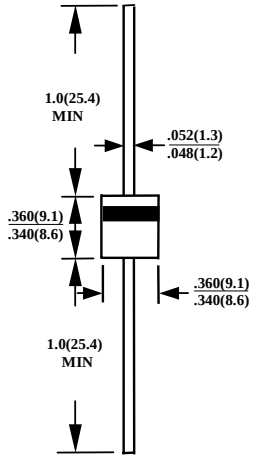
FRONTIER
ELECTRONICS CO., LTD.

FR60-005 THRU FR60-10

6A FAST RECOVERY PLASTIC RECTIFIER

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
- LEADS：SOLDERABLE PER MIL-STD-202,METHOD 208
- POLARITY：CATHODE INDICATED BY COLOR BAND
- WEIGHT：2.1 GRAMS



CASE：P6
DIMENSIONS IN INCHES AND (MILLIMETERS)

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 .375″ (9.5mm) LEAD LENGTH AT TA=55°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							℃/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150							℃
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 150							℃

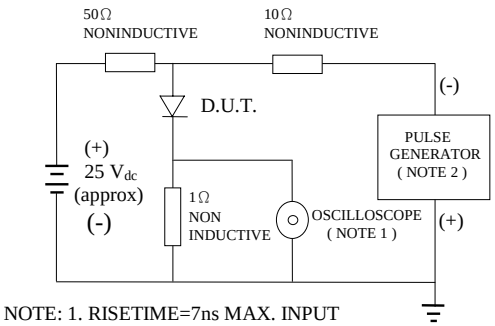
ELECTRICAL CHARACTERISTICS (A_T T_A =25°C UNLESS OTHERWISE NOTED)

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℃	I_R	10							μA
MAXIMUM REVERSE CURRENT AT 100℃	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 0F 4.0 VOLTS
2. BOTH LEADS ATTATCHED TO HEATSINK 70x70x1t(mm) COPPER PLATE AT LEAD LENTH 5mm
3. REVERSE RECOVERY TEST CONDITIONS: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

RATINGS AND CHARACTERISTIC CURVE FR60-005 THRU FR60-10

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



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

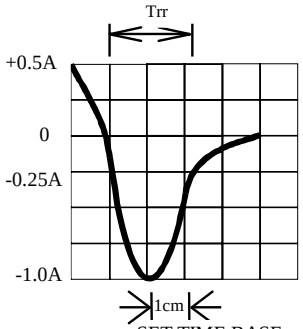


Fig. 2-MAXIMUM CURRENT DERATING CURVE

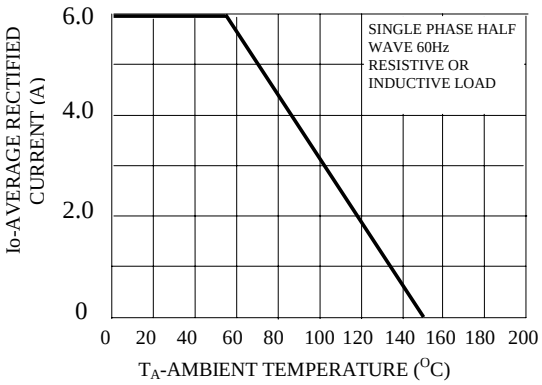


Fig. 3-MAXIMUM FORWARD SURGE NUMBER OF CYCLES

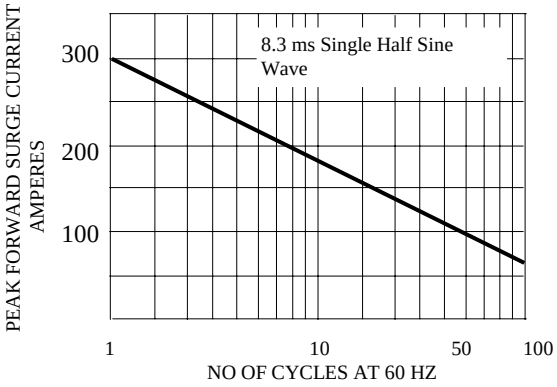


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

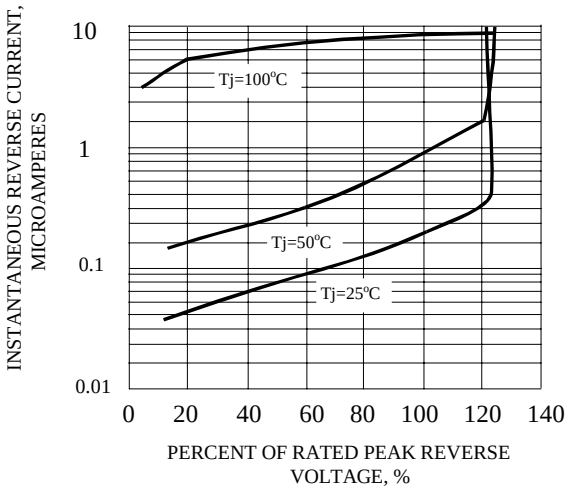


FIG. 5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS