

**SURFACE MOUNT GLASS PASSIVATED
SUPER FAST SILICON RECTIFIER
VOLTAGE RANGE 50 to 600 Volts CURRENT 3.0 Ampere**

FEATURES

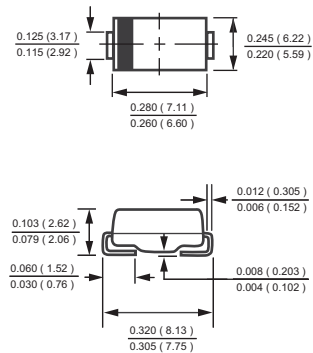
- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 gram
- * P/N suffix V means AEC-Q101 qualified
- * P/N suffix V means Halogen-free

MECHANICAL DATA

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



DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Resistive or inductive load.

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

RATINGS	SYMBOL	EFM301	EFM302	EFM303	EFM304	EFM305	EFM306	EFM307	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°C	I _O	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	125							Amps
Typical Current Square Time	I ² T	64.8							A ² S
Typical Thermal Resistance (Note 4)	R _{θJA}	47			50			°C/W	
	R _{θJL}	12			15				
Typical Junction Capacitance (Note 2)	C _J	50			30			pF	
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150							°C

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

CHARACTERISTICS	SYMBOL	EFM301	EFM202	EFM303	EFM304	EFM305	EFM306	EFM307	UNITS
Maximum Instantaneous Forward Voltage at 3.0ADC	V _F	0.95			1.25		1.50		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@T _A = 25°C							μAmps
		@T _A = 150°C							mAmps
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.

RATING AND CHARACTERISTICS CURVES (EFM301 THRU EFM307)

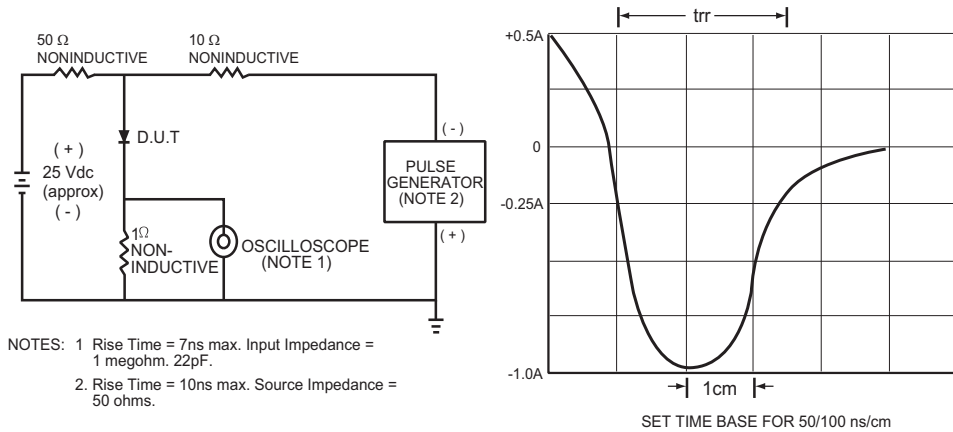


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

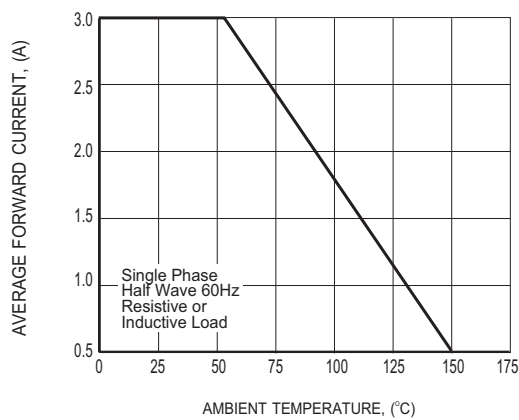


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

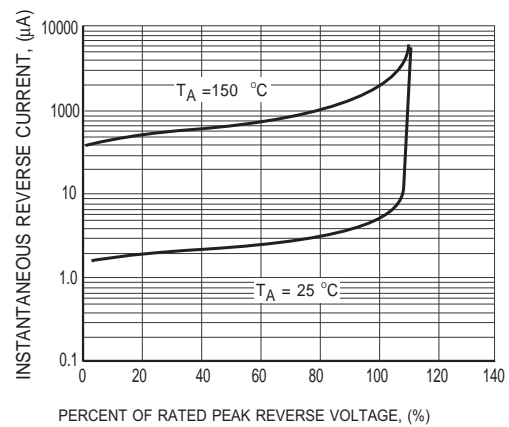


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (EFM301 THRU EFM307)

