



FR301G - FR307G-STR GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIERS

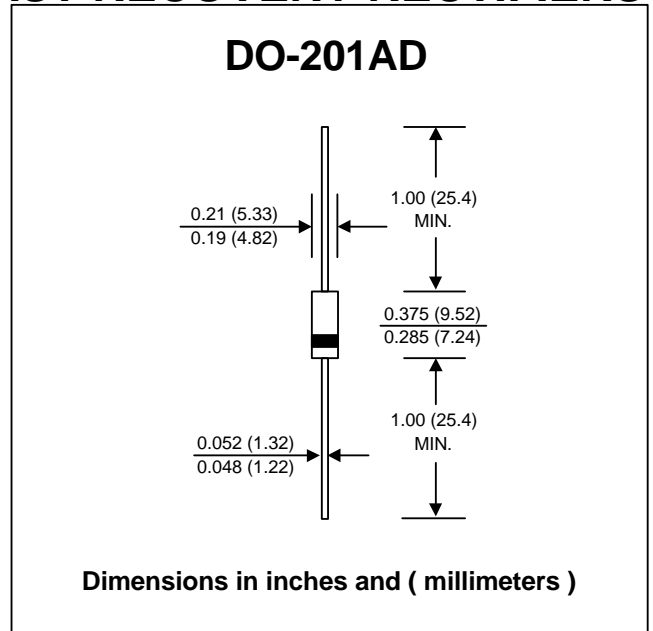
PRV : 50 - 1000 Volts
Io : 3.0 Amperes

FEATURES :

- * Glass passivated chip
- * High current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency

MECHANICAL DATA :

- * Case : DO-201AD Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 1.21 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%.

RATING	SYMBOL	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G	FR307G-STR	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	1000	Volts
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	IF(AV)	3.0								Amps.
Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	IFSM	100								Amps.
Maximum Peak Forward Voltage at IF = 3.0 Amperes.	VF	1.3								Volts
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	IR	5								µA
	IR(H)	100								µA
Maximum Reverse Recovery Time (Note 1)	Trr	150			250	500	250			ns
Typical Junction Capacitance (Note 2)	CJ	60								pf
Junction Temperature Range	TJ	- 65 to + 150								°C
Storage Temperature Range	TSTG	- 65 to + 150								°C

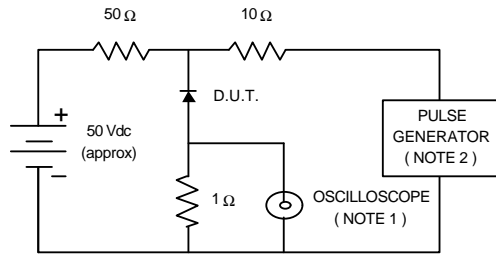
Notes :

- (1) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

UPDATE : JUNE 17, 1998

RATING AND CHARACTERISTIC CURVES (FR301G - FR307G-STR)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.
 3. All Resistors = Non-inductive Types.

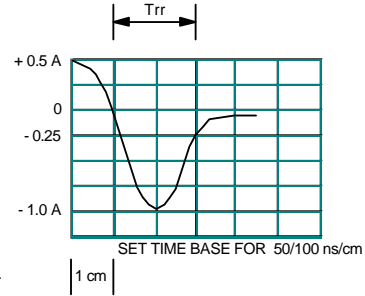


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

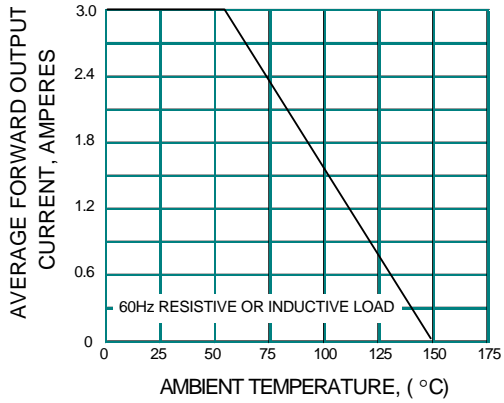


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

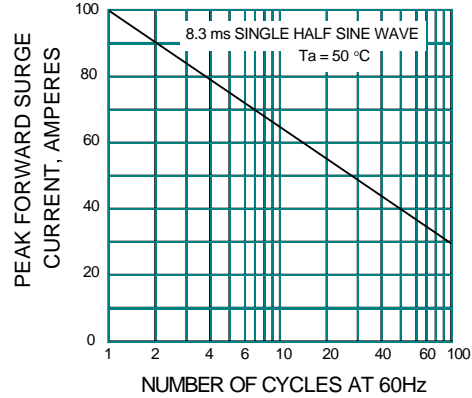


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

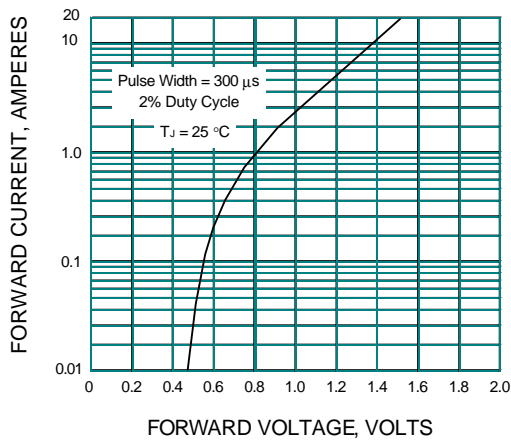


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

