

SURFACE MOUNT GLASS PASSIVATED
SUPER FAST SILICON RECTIFIER

VOLTAGE RANGE 50 to 600 Volts CURRENT 1.0 Ampere

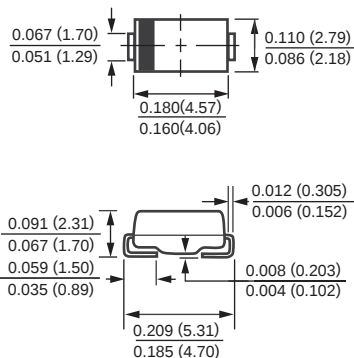
FEATURES

- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.057 gram

MECHANICAL DATA

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

DO-214AC



Dimensions in inches and (millimeters)

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 (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	EFM101	EFM102	EFM103	EFM104	EFM105	EFM106	EFM107	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	Volts
Maximum RMS Volts	VRMS	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	Volts
Maximum Average Forward Current at TA = 55°C	Io	1.0							Amps
Peak Forward Surge Current IFM (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	30							Amps
Typical Junction Capacitance (Note 2)	Cj	15				10			pF
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150							°C

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

CHARACTERISTICS		SYMBOL	EFM101	EFM102	EFM103	EFM104	EFM105	EFM106	EFM107	UNITS
Maximum Forward Voltage at 1.0A DC		V _F	0.95				1.25		1.70	Volts
Maximum DC Reverse Current	@ T _A = 25°C	I _R	5.0							uAmps
at Rated DC Blocking Voltage	@ T _A =100°C		100							
Maximum Reverse Recovery Time (Note 1)		t _{rr}	35						50	nSec

NOTES : 1. Test Conditions: IF=0.5A, IR=-1.0A, IRR=-0.25A.

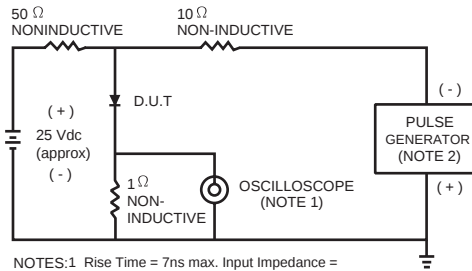
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

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RATING AND CHARACTERISTIC CURVES (EFM101 THRU EFM107)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm, 22 pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

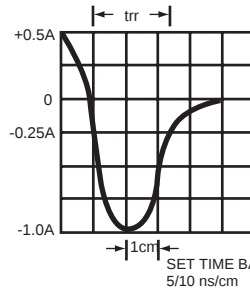


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

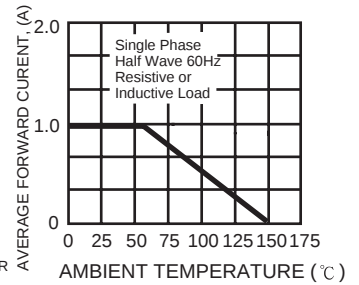


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

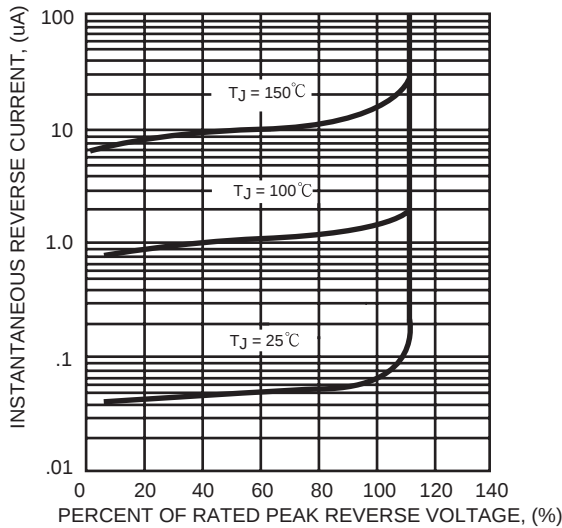


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

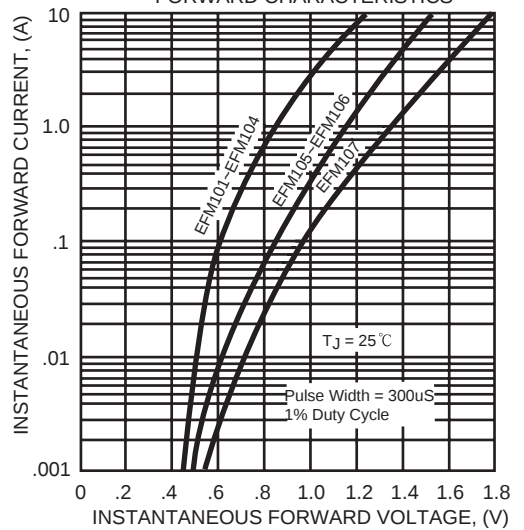


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

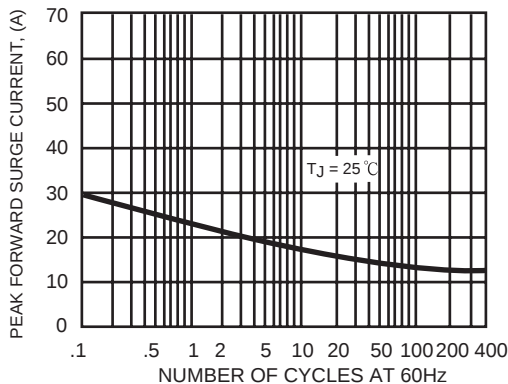
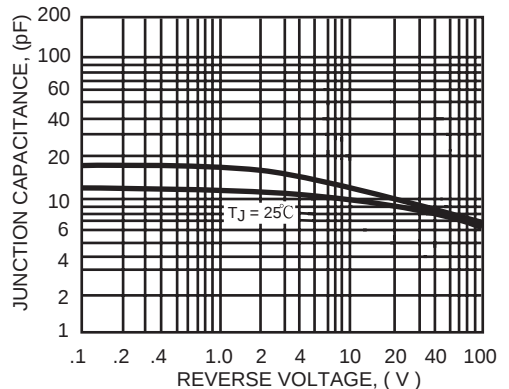
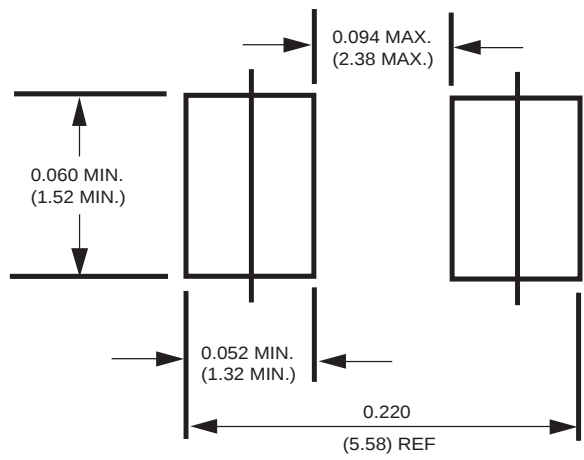


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



Mounting Pad Layout



Dimensions in inches and (millimeters)