

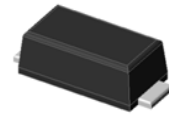


MFU1 Thru MFU5

Surface Mount Glass Passivated Superfast Recovery Rectifier
Reverse Voltage 50~600V Forward Current 1A

Features

- Glass passivated superfast recovery Rectifiers
- Very low profile - typical height of 1.0 mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- AEC-Q101 qualified for automotive customers
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



eSGA
(SOD-123FL)



RoHS
COMPLIANT

Typical Application

For use of general purpose rectifications.

Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)							
Parameter	Symbol	MFU1	MFU2	MFU3	MFU4	MFU5	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	V
Maximum average forward rectified current	$I_{F(AV)}$	1					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30					A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150					$^\circ\text{C}$

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)								
Parameter	Test Conditions	Symbol	MFU1	MFU2	MFU3	MFU4	MFU5	Unit
Maximum instantaneous forward voltage	1 A	V_F	0.95			1.3	1.7	Volts
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	5.0					μA
Maximum reverse recovery time	$I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{rr}=0.25\text{A}$	t_{rr}	35					nS
Typical junction capacitance	4.0 V, 1 MHz	C_J	0.75					pF
Typical thermal resistance ¹⁾	Juntion to Ambient	$R_{\theta JA}$	66					$^\circ\text{C/W}$
	Juntion to Case	$R_{\theta JC}$	32					
	Juntion to Mount	$R_{\theta JM}$	1					

Note:1) The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 5x5mm copper pads,2 OZ,FR4 PCB



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Ratings and Characteristics Curves

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

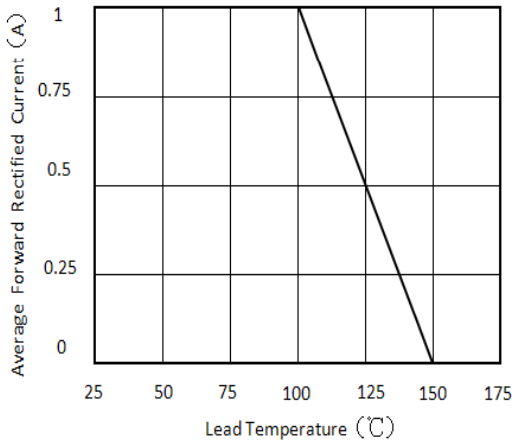


Figure 1. Forward Current Derating Curve

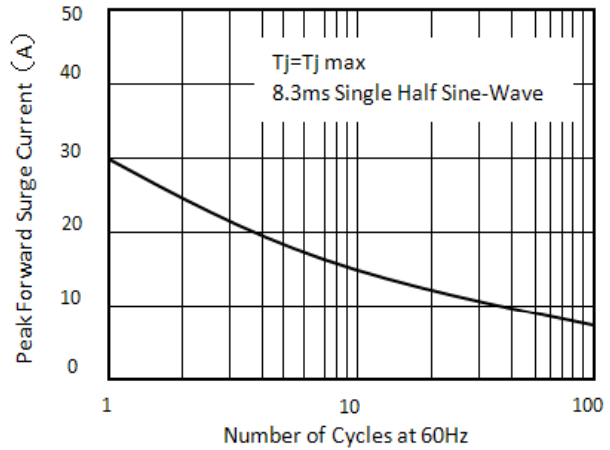


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

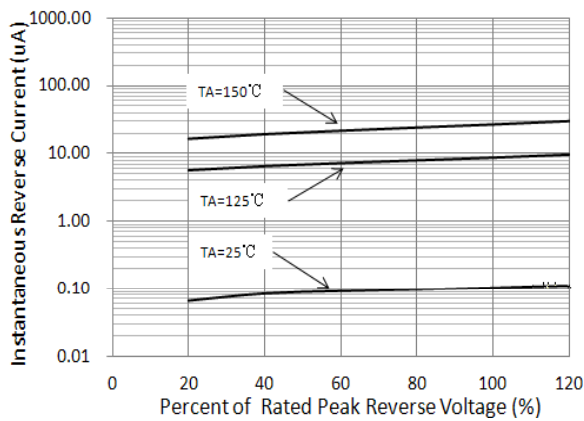


Figure 3. Typical Reverse Characteristics

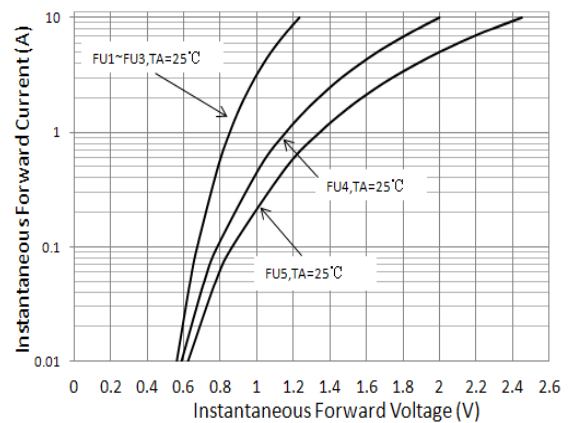


Figure 4. Typical Instantaneous Forward Characteristics

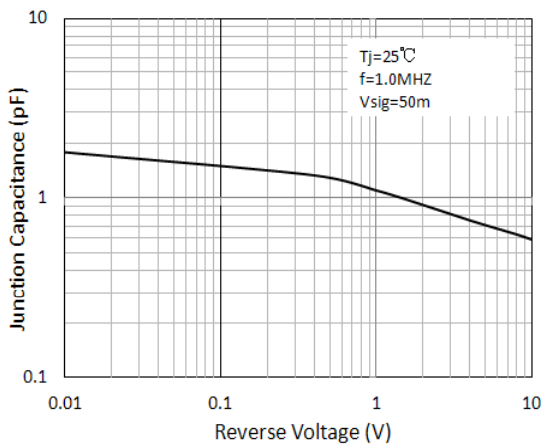


Figure 5. Typical Junction Capacitance

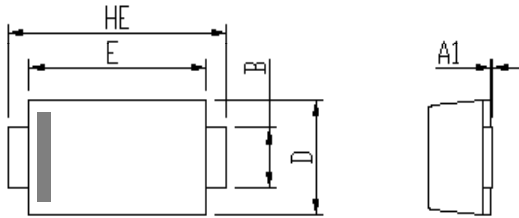


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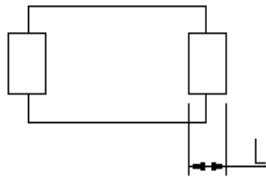
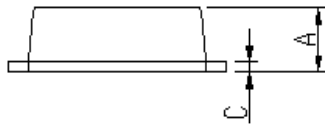
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Package Outline Dimensions

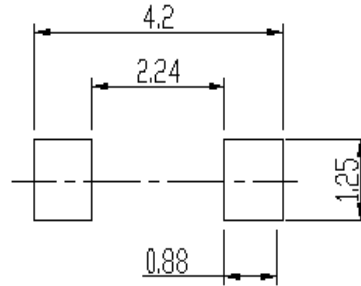
in inches (millimeters)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154



Soldering footprint



Packing Information

Packing quantities:

3000 pcs/Reel, 40 Reels/Box; 8mm Tape, 7" Reel

Tape & Reel Specification

