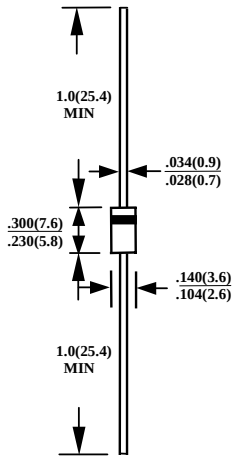
FRONTIER
ELECTRONICS CO., LTD.

SF20-005G THRU SF20-06G

2A GLASS PASSIVATED SUPER FAST RECOVERY RECTIFIER

FEATURES
- HIGH RELIABILITY
- LOW FORWARD VOLTAGE
- SUPER FAST SWITCHING
- GOOD FOR 200KHZ POWER SUPPLIER
- HIGH SURGE CAPABILITY
- HIGH CURRENT CAPABILITY
- GLASS PASSIVATED CHIP JUNCTION

MECHANICAL DATA
- CASE：MOLDED PLASTIC
- EPOXY：UL 94V-0 MOLDING COMPOUND
- LEADS：MIL-STD-202E METHOD 208C GUARANTEED
- MOUNTING POSITION：ANY
- WEIGHT：0.4 GRAMS



CASE：DO15
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	SF20 -005G	SF20 -01G	SF20 -015G	SF20 -02G	SF20 -03G	SF20 -04G	SF20 -05G	SF20 -06G	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	150	200	300	400	500	600	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	105	140	210	280	350	420	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	1500	200	300	400	500	600	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT .375″ (9.5mm) LEAD LENGTH AT TA=55°C	I_O	2.0								A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	75								A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	30				20				PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta jc}$	40								℃/W
STORAGE TEMPERATURE RANGE	T_{STG}	- 55 TO + 150								℃
OPERATING TEMPERATURE RANGE	T_{OP}	- 55 TO + 150								℃

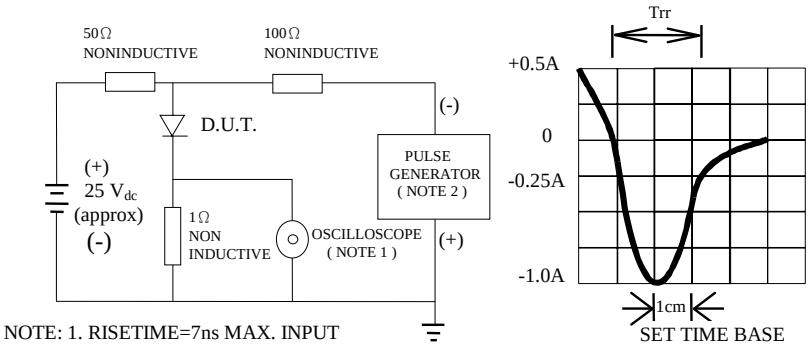
ELECTRICAL CHARACTERISTICS (A_T T_A =25°C UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	SF20 -005G	SF20 -01G	SF20 -015G	SF20 -02G	SF20 -03G	SF20 -04G	SF20 -05G	SF20 -06G	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	0.95				1.25		1.85		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}	35								nS

NOTE ： 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE 0F 4.0 VOLTS
2. BOTH LEADS ATTATCHED TO HEATSINK 20x20x1t(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 SF20-005G THRU SF20-06G

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-TYPICAL FORWARD CURRENT DERATING CURVE

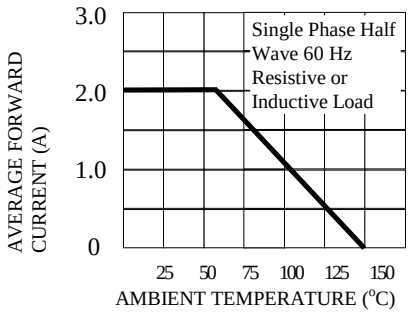


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

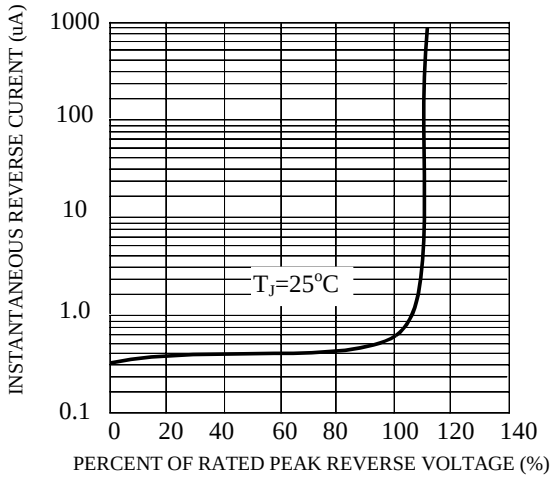


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

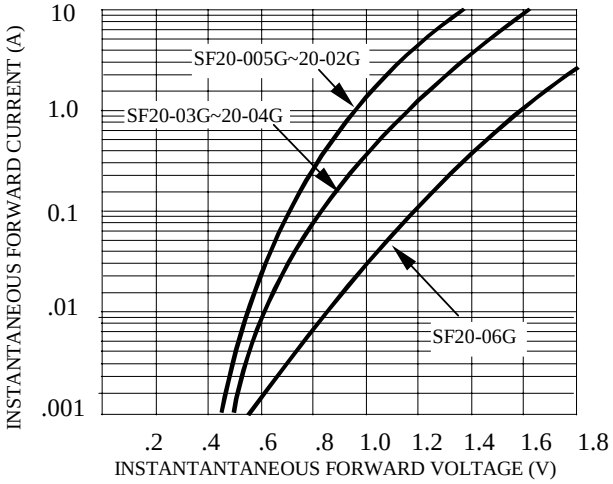


FIG. 5-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

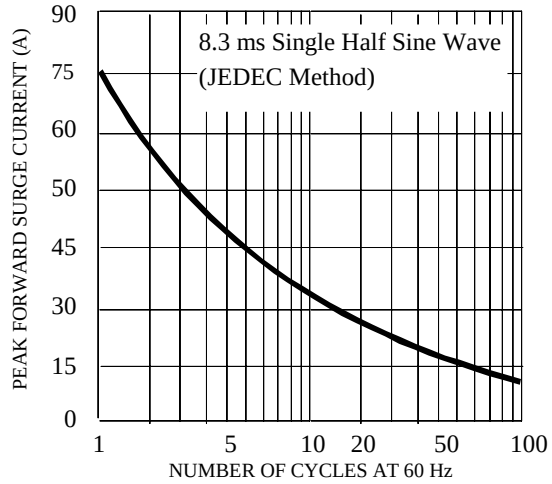


FIG. 6-TYPICAL JUNCTION CAPACITANCE