

**SURFACE MOUNT GLASS PASSIVATED  
SUPER FAST SILICON RECTIFIER**  
VOLTAGE RANGE 50 to 600 Volts CURRENT 2.0 Ampere

**FEATURES**

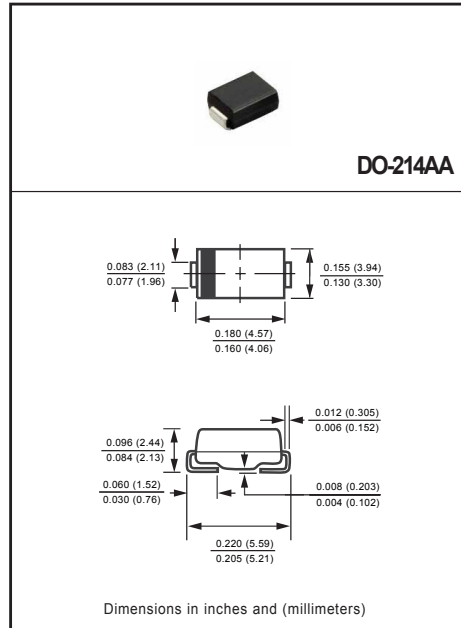
- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.098 gram

**MECHANICAL DATA**

- \* Epoxy : Device has UL flammability classification 94V-0

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	EFM201	EFM202	EFM203	EFM204	EFM205	EFM206	EFM207	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at $T_A = 55^\circ\text{C}$	$I_O$	2.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	75							Amps
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	75			75			°C/W	
	$R_{\theta JL}$	20			25				
Typical Junction Capacitance (Note 2)	$C_J$	30			20			pF	
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150							°C

**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	EFM201	EFM202	EFM203	EFM204	EFM205	EFM206	EFM207	UNITS
Maximum Instantaneous Forward Voltage at 2.0A DC	$V_F$	0.95			1.25		1.50		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_A = 25^\circ\text{C}$ 5.0							μAmps
		@ $T_A = 100^\circ\text{C}$ 100							
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	35						50	nSec

- NOTES : 1. Reverse Recovery Test Conditions:  $I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A$   
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts  
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
4. Thermal Resistance : Mounted on PCB.

