

# FR301\_7G

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
- RoHS compliant package

### Mechanical Data

- 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 : 1.10 grams

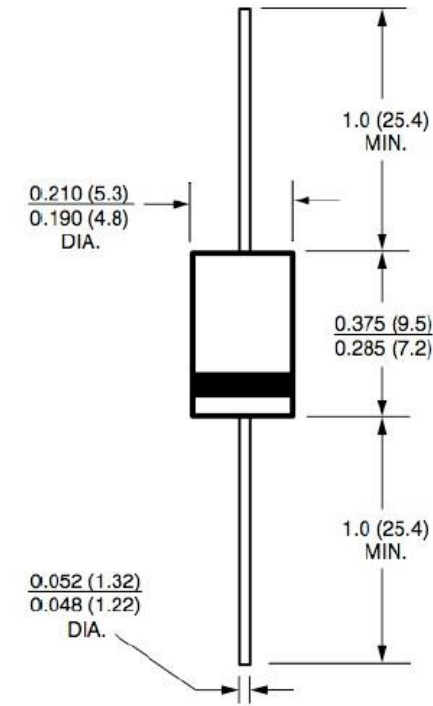
Package type : DO-201AD

### Packing & Order Information

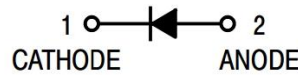
1,250/T



**RoHS  
COMPLIANT**



Graphic symbol



## 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	FR 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	FR307G -STR	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	1000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	3.0								A

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Rating	Symbol	FR 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	FR307G -STR	Unit
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100								A
Maximum instantaneous forward voltage at I <sub>F</sub> = 3.0 A	V <sub>F</sub>	1.3								V
Maximum DC Reverse Current T <sub>a</sub> = 25 °C	I <sub>R</sub>	5.0								μA
at Rated DC Blocking Voltage T <sub>a</sub> = 100 °C	I <sub>R(H)</sub>	100								μA
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>	150			250		500		250	ns
Typical Junction Capacitance ( Note 2 )	C <sub>J</sub>	60								pF
Junction Temperature Range	T <sub>J</sub>	-65 to +150								°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150								°C

Notes :

( 1 ) Reverse Recovery Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1.0 A, I<sub>rr</sub> = 0.25 A.

( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC

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### ■ RATING AND CHARACTERISTIC CURVES ( FR301G - FR307G-STR )

