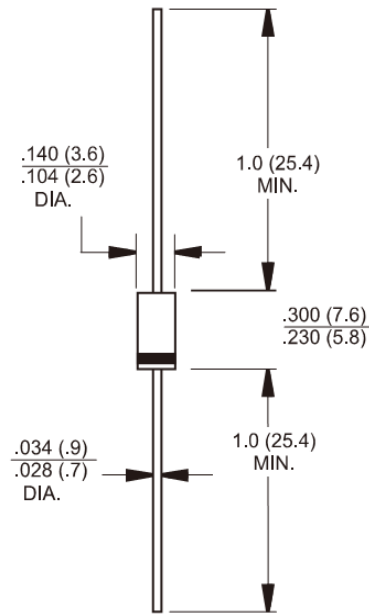


DO-15



Dimensions in inches and (millimeters)

Marking Diagram



- FR20X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

Features

- ✧ 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: 0.40 grams

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 201	FR 202	FR 203	FR 204	FR 205	FR 206	FR 207	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 @ $T_A=55^{\circ}C$	$I_{F(AV)}$	2							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	60							A
Maximum Instantaneous Forward Voltage (Note 1) @ 2 A	V_F	1.2							V
Maximum DC Reverse Current at @ $T_A=25^{\circ}C$ Rated DC Blocking Voltage @ $T_A=125^{\circ}C$	I_R	5 150							μA μA
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)	$R_{\theta JA}$ $R_{\theta JL}$ $R_{\theta JC}$	60 18 5							$^{\circ}C/W$
Operating Temperature Range	T_J	- 65 to + 150							$^{\circ}C$
Storage Temperature Range	T_{STG}	- 65 to + 150							$^{\circ}C$

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 10mm x 10mm on PCB

RATINGS AND CHARACTERISTIC CURVES (FR201 THRU FR207)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

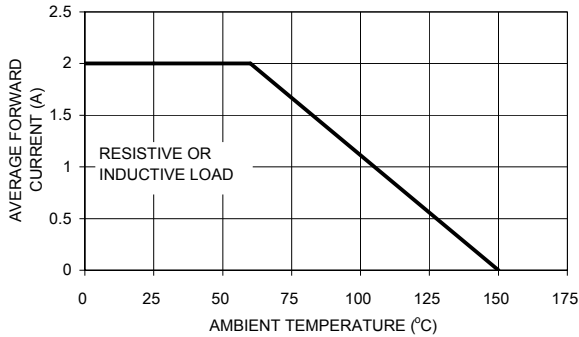


FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER LEG

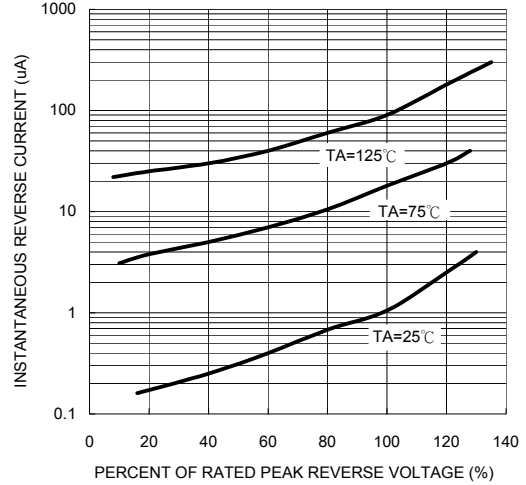


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

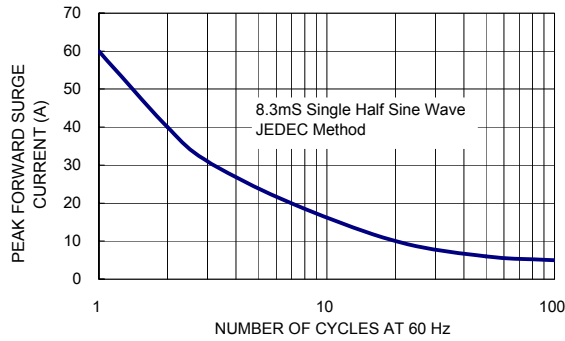


FIG. 5- TYPICAL FORWARD CHARACTERISTICS

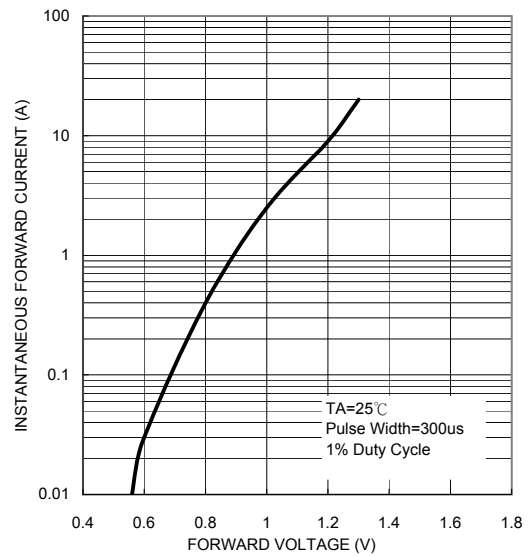


FIG. 4- TYPICAL JUNCTION CAPACITANCE

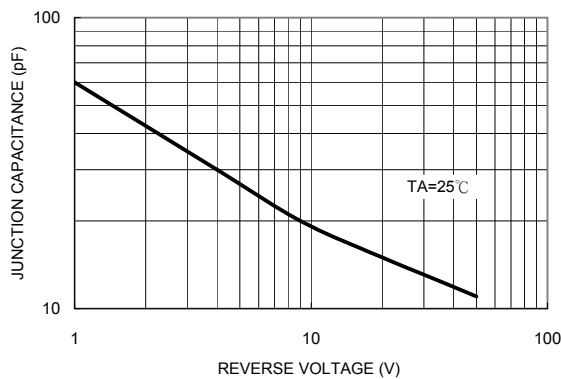


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

