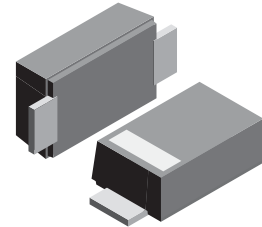




# UF3AF - UF3MF

## SURFACE MOUNT ULTRA FAST RECTIFIER DIODES

**VOLTAGE RANGE: 50 - 1000V**  
**CURRENT: 3.0 A**

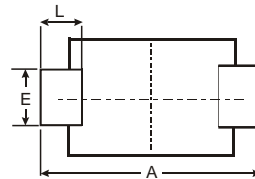
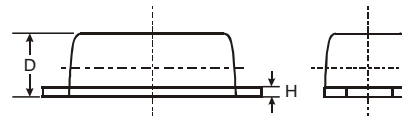
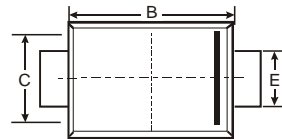


### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

### Mechanical Data

- Case: SMBF, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.0018 ounces, 0.05grams



SMBF			
Dim	Min	Max	Typ
A	5.45	5.55	5.50
B	4.27	4.33	4.30
C	3.57	3.63	3.60
D	1.32	1.38	1.35
E	1.96	2.00	1.98
H	0.019	0.021	0.20
L	0.73	0.77	0.75
All Dimensions in mm			

### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	UF3AF	UF3BF	UF3DF	UF3GF	UF3JF	UF3KF	UF3MF	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>A</sub> =55°C	I <sub>(AV)</sub>	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100.0							A
Maximum instantaneous forward voltage at 3.0A	V <sub>F</sub>	1.0		1.30		1.70		V	
Maximum DC reverse current T <sub>A</sub> =25°C at rated DC blocking voltage T <sub>A</sub> =100°C	I <sub>R</sub>	5.0			250.0				µA
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	50				75			ns
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	75							pF
Typical thermal resistance (NOTE 3)	R <sub>θJL</sub>	15.0							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150							°C

- Note:**
- 1.Reverse recovery condition I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A
  - 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
  - 3.The thermal resistance from junction to lead and from junction to ambient with P.C.B mounted on 0.3 x 0.3" (8.0 x 8.0 mm) Copper pad area



Fig. 1 – Maximum Forward Current Derating Curve

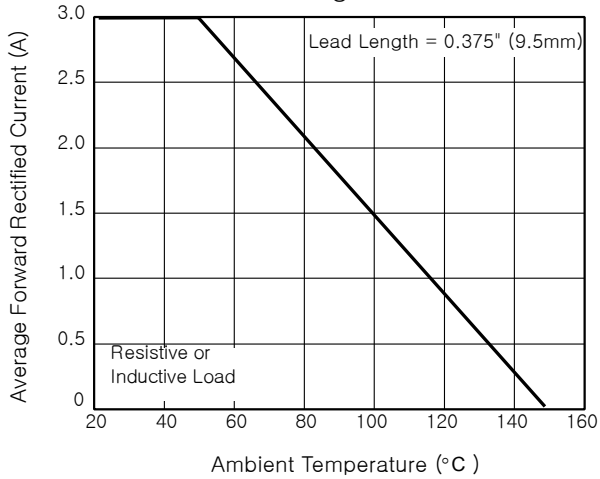


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

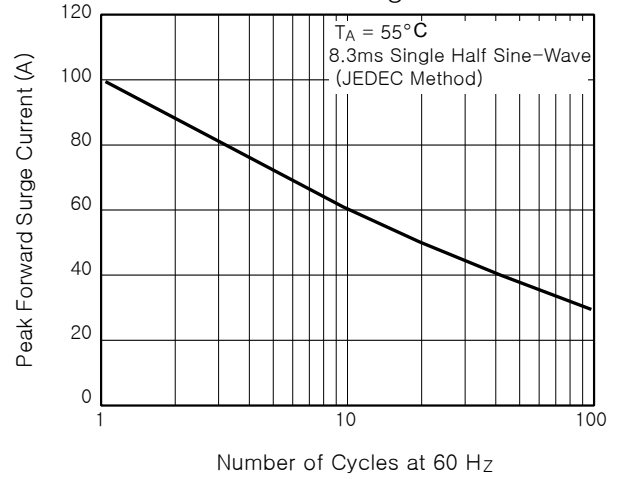


Fig. 3 – Typical Instantaneous Forward Characteristics

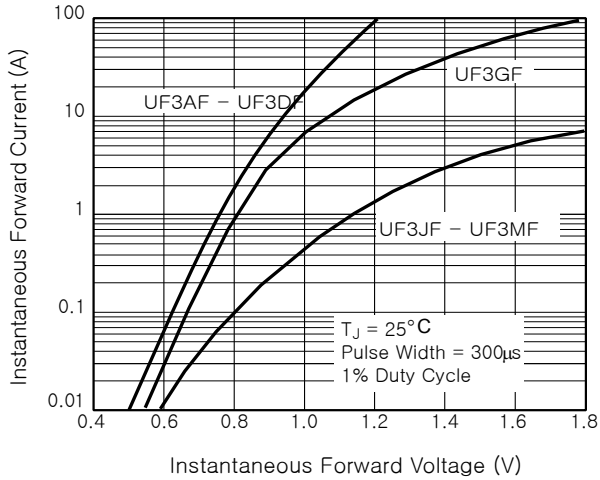


Fig. 4 – Typical Reverse Leakage Characteristics

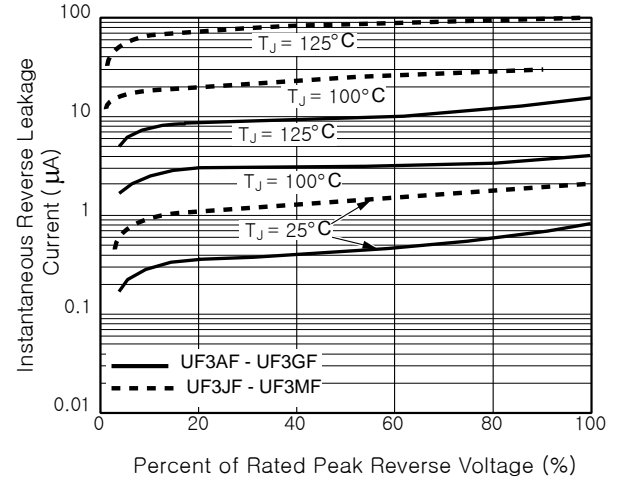


Fig. 5 – Typical Junction Capacitance

