

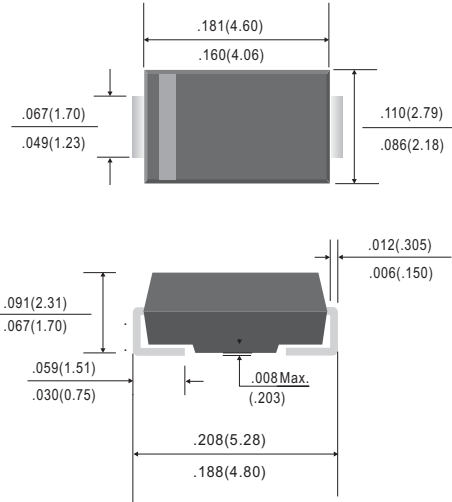


1.0 AMP SUPER FAST RECTIFIER

DO-214AC/SMA PACKAGE

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * RoHS product for packing code suffix "G"
- Halogen free product for packing code suffix "H"



Dimensions in inches and (millimeters)

MECHANICAL DATA

- * Case: DO-214AC/SMA Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.06 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

RATINGS	SYMBOL	EFM101	EFM102	EFM103	EFM104	EFM105	EFM106	EFM108	UNIT
Marking Code		E1	E2	E3	E4	E5	E6	E8	
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 Current at T _A = 55°C	I _O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30							Amps
Typical Thermal Resistance	R _{ΘJA}	85							°C/W
Typical Junction Capacitance (Note 2)	C _J	15				10			pF
Operating Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{sTg}	-65 to +175							°C

CHARACTERISTICS	SYMBOL	EFM101	EFM102	EFM103	EFM104	EFM105	EFM106	EFM108	UNIT	
Maximum Forward Voltage at 1.0A DC(Note 3)	V _F	0.95				1.25		1.75		Volts
Maximum Average Reverse Current at @TA=25°C	I _R	5.0							μAmps	
Rated DC Blocking Voltage @TA=100°C		150								
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35							nS	

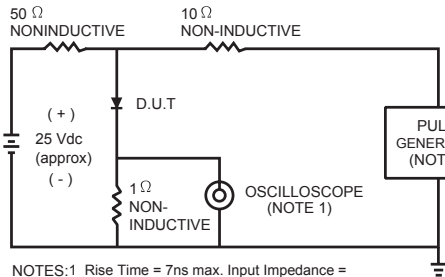
NOTES :1. Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A

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

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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.

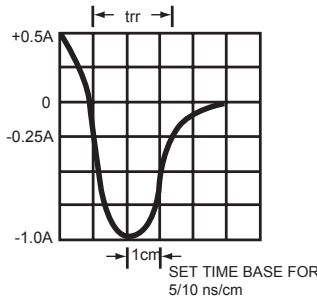


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

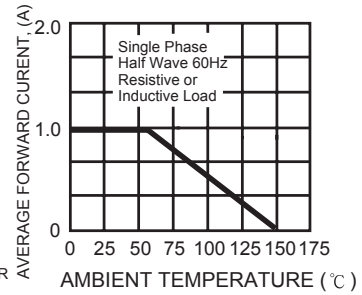


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

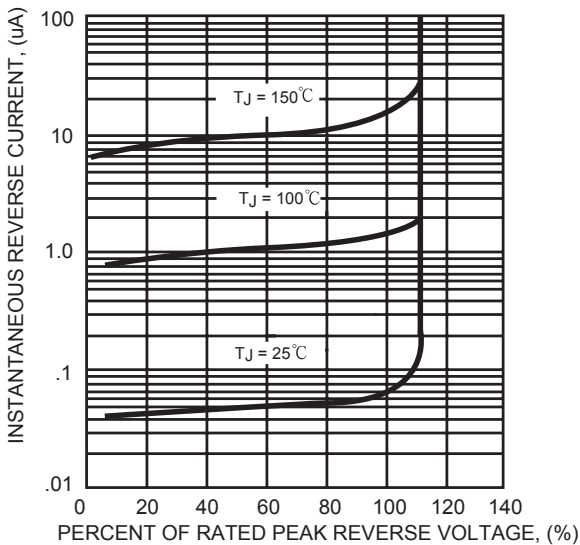


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

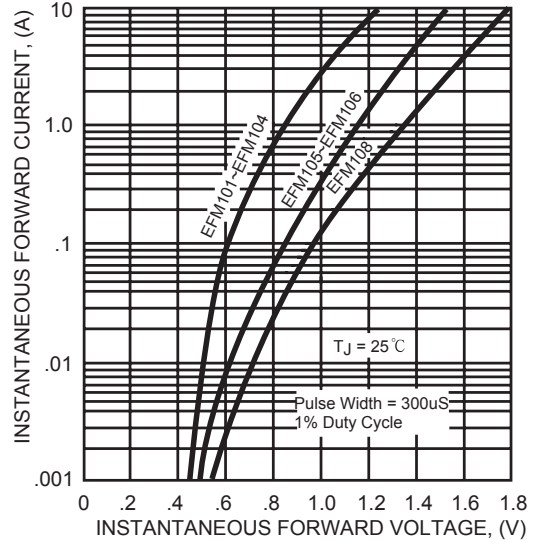


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

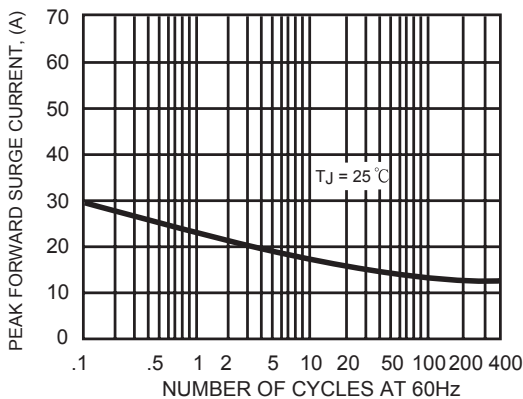


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