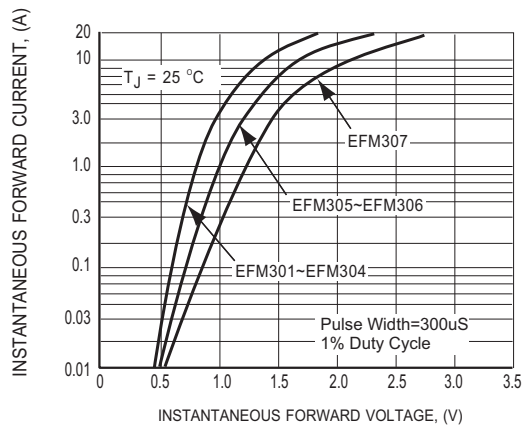


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

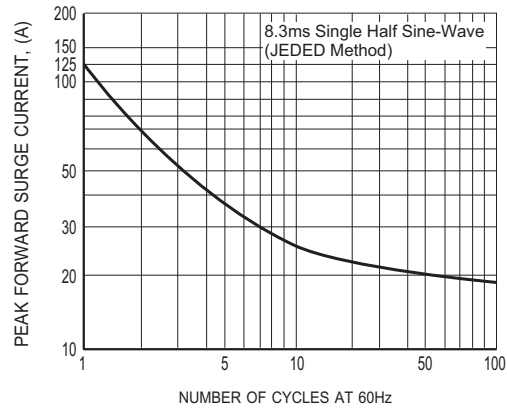


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

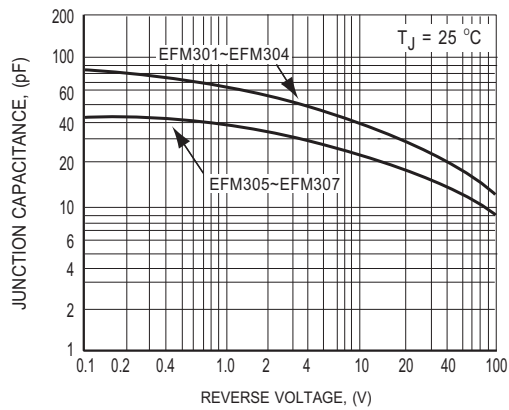
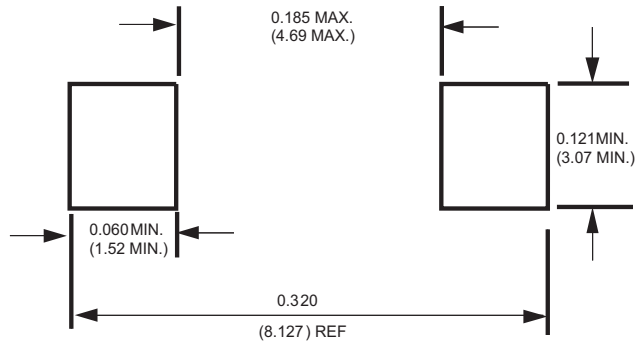


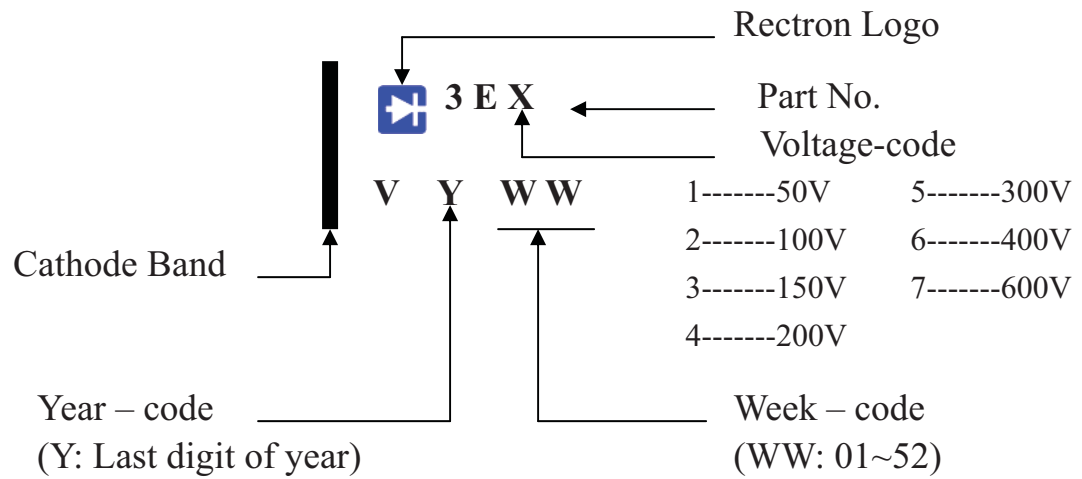
FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMC	-T	500	1,500	---	---	178	390*205*310	12,000	6.65
SMC	-W	3,000	3,000	---	---	330	360*355*360	24,000	11.50

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