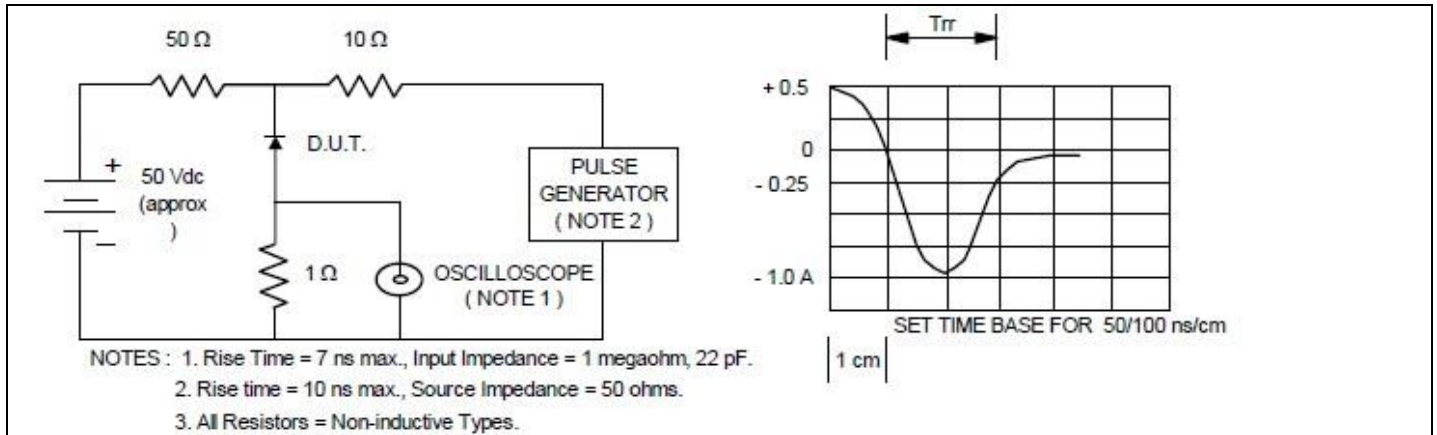


FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

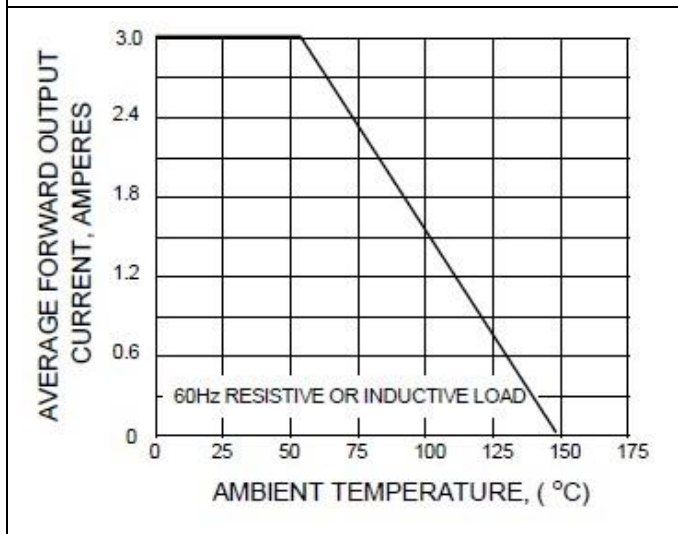


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

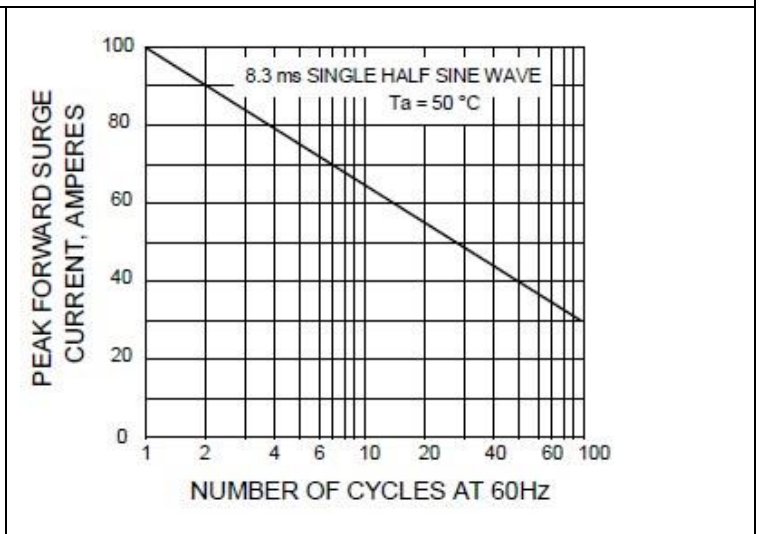


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

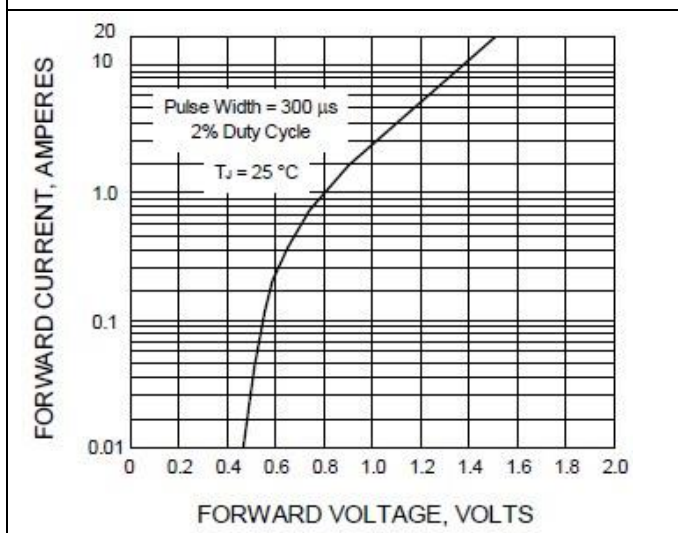


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

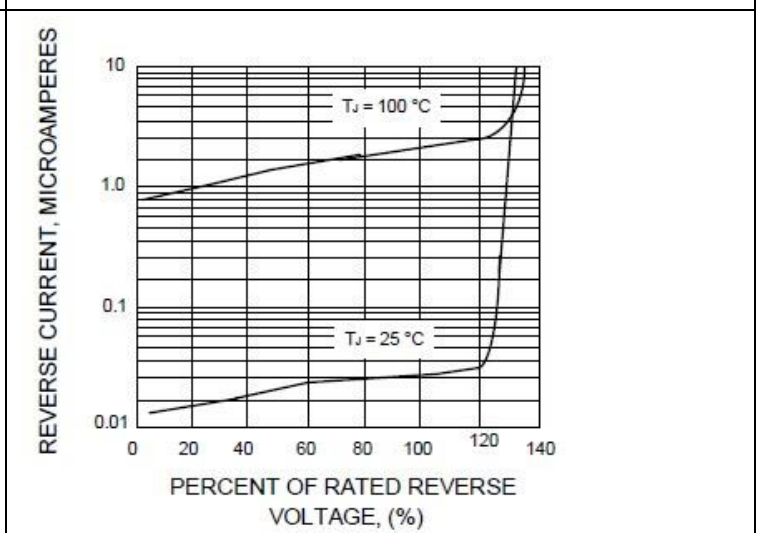


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

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