



# EGF1A THRU EGF1M

**1.0 AMP. Surface Mount Glass Passivated Junction High Efficient Rectifiers**



Voltage Range  
50 to 1000 Volts  
Current  
1.0 Ampere

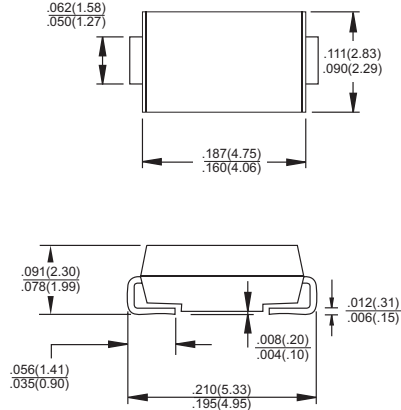
## Features

- ✧ Ideal for surface mount automotive applications
- ✧ Glass passivated cavity-free junction
- ✧ Easy pick and place
- ✧ Capable of meeting environmental standard of MIL-S-19500
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-O
- ✧ Complete device submersible temperature of 265°C for 10 sec in solder bath.

## Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.120 gram

### SMA/DO-214AC



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	EGF 1A	EGF 1B	EGF 1C	EGF 1D	EGF 1G	EGF 1J	EGF 1K	EGF 1M	Units		
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	400	600	800	1000	V		
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	280	420	560	700	V		
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	400	600	800	1000	V		
Maximum Average Forward Rectified Current @ $T_L = 125^\circ\text{C}$	$I_{(AV)}$	1.0								A		
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30								A		
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.0			1.3		1.7			V		
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_R$					5					$\mu\text{A}$	
						100					$\mu\text{A}$	
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	50					75				nS	
Typical Junction Capacitance ( Note 2 )	$C_j$	15								pF		
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$						85.0					$^\circ\text{C/W}$
							30.0					$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-65 to +175								$^\circ\text{C}$		
Storage Temperature Range	$T_{STG}$	-65 to +175								$^\circ\text{C}$		

Notes: 1. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$

2. Measured at 1 MHz and Applied  $V_R = 4.0$  Volts

3. Thermal Resistance from Junction to Ambient and from Junction to Lead P.C.B. Mounted on 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Areas.

## RATINGS AND CHARACTERISTIC CURVES (EGF1A THRU EGF1M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

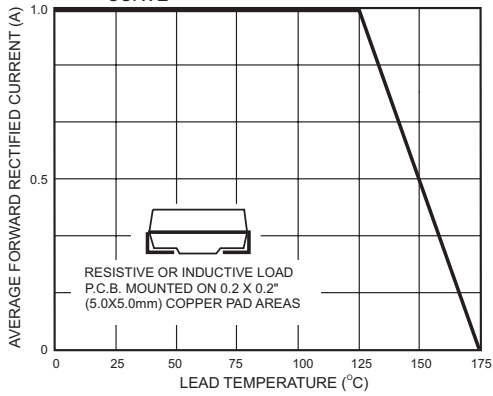


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

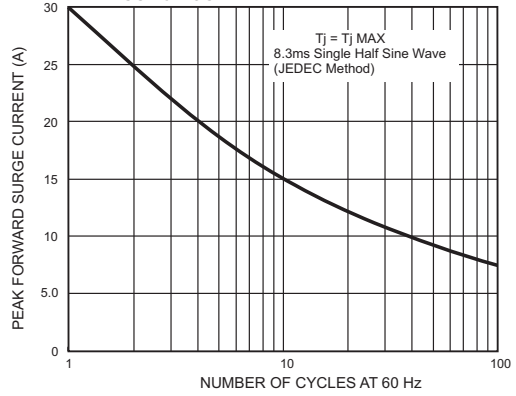


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

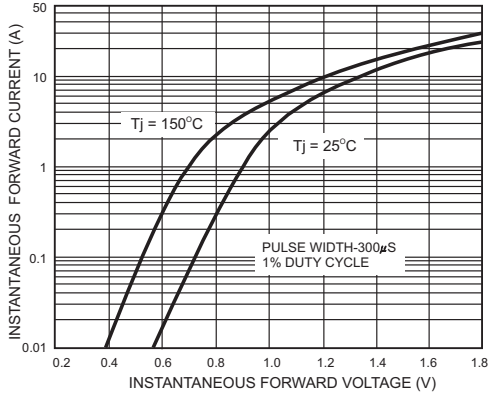


FIG.4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS

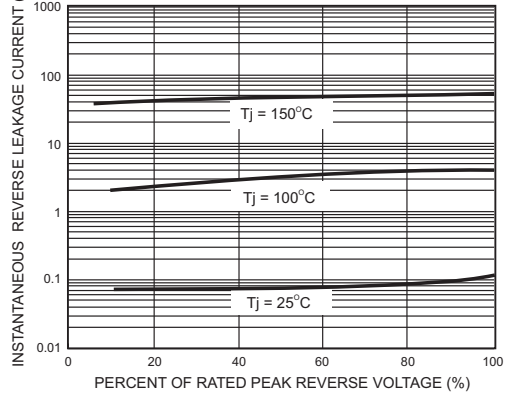


FIG.5- TYPICAL JUNCTION CAPACITANCE

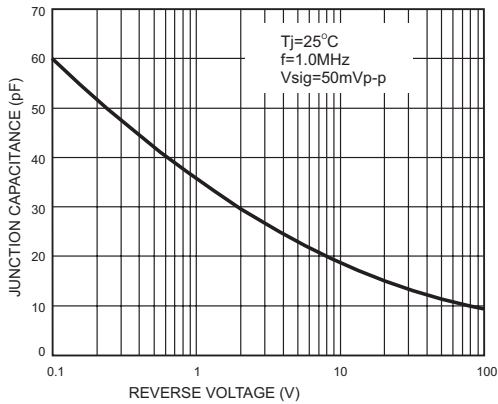


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE

