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6A FAST RECOVERY PLASTIC RECTIFIER

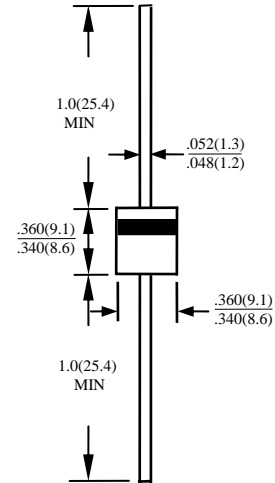
FR60-005 THRU FR60-10

FEATURES

- FAST RECOVERY TIMES
- DIFFUSED JUNCTION
- LOW COST
- UL 94V-0 FLAME RETARDANT EPOXY MOLDING COMPOUND
- HIGH SURGE CURRENT CAPABILITY

MECHANICAL DATA

- CASE: TRANSFER MOLDED, P6, DIMENSIONS IN INCHES AND (MILLIMETERS)
- LEADS: SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: CATHODE INDICATED BY COLOR BAND
- WEIGHT: 2.1 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	FR60-005	FR60-01	FR60-02	FR60-04	FR60-06	FR60-08	FR60-10	UNITS	
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	200	400	600	800	1000	V	
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	140	280	420	560	700	V	
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	200	400	600	800	1000	V	
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375"(9.5mm) LEAD LENGTH AT $T_A=55^\circ\text{C}$	I_O	6.0								A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	300								A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_j	100								PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	10								$^\circ\text{C/W}$
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150								$^\circ\text{C}$
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 150								$^\circ\text{C}$

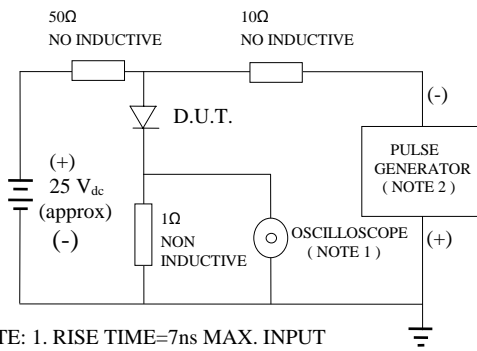
ELECTRICAL CHARACTERISTICS ($A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	FR60-005	FR60-01	FR60-02	FR60-04	FR60-06	FR60-08	FR60-10	UNITS	
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.3								V
MAXIMUM REVERSE CURRENT AT 25°C	I_R	10								μA
MAXIMUM REVERSE CURRENT AT 100°C	I_R	100								μA
MAXIMUM REVERSE RECOVERY TIME (NOTE3)	T_{RR}	150			250		500		nS	

- NOTE:
1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. BOTH LEADS ATTACHED TO HEAT SINK 70x70x1t(mm) COPPER PLATE AT LEAD LENGTH 5mm
 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 FR60-005 THRU FR60-10

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

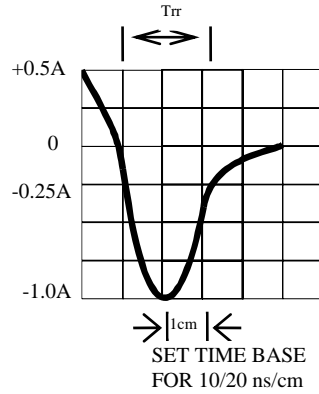


Fig. 2-MAXIMUM CURRENT DERATING CURVE

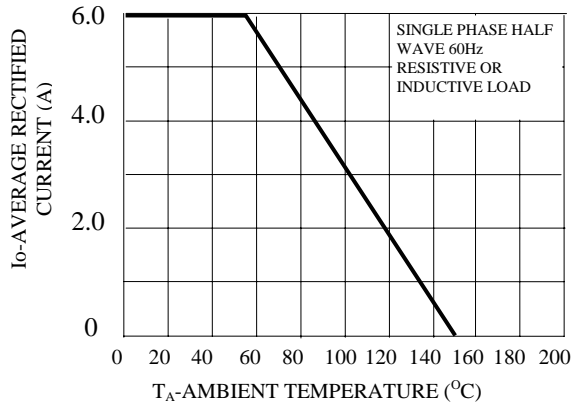


Fig. 3-MAXIMUM FORWARD SURGE NUMBER OF CYCLES

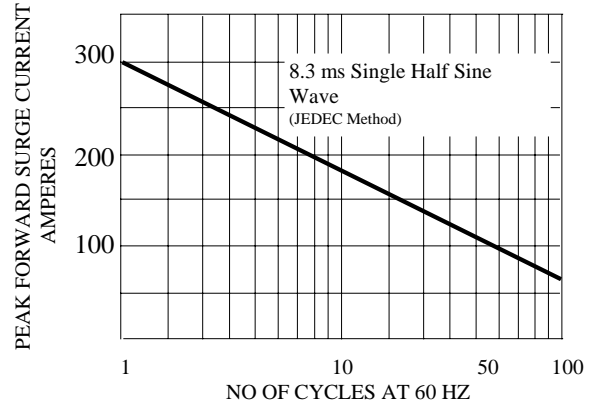


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

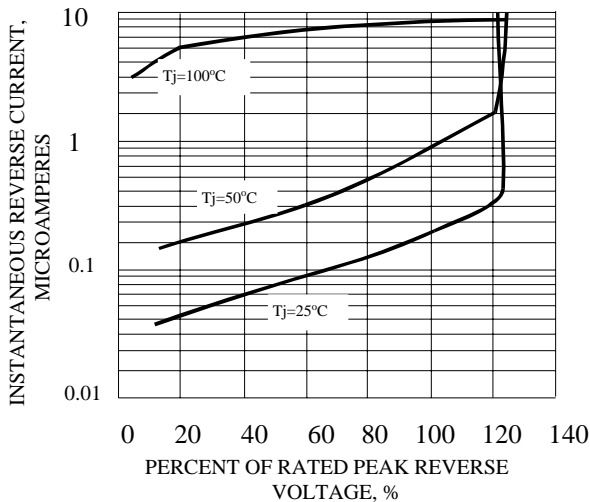


FIG. 5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

