WILLAS

RoHS COMPLIANT

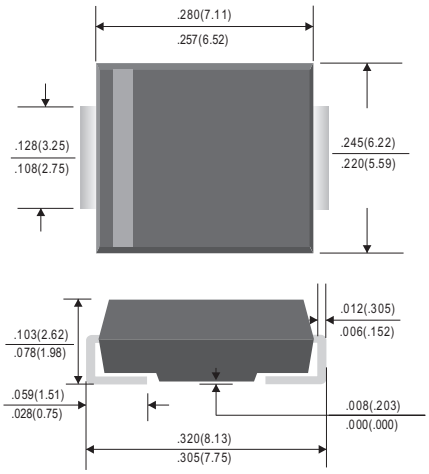
EFM301 THRU EFM308

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: 0.23gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ 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℃	I_O	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100							Amps
Typical Thermal Resistance	$R_{\Theta JA}$	47				50			℃/W
Typical Junction Capacitance (Note 2)	C_J	50				30			pF
Operating Temperature Range	T_J	-65 to +150							℃
Storage Temperature Range	T_{STG}	-65 to +175							℃

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	@TA=25℃	I_R	5.0							μAmps
Rated DC Blocking Voltage	@TA=150℃		50							
Maximum Reverse Recovery Time (Note 1)		Trr	35							nS

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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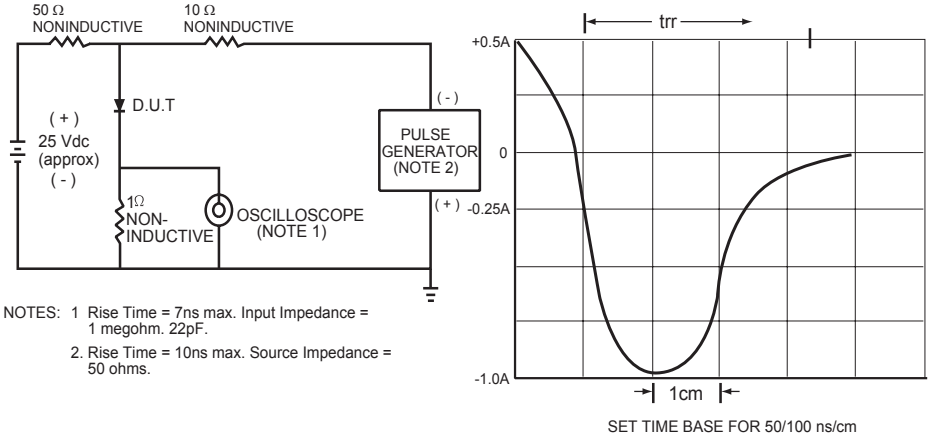

NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

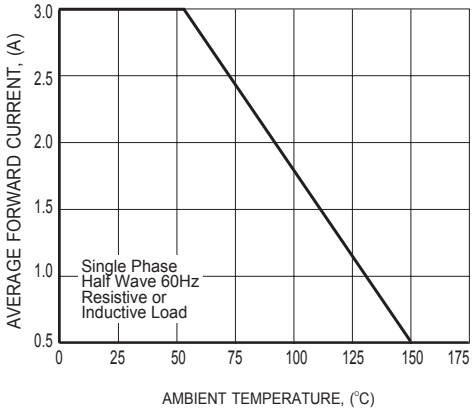

FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

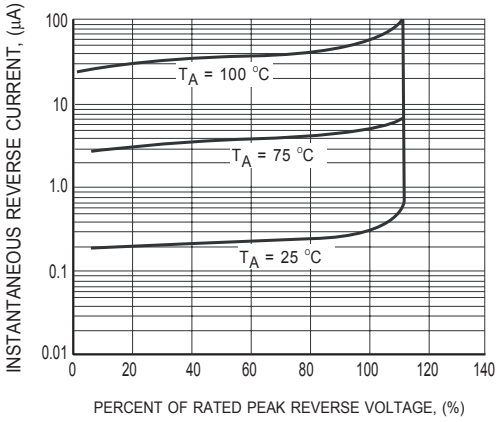

FIG.3 TYPICAL REVERSE CHARACTERISTICS

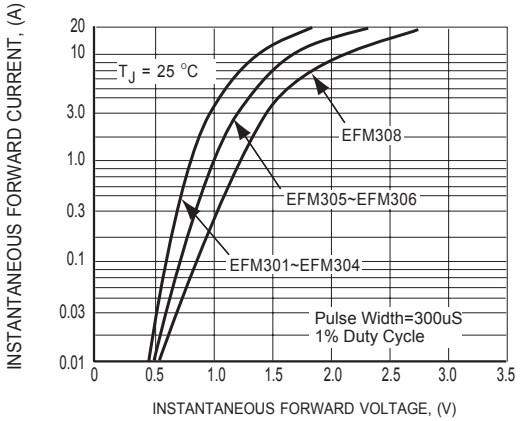

FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

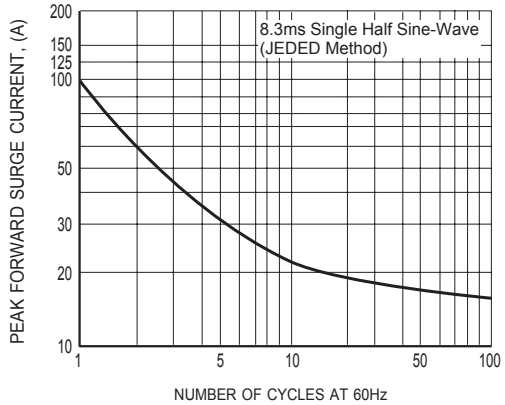

FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

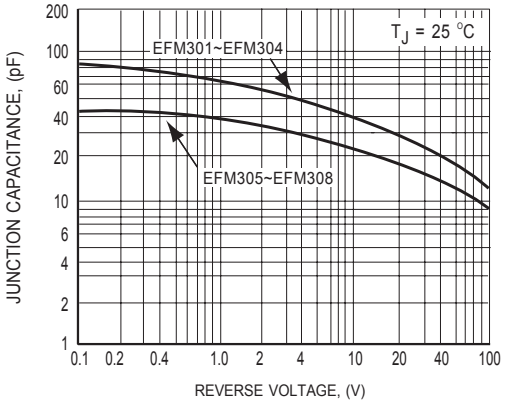

FIG.6 TYPICAL JUNCTION CAPACITANCE