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1A SURFACE MOUNT FAST EFFICIENT RECOVERY RECTIFIERS

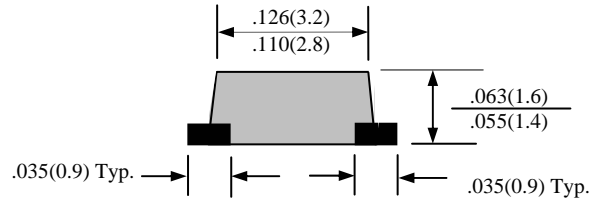
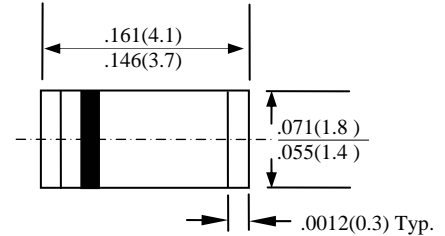
EFM11M THRU EFM18M

FEATURES

- FOR SURFACE MOUNTED APPLICATIONS
- LOW PROFILE PACKAGE
- BUILT-IN STRAIN RELIEF
- EASY PICK AND PLACE
- PLASTIC MATERIAL USED CARRIES UNDERWRITERS
LABORATORY CLASSIFICATION 94 V-0
- HIGH TEMPERATURE SOLDERING: 250°C/10 SECONDS AT
TERMINALS

MECHANICAL DATA

- CASE: MOLDED PLASTIC, SOD-123, DIMENSIONS
IN INCHES AND (MILLIMETERS)
- TERMINALS: SOLDER PLATED
- POLARITY: INDICATED BY CATHODE BAND
- WEIGHT: 0.04 GRAMS



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%

RATINGS	SYMBOL	EFM11M	EFM12M	EFM14M	EFM15M	EFM16M	EFM18M	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	200	300	400	600	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	140	210	280	420	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	200	300	400	600	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT AT $T_L=90^\circ\text{C}$	I_o	1.0						A
MAXIMUM OVERLOAD SURGE 8.3ms SINGLE HALF SINE-WAVE	I_{FSM}	30						A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_j	15			10			PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta jL}$	20						°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150						°C
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 125						°C

ELECTRICAL CHARACTERISTICS ($A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	EFM11M	EFM12M	EFM14M	EFM15M	EFM16M	EFM18M	UNITS
MAXIMUM FORWARD VOLTAGE AT 1.0A AND 25°C	V_F	0.98			1.25		1.75	V
MAXIMUM REVERSE CURRENT AT 25°C	I_R	10						μA
MAXIMUM REVERSE RECOVERY TIME (NOTE3)	T_{RR}	25						nS
MARKING		E1	E2	E4	E5	E6	E8	

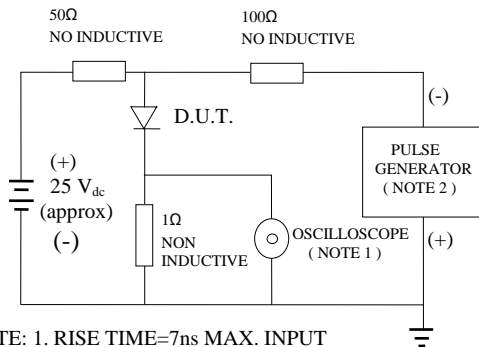
NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS

2. THERMAL RESISTANCE FROM JUNCTION TO AMBIENT AND JUNCTION TO LEAD P.C.B. MOUNTED ON
0.3×0.3" (8.0×8.0mm) COPPER PAD AREAS

3. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVE EFM11M THRU EFM18M

FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1 MOhms 22PF
 2. RISE TIME =10ns MAX. SOURCE IMPEDANCE=50 OHMS

