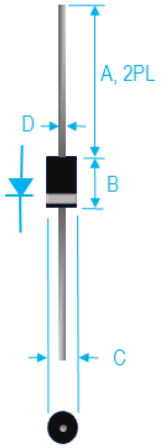
FR301G THRU FR307G SPECIFICATIONS

Rev. A

3A FAST RECOVERY GLASS PASSIVATED RECTIFIER



	Value Inch[mm]	
Dim.	Min.	Max.
A	1.000[25.40]	---
B	0.335[8.51]	0.375[9.52]
C	0.197[5.00]	0.220[5.59]
D	0.048[1.22]	0.052[1.32]

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION: 94V-0
2. GLASS PASSIVATED CHIP JUNCTION
3. HIGH SURGE CURRENT CAPABILITY
4. CASE: TRANSFER MOLDED, DO-201AD
5. DIMENSIONS IN INCHES AND (MILLIMETERS)
6. POLARITY: INDICATED BY CATHODE BAND
7. WEIGHT : 1.2 GRAMS
8. TERMINAL SOLDERABILITY: PER MIL-STD-202, METHOD 208
9. RoHS

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED. STORAGE AND OPERATING TEMPERATURE RANGE -55°C TO +150°C. SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%.

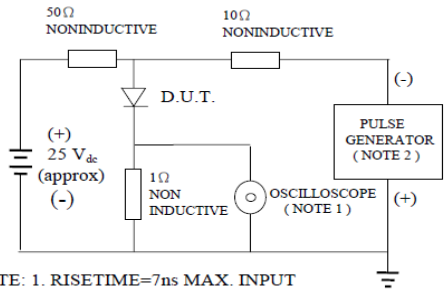
RATINGS	SYMBOL	VALUE	UNITS
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT, 0.375"(9.5mm) LEAD LENGTH @ 55°C	I_O	3	A
PEAK FWD SURGE CURRENT, 8.3ms HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	125	A
TYPICAL JUNCTION CAPACITANCE(NOTE1)	C_J	28	pF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	20	°C/W
MAXIMUM FORWARD VOLTAGE	V_F	1.3	V
MAXIMUM REVERSE CURRENT @ 25°C	I_R	5	uA
MAXIMUM REVERSE CURRENT @ 100°C	I_R	50	uA

1. MEASURED @ 1.0 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 V
2. BOTH LEADS ATTATCHED TO HEATSINK 63.5×63.5×1 (mm) COPPER PLATE AT LEAD LENGTH 5mm
3. REVERSE RECOVERY TEST CONDITIONS: IF=0.5A, IR=1.0A, IRR=0.25A
4. MAXIMUM FORWARD VOLTAGE AT Io DC

PART NUMBER	MAX RECURRENT PK REV VOLTAGE V_{RRM} (V)	MAX RMS VOLTAGE V_{RMS} (V)	MAX DC BLOCKING VOLTAGE V_{DC} (V)	MAX REV RECOVERY TIME T_{RR} (nS)
FR301G	50	35	50	150
FR302G	100	70	100	150
FR303G	200	140	200	150
FR304G	400	280	400	150
FR305G	600	420	600	250
FR306G	800	560	800	500
FR307G	1000	700	1000	500

RATING AND CHARACTERISTIC CURVES

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

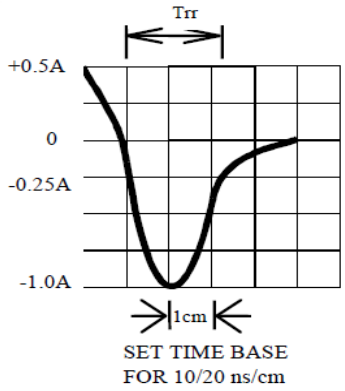


Fig. 2-MAXIMUM CURRENT DERATING CURVE

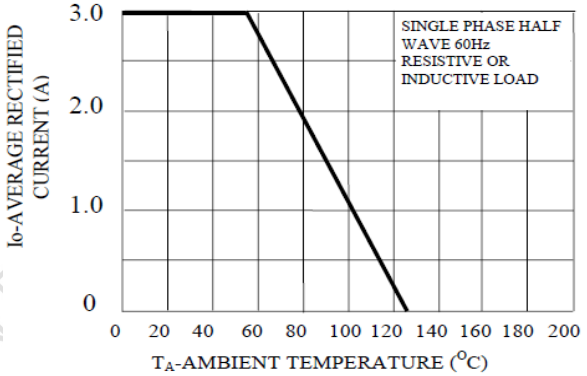


Fig. 3-MAXIMUM FORWARD SURGE NUMBER OF CYCLES

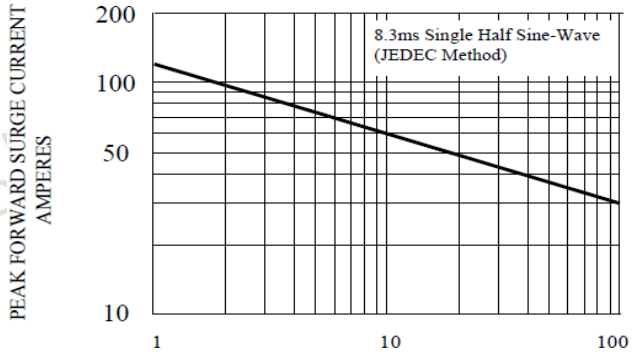


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

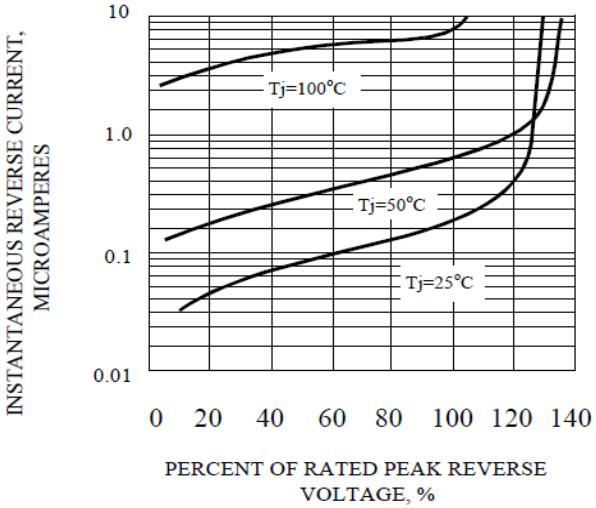
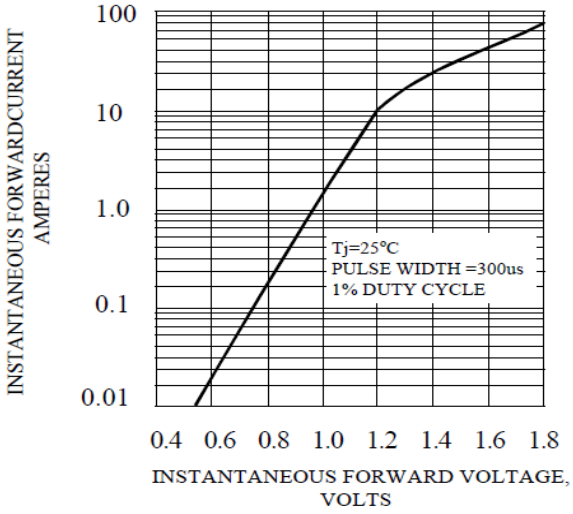



FIG. 5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS