

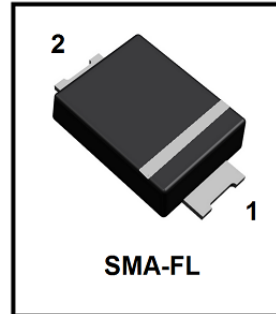
S-HFMAF101 thru S-HFMAF109

Surface Mount Glass Passivated High Efficiency Rectifiers

Reverse Voltage 50 to 1200V Forward Current 1.0A

FEATURES

- * Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- * Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- * Ultrafast recovery time for high efficiency
- * Excellent high temperature switching
- * Soft recovery characteristics
- * Cavity-free glass passivated junction
- * High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension
- * S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



Mechanical Data

Case: JEDEC SMA-FL, molded plastic over glass die
Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 28mg
Handling precaution: None

We declare that the material of product is Halogen free (green epoxy compound)

1. Electrical Characteristic

Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	Symbol	S-HFM AF101	S-HFM AF102	S-HFM AF103	S-HFM AF104	S-HFM AF105	S-HFM AF106	S-HFM AF107	S-HFM AF108	S-HFM AF109	Unit
marking		HF1	HF2	HF3	HF4	HF5	HF6	HF7	HF8	HF9	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	1200	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	840	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	1200	V
Maximum average forward rectified current lead length at $T_C = 75^\circ\text{C}$	$I_{F(AV)}$	1.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30									A
Typical thermal resistance (Note 2)	$R_{\theta JA}$	150									°C/W
	$R_{\theta Jc}$	50									
	$R_{\theta JL}$	35									
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150									°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

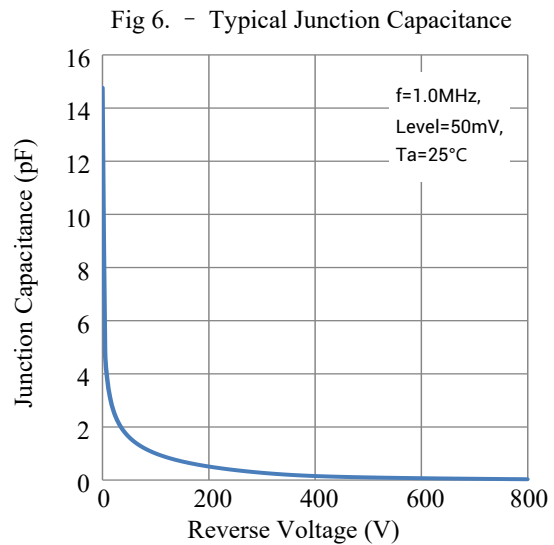
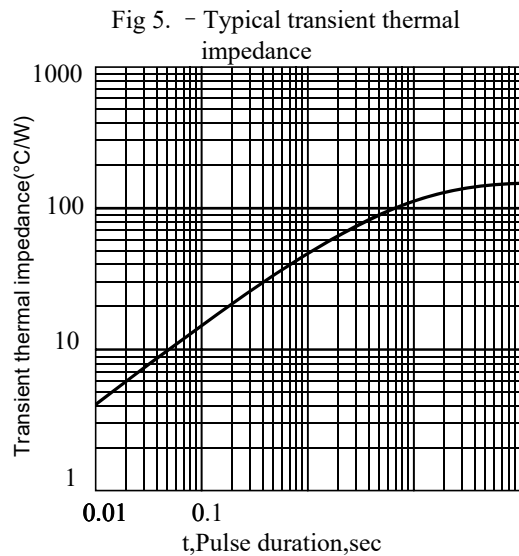
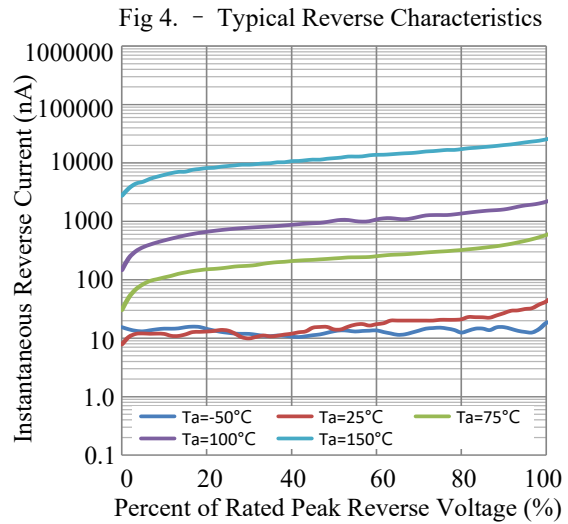
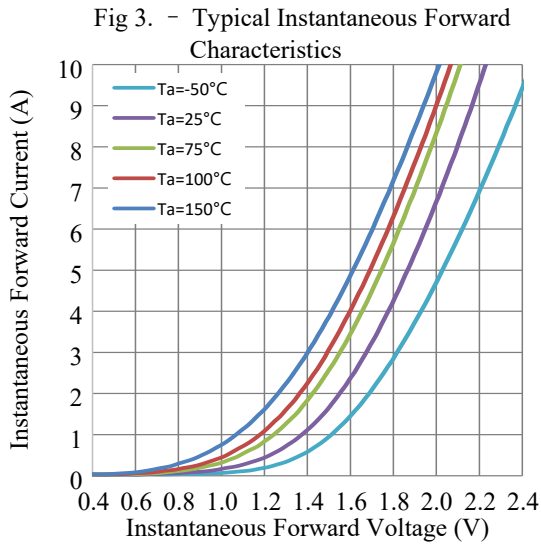
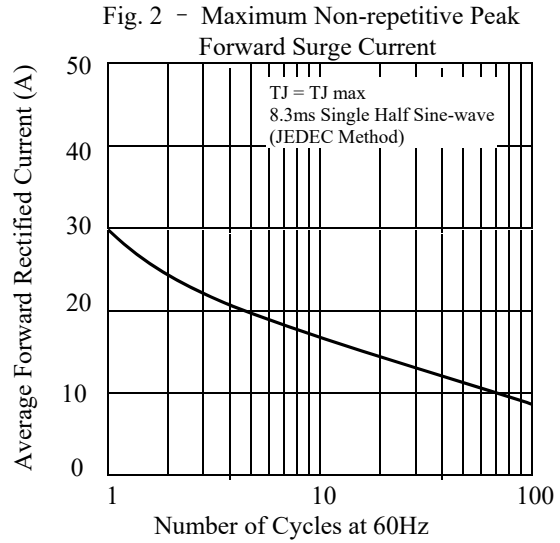
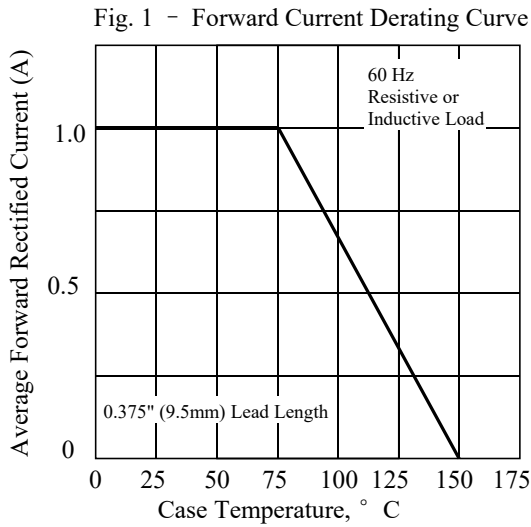
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Maximum instantaneous forward voltage at 1.0A	V_F	1.00			1.30		1.70				V	
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_J = 100^\circ\text{C}$	I_R	5.0					50					μA
Typical reverse recovery time (Note 1)	t_{rr}	50					75					ns
Typical junction capacitance at 4.0V, 1MHz	C_J	17										PF

