

**SURFACE MOUNT GLASS PASSIVATED  
 SUPER FAST SILICON RECTIFIER**

**VOLTAGE RANGE 50 to 400 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**

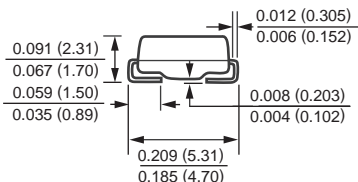
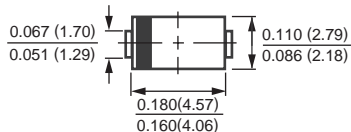
- \* Epoxy : Device has UL flammability classification 94V-0

**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%.



**DO-214AC**



Dimensions in inches and (millimeters)

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

RATINGS		SYMBOL	EFM101	EFM102	EFM103	EFM104	EFM105	EFM106	UNITS
Maximum Recurrent Peak Reverse Voltage		V <sub>RRM</sub>	50	100	150	200	300	400	Volts
Maximum RMS Volts		V <sub>RMS</sub>	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage		V <sub>DC</sub>	50	100	150	200	300	400	Volts
Maximum Average Forward Current at TA = 55°C		I <sub>O</sub>	1.0						Amps
Peak Forward Surge Current I <sub>FM</sub> (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		I <sub>FSM</sub>	30						Amps
Typical Junction Capacitance (Note 2)		C <sub>J</sub>	15			10			pF
Operating and Storage Temperature Range		T <sub>J</sub> , T <sub>STG</sub>	-65 to + 175						°C

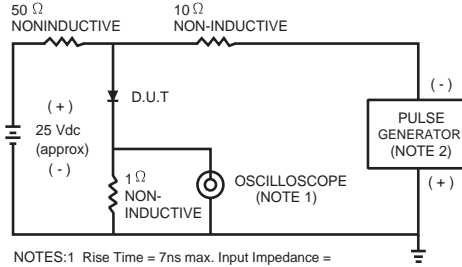
**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	EFM101	EFM102	EFM103	EFM104	EFM105	EFM106	UNITS
Maximum Forward Voltage at 1.0A DC		V <sub>F</sub>	0.95			1.25			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	I <sub>R</sub>	5.0						uAmps
	@ TA = 150°C		50						
Maximum Reverse Recovery Time (Note 1)		t <sub>rr</sub>	35						nSec

NOTES : 1. Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=-1.0A, I<sub>RR</sub>=-0.25A.  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES ( EFM101 THRU EFM106 )

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.

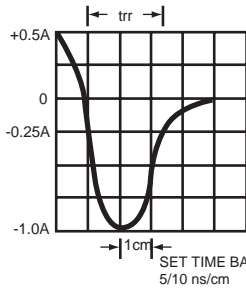


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

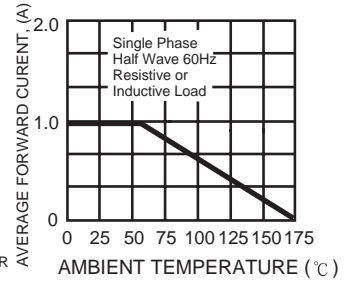


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

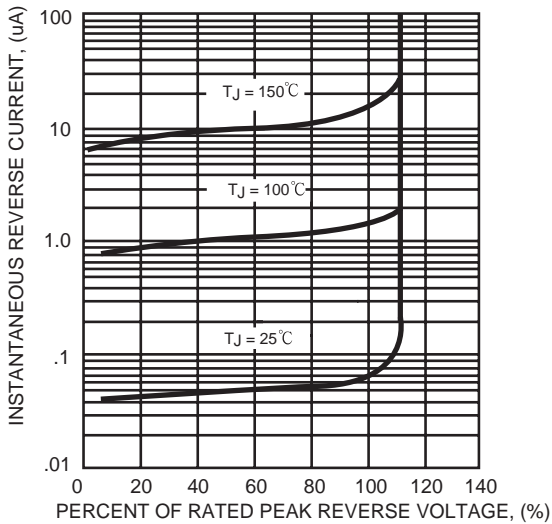


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

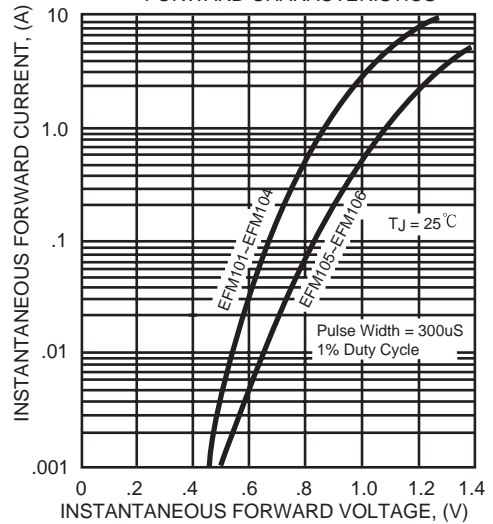


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

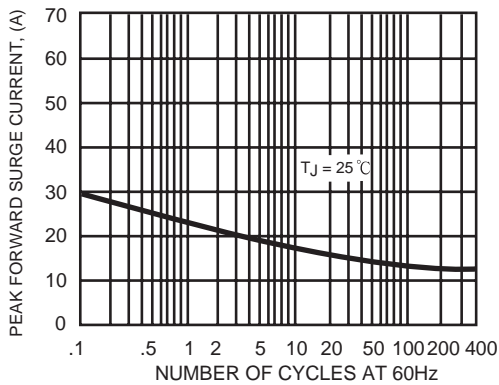


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