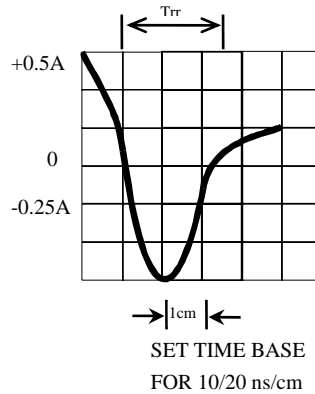


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

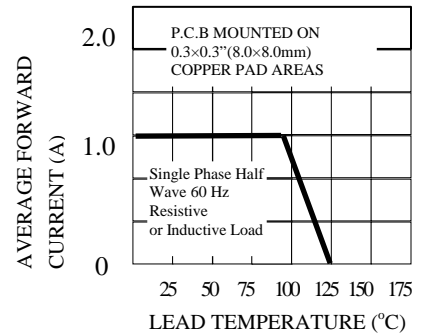


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

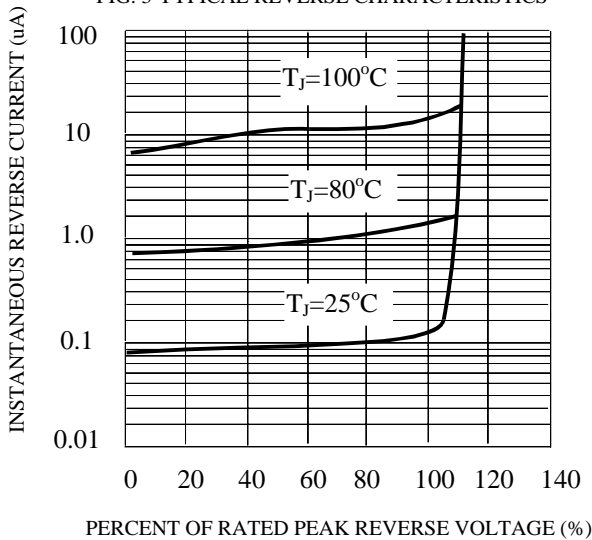


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

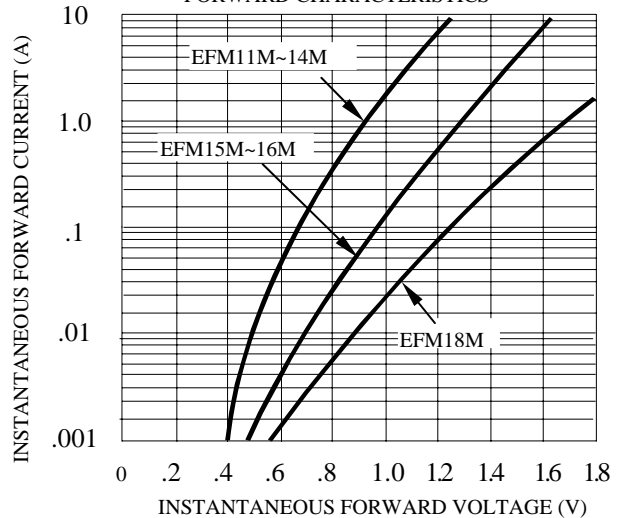


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

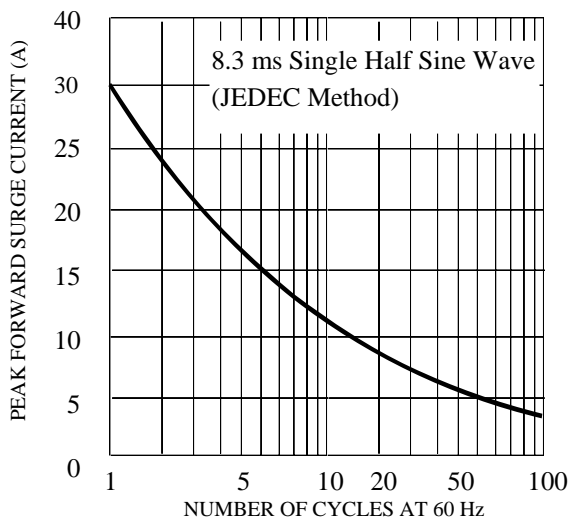


FIG. 6-TYPICAL JUNCTION CAPACITANCE