NOTES:

1. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. 8.0mm² (.013mm thick) land areas

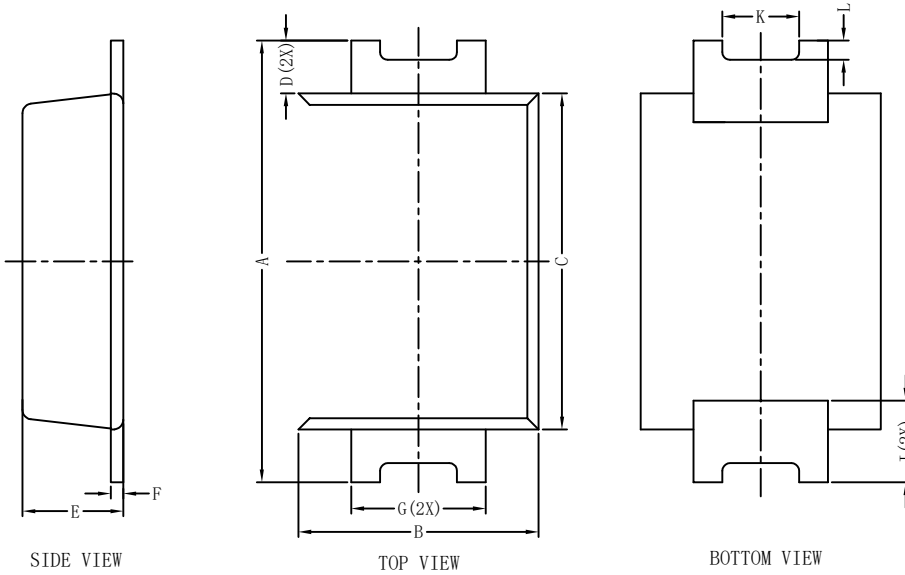
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2. ELECTRICAL CHARACTERISTIC CURVES (TA = 25°C unless otherwise noted)



3. OUTLINE AND DIMENSIONS

SMA-FL

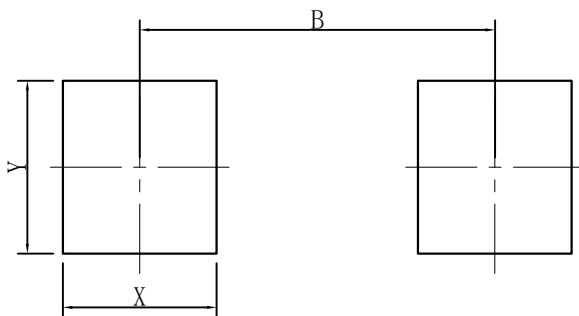


SMA-FL			
DIM	MIN	MAX	TYP
A	4.40	4.80	4.60
B	2.30	2.70	2.60
C	3.30	3.70	3.50
D	0.30	0.80	0.55
E	0.90	1.20	1.05
F	0.11	0.21	0.17
G	1.30	1.50	1.40
I	0.60	1.20	0.90
K	0.50	1.10	0.80
L	0.05	0.40	0.20
All Dimensions in mm			

GENERAL NOTES

- 1.Top package surface finish Ra0.4±0.2um
- 2.Bottom package surface finish Ra0.7±0.2um

4. SOLDERING FOOTPRINT



SMA-FL	
DIM	(mm)
X	1.60
Y	1.80
B	3.70

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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