

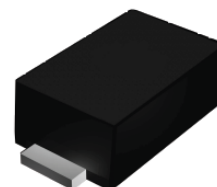
FU1 thru FU5

1A Surface Mount Glass Passivated Superfast Rectifiers

Features

- Glass passivated Standard Rectifiers
- Very low profile - typical height of 1.0 mm
- Low forward voltage drop
- Low leakage current
- AEC-Q101 qualified
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition

eSGA
(SOD-123FL)



Typical Applications

These devices are intended for use in snubber boost, lighting, piezo-injection as high frequency rectifiers and freewheeling diodes

Maximum Ratings and Electrical Characteristics

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

Symbol	Parameter	FU1	FU2	FU3	FU4	FU5	Unit
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	50	100	200	400	600	V
V_{RMS}	Maximum RMS Voltage	35	70	140	280	420	V
V_{DC}	Maximum DC Blocking Voltage	50	100	200	400	600	V
$I_{F(AV)}$	Maximum Average Forward Rectified Current	1.0					A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	30					A
V_F	Maximum Instantaneous Forward Voltage @ $I_F=1\text{A}$	0.95			1.3	1.7	V
I_R	Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	5 100					μA
t_{rr}	Typical Reverse Recovery Time @ $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$	35					ns
C_J	Typical Junction Capacitance @ 4V, 1MHz	7					pF
$R_{\theta JA}^{(1)}$	Typical Thermal Resistance, Junction-to-Ambient	90					$^\circ\text{C}/\text{W}$
$R_{\theta JC}^{(1)}$	Typical Thermal Resistance, Junction-to-Case	39					$^\circ\text{C}/\text{W}$
$R_{\theta JM}^{(1)}$	Typical Thermal Resistance, Junction-to-Mount	20					$^\circ\text{C}/\text{W}$
T_J	Operating Junction Temperature Range	-55 to +150					$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150					$^\circ\text{C}$

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

Rating and Characteristic Curves

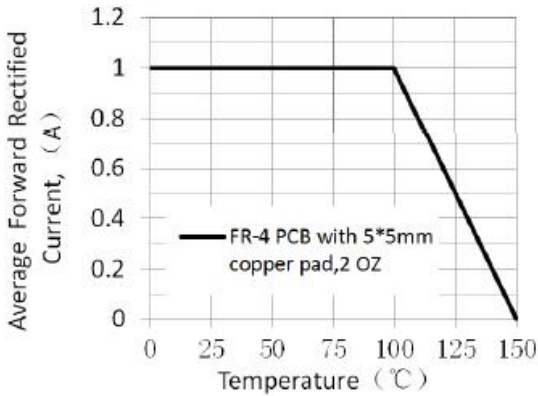


Figure 1. Forward Current Derating Curve

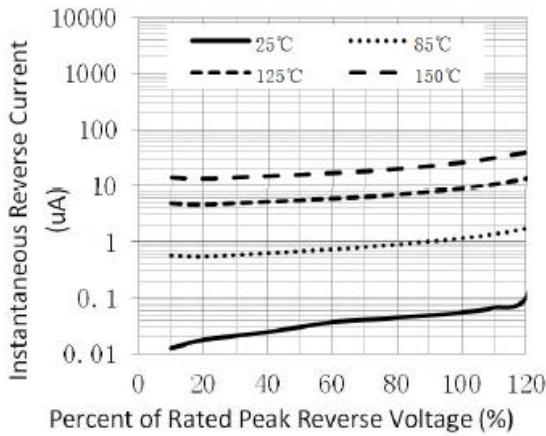


Figure 3. Typical Reverse Characteristics

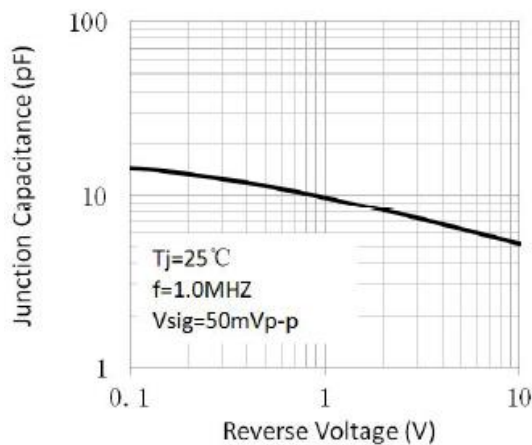


Figure 5. Typical Junction Capacitance

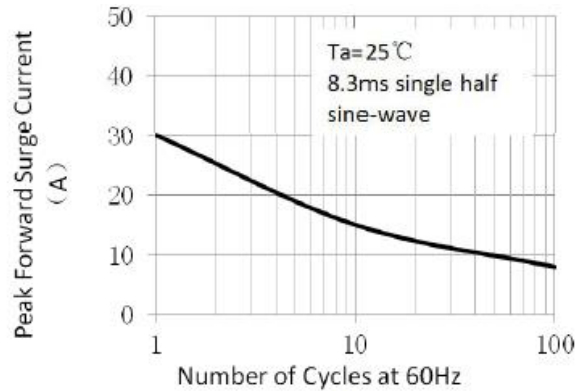


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

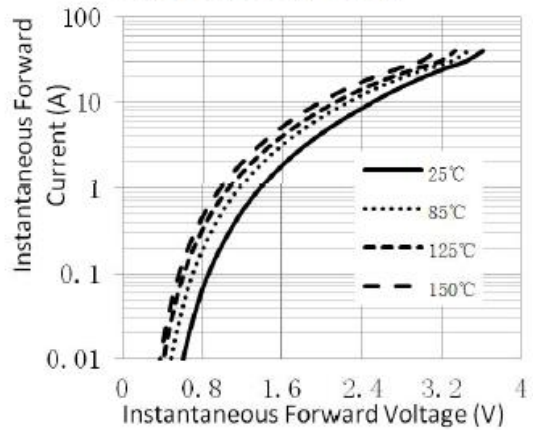


Figure 4. Typical Instantaneous Forward Characteristics (FU5)

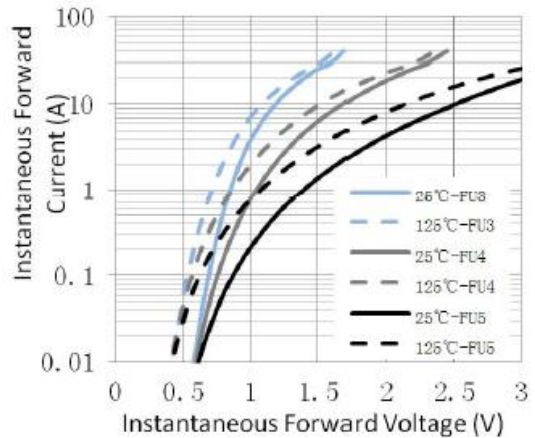
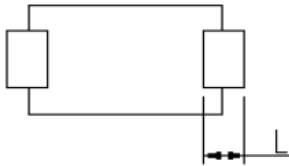
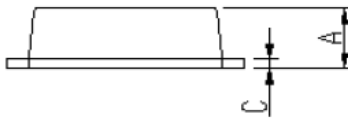
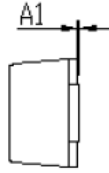
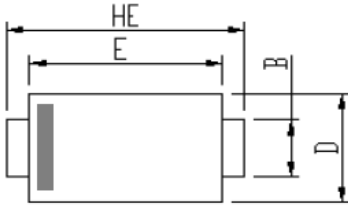


Figure 6. Typical Instantaneous Forward Characteristics

Package Outline Dimension

SOD-123FL



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

