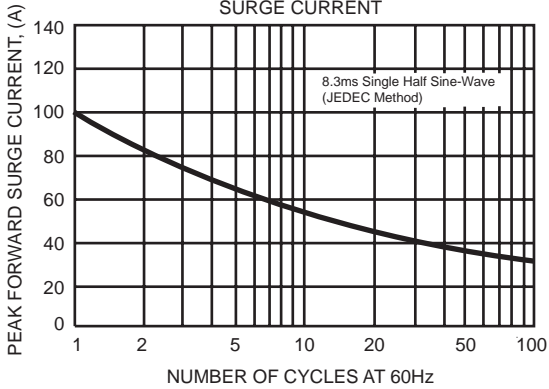
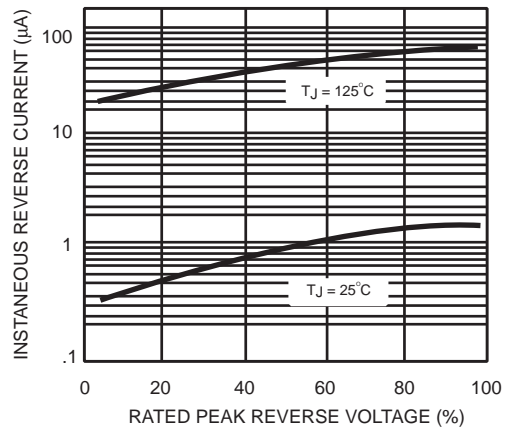


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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