



WILLAS



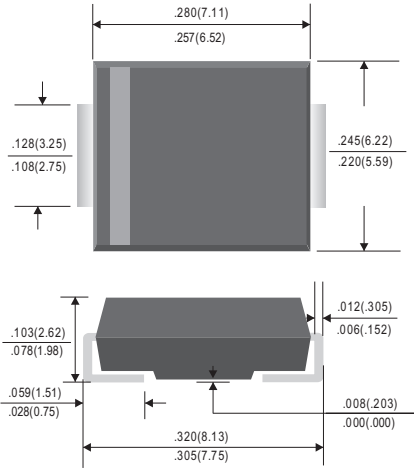
**EFM301
THRU
EFM308**

3.0 AMP SUPER FAST RECTIFIER

DO-214AB/SMC PACKAGE

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Pb free plating 99% Sn above



Dimensions in inches and (millimeters)

MECHANICAL DATA

- * Case: DO-214AB/SMC Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.2' 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	EFM301	EFM302	EFM303	EFM304	EFM305	EFM306	EFM308	UNIT
Marking Code		3E1	3E2	3E3	3E4	3E5	3E6	3E8	
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	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	%\$\$							Amps
Typical Thermal Resistance	R _{θJA}	47			50				°C/W
Typical Junction Capacitance (Note 2)	C _J	50			30				pF
Operating Temperature Range	T _J	-65 to +150							°C
Storage Temperature Range	T _{STG}	-65 to +175							°C

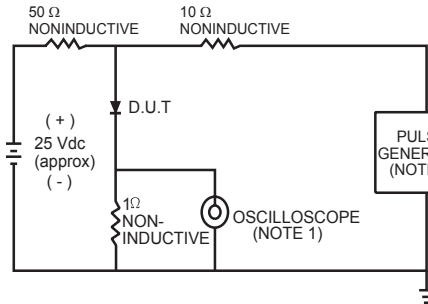
CHARACTERISTICS	SYMBOL	EFM301	EFM302	EFM303	EFM304	EFM305	EFM306	EFM308	UNIT
Maximum Forward Voltage at 3.0A DC(Note 3)	V _F	0.95			1.25		1.75		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	I _R	@TA=25°C			5.0				μAmps
		@TA=150°C			50				
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35							nS

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

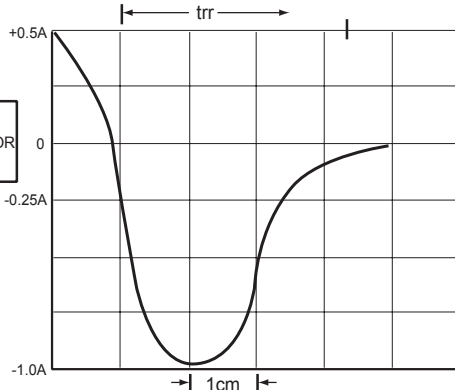
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

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



SET TIME BASE FOR 50/100 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

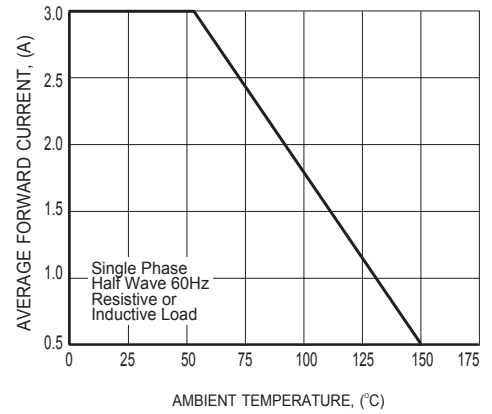


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

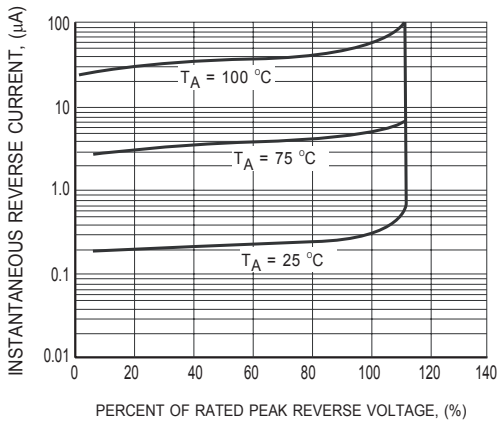


FIG.3 TYPICAL REVERSE CHARACTERISTICS

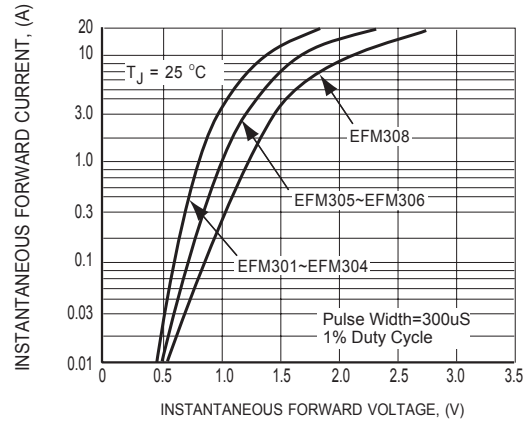


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

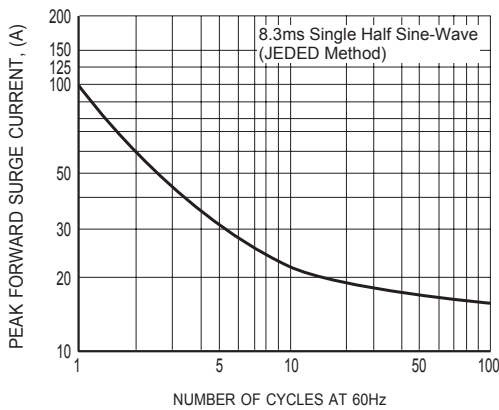


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

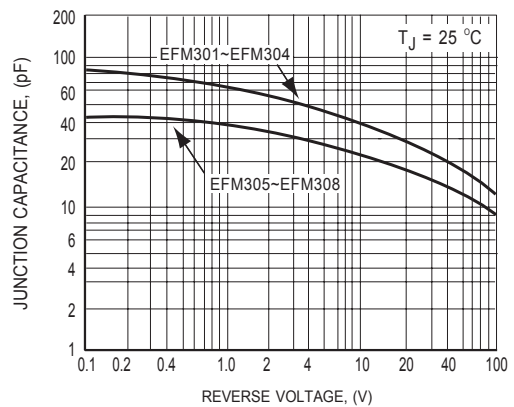


FIG.6 TYPICAL JUNCTION CAPACITANCE