GM GarboMicro Semiconductor

UF3AF - UF3MF

SURFACE MOUNT ULTRA FAST RECTIFIER DIODES

VOLTAGE RANGE: 50 - 1000V
CURRENT: 3.0 A

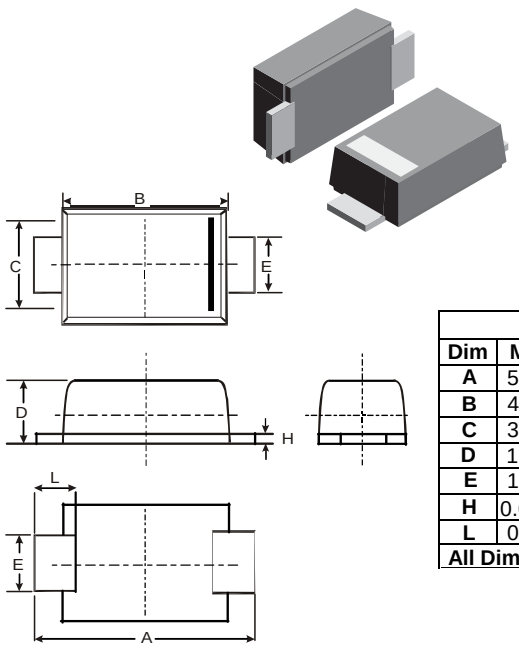
Features

- 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

RoHS COMPLIANT



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_A = 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_{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 0.375″(9.5mm) lead length at T_A=55 C	$I_{(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0							A
Maximum instantaneous forward voltage at 3.0A	V_F	1.0			1.30	1.70			V
Maximum DC reverse current T_A=25 C at rated DC blocking voltage T_A=100 C	I_R	5.0 250.0							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	50				75			ns
Typical junction capacitance (NOTE 2)	C_J	75							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JL}$	15.0							C/W
Operating junction and storage temperature range	T_J,T_{STG}	-65 to +150							C

Note: 1.Reverse recovery condition $I_{F=0.5A,IR=1.0A,Irr=0.25A}$
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3.The r mal resistance from junction tolead 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

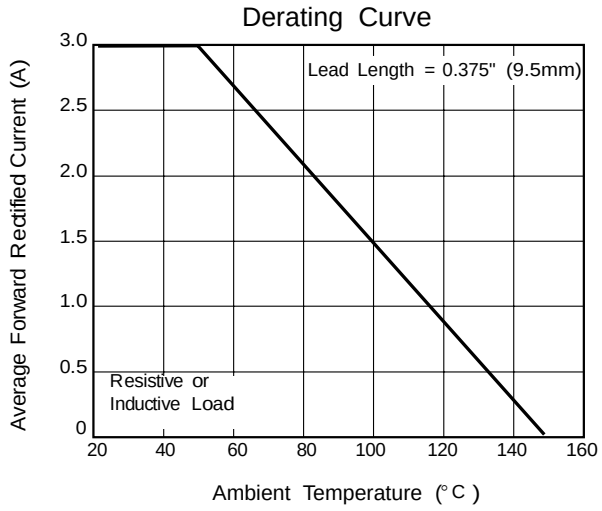


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

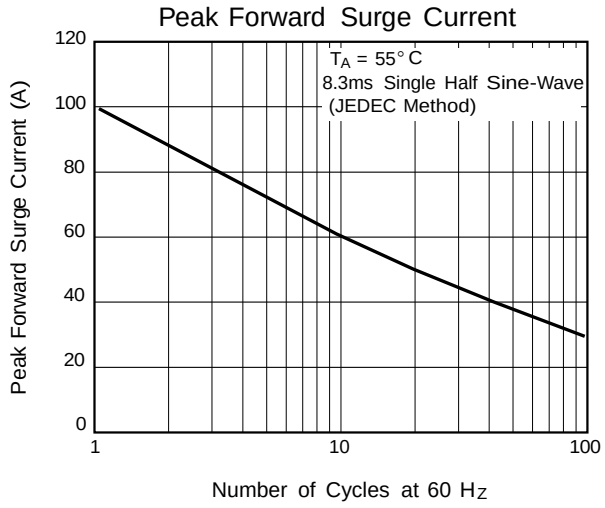


Fig. 3 – Typical Instantaneous Forward Characteristics

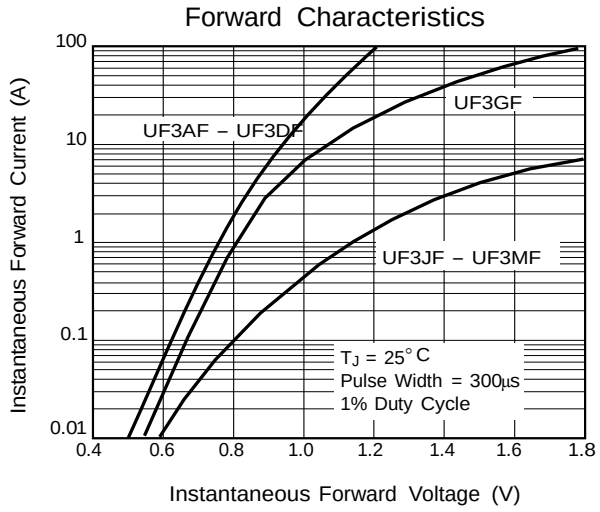


Fig. 4 – Typical Reverse Leakage Characteristics

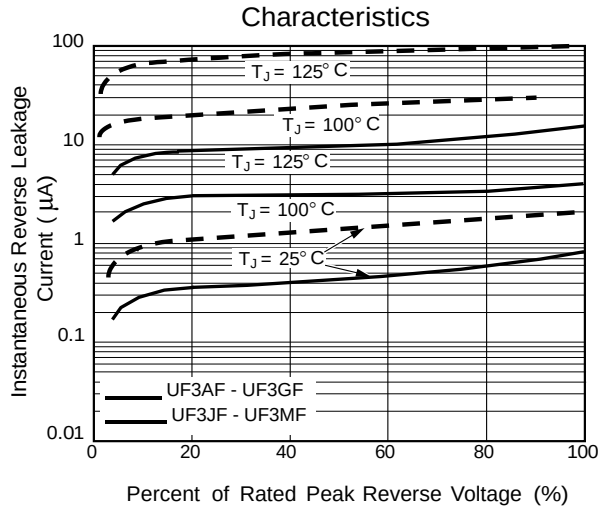


Fig. 5 – Typical Junction Capacitance