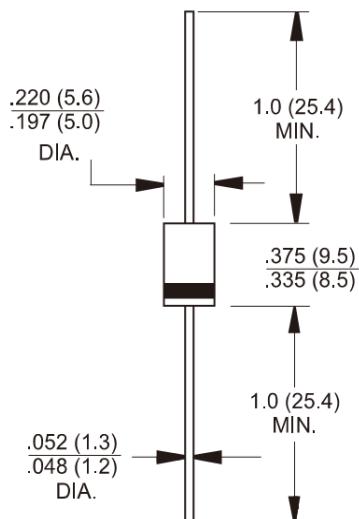


**Features**

- ❖ Glass passivated chip junction
- ❖ High efficiency, Low VF
- ❖ High current capability
- ❖ High reliability
- ❖ High surge current capability
- ❖ Low power loss
- ❖ Green compound with suffix "G" on packing code & prefix "G" on datecode

**Mechanical Data**

- ❖ Cases: Molded plastic
- ❖ Epoxy: UL 94V-0 rate flame retardant
- ❖ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ❖ Polarity: Color band denotes cathode end
- ❖ High temperature soldering guaranteed: 260°C/10s /.375", (9.5mm) lead lengths at 5 lbs, (2.3kg) tension
- ❖ Weight: 1.2 grams

**DO-201AD**

**Dimensions in inches and (millimeters)**
**Marking Diagram**


FR30XG	= Specific Device Code
G	= Green Compound
Y	= Year
WW	= Work Week

**Maximum Ratings and Electrical Characteristics**

Rating 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%

Type Number	Symbol	FR 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	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 @ $T_A=55^\circ C$	$I_{F(AV)}$					3			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$					125			A
Maximum Instantaneous Forward Voltage (Note 1) @ 3 A	$V_F$				1.3				V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A=25^\circ C$ @ $T_A=125^\circ C$	$I_R$			5	100				uA uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$		150		250	500			nS
Typical Junction Capacitance (Note 3)	$C_J$			30					pF
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$			35					°C/W
Operating Temperature Range	$T_J$			- 65 to + 150					°C
Storage Temperature Range	$T_{STG}$			- 65 to + 150					°C

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

Note 4: Mount on Cu-Pad Size 16mm x 16mm on PCB

### RATINGS AND CHARACTERISTIC CURVES (FR301G THRU FR307G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

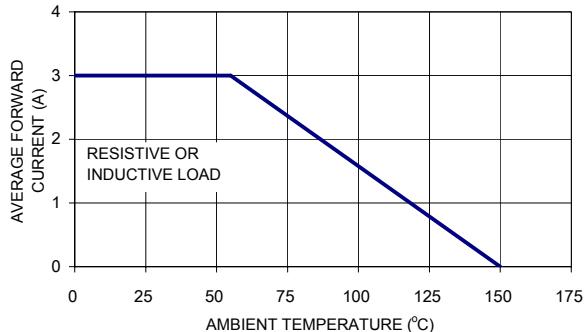


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

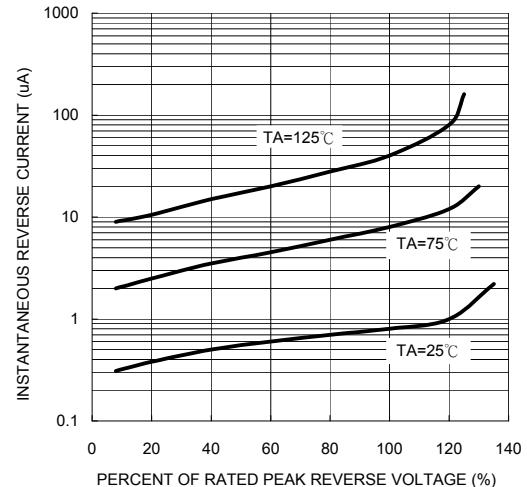


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

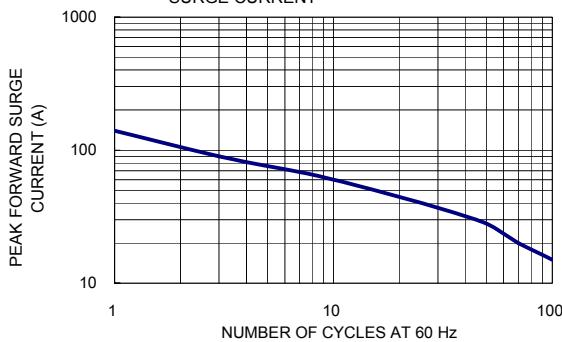


FIG. 5- TYPICAL FORWARD CHARACTERISTICS

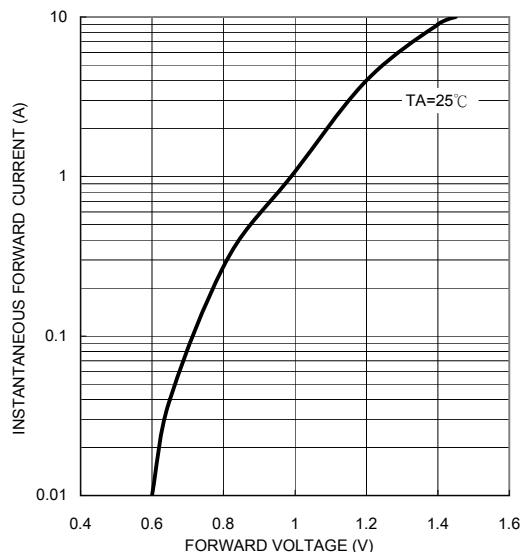


FIG. 4- TYPICAL JUNCTION CAPACITANCE

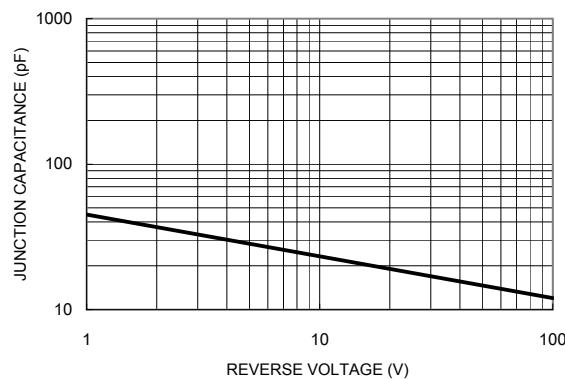


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

