Elektronische Bauelemente

FR301G ~ FR307G

VOLTAGE 50 ~ 1000 V

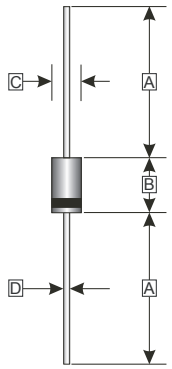
3.0 A, Glass Passivated Fast Recovery Rectifiers

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

DO-27



REF.	Millimeter	
	Min.	Max.
A	25.4 (TYP)	
B	7.20	9.53
C	5.00	5.60
D	1.20	1.32

MECHANICAL DATA

- Glass Passivated
- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 1.1050 grams (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.

PARAMETERS	SYMBOL	PART NUMBERS							UNITS	TESTING CONDITIONS
		FR 301 G	FR 302 G	FR 303 G	FR 304 G	FR 305 G	FR 306 G	FR 307 G		
Recurrent Reverse Voltage (Max.)	V_{RRM}	50	100	200	400	600	800	1000	V	
RMS Voltage (Max.)	V_{RMS}	35	70	140	280	420	560	700	V	
DC Blocking Voltage (Max.)	V_{DC}	50	100	200	400	600	800	1000	V	
Instantaneous Forward Voltage(Max.)	V_F	1.3							V	I_F = 3A
Average Forward Rectified Current (Max.)	I_O	3.0							A	0.375" (9.5mm) lead length @ T_A = 75°C
Peak Forward Surge Current	I_{FSM}	80							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
DC Reverse Current (Max.)	I_R	5.0							μA	$V_R = V_{DC}$, T_A=25°C
		150								$V_R=V_{DC}$, T_A=100°C
Reverse Recovery Time (Max.)	T_{RR}	150				250	500		nS	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
Junction Capacitance (Typ.)	C_J	60							pF	f=1MHz and applied 4V DC reverse voltage
Storage Temperature Range	T_{STG}	-65 ~ 150							°C	

RATINGS AND CHARACTERISTIC CURVES (FR301G THRU FR307G)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

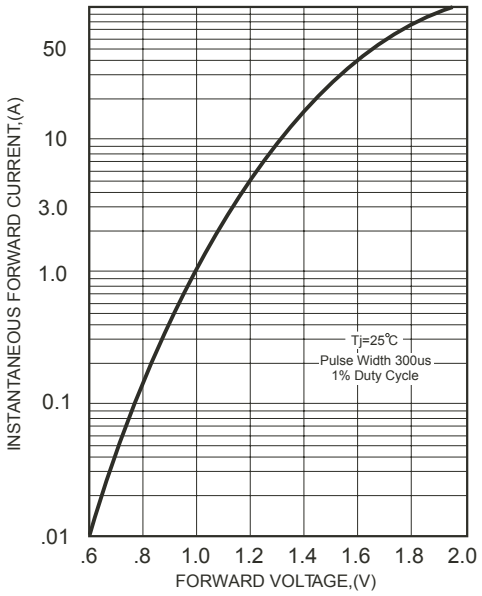


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

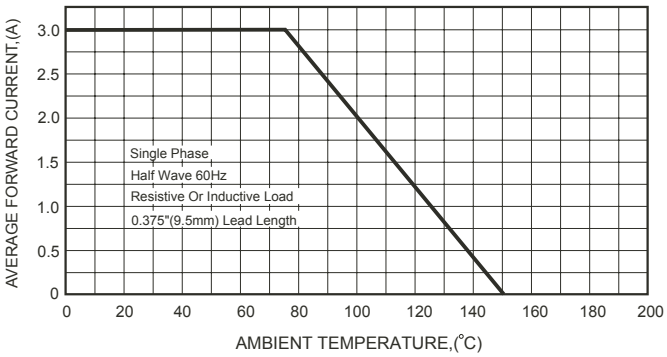
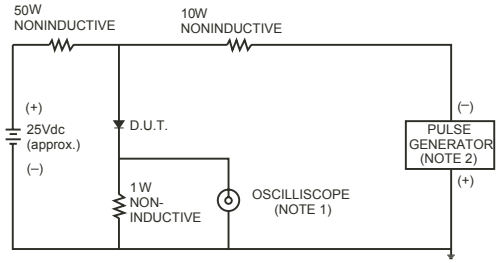
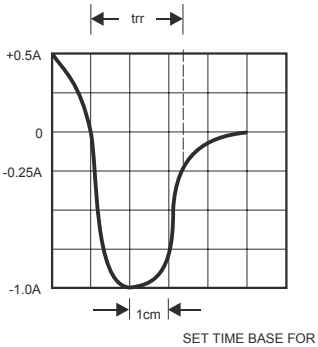


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.



SET TIME BASE FOR
50 / 10ns / cm

FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

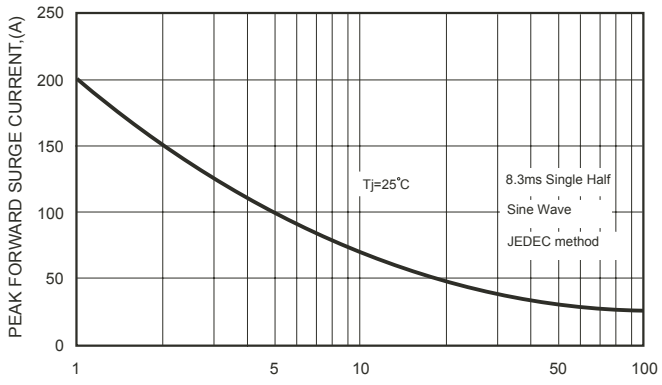


FIG.5-TYPICAL JUNCTION CAPACITANCE