2006-11  
REV.C

## RATING AND CHARACTERISTICS CURVES ( EFM201 THRU EFM207 )

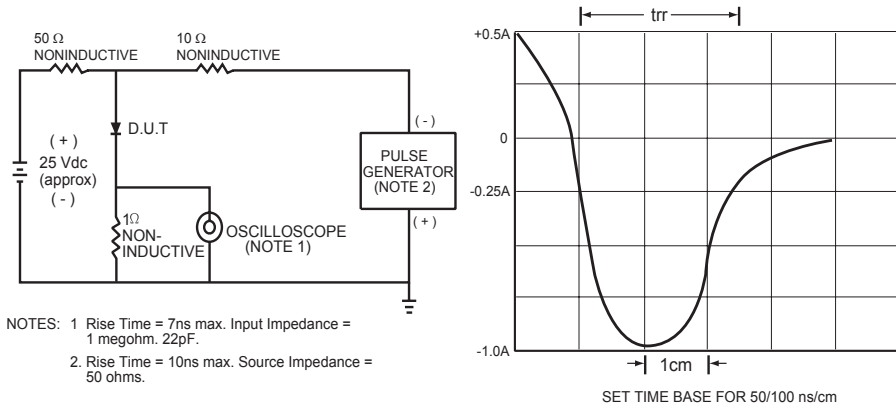


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

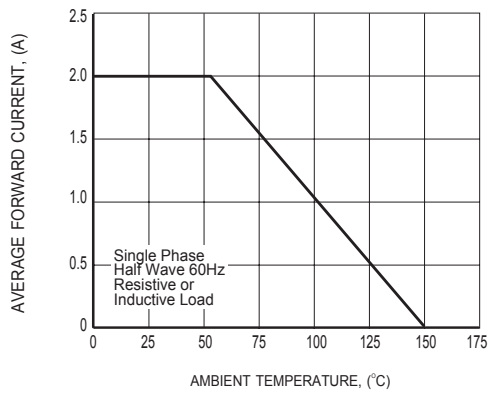


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

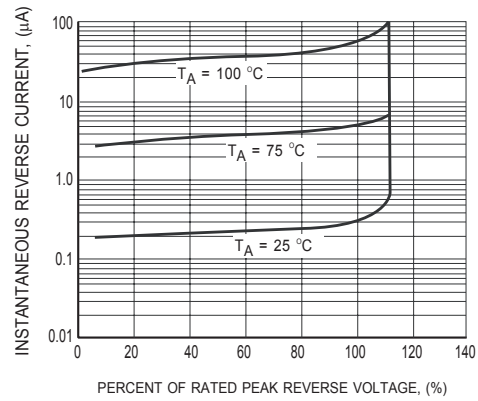


FIG.3 TYPICAL REVERSE CHARACTERISTICS

## RATING AND CHARACTERISTICS CURVES ( EFM201 THRU EFM207 )

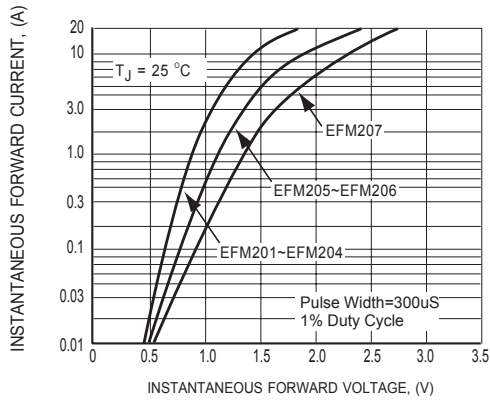


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

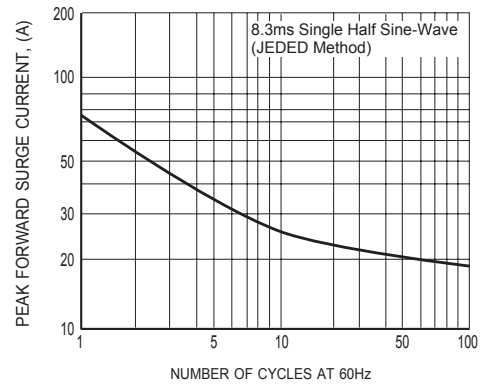


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

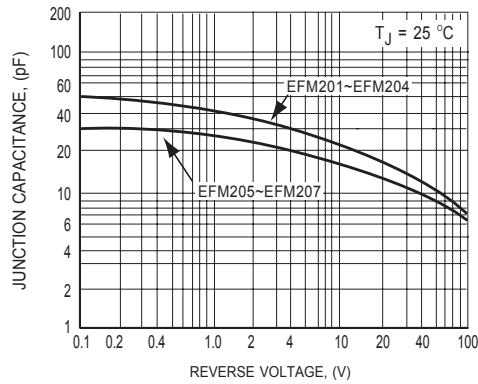
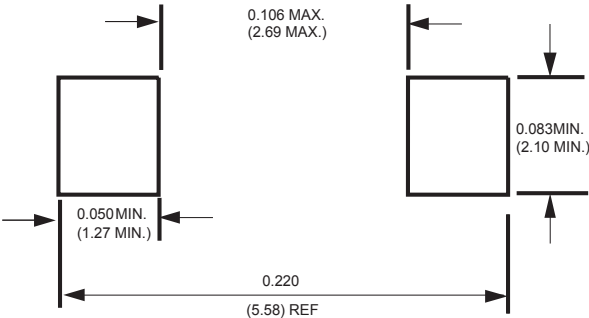


FIG.6 TYPICAL JUNCTION CAPACITANCE

# Mounting Pad Layout



Dimensions in inches and (millimeters)



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