

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

- Case : DO-201AD Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed

208 guaranteed

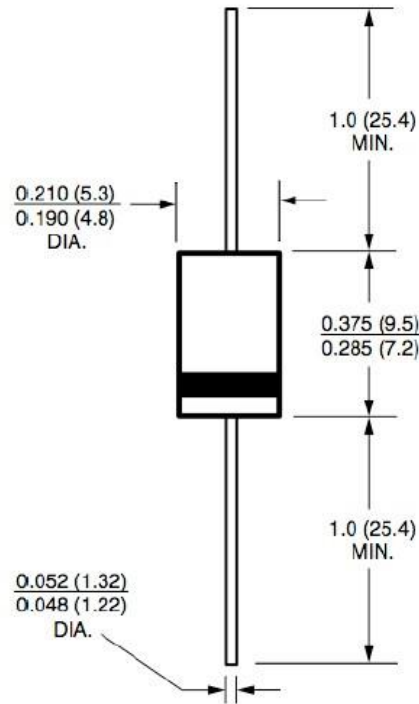
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 1.10 grams

Packing & Order Information

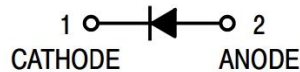
1,250/T



**RoHS
COMPLIANT**



Graphic symbol



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specific.

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_{FSM}	100								A
Maximum instantaneous forward voltage at $I_F = 3.0$ A	V_F	1.3								V
Maximum DC Reverse Current $T_a = 25$ °C	I_R	5.0								μ A
at Rated DC Blocking Voltage $T_a = 100$ °C	$I_{R(H)}$	100								μ A
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150			250		500		250	ns
Typical Junction Capacitance (Note 2)	C_J	60								pF
Junction Temperature Range	T_J	-65 to +150								°C
Storage Temperature Range	T_{STG}	-65 to +150								°C

Notes :

(1) Reverse Recovery Test Conditions : $I_F = 0.5$ A, $I_R = 1.0$ A, $I_{rr} = 0.25$ 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)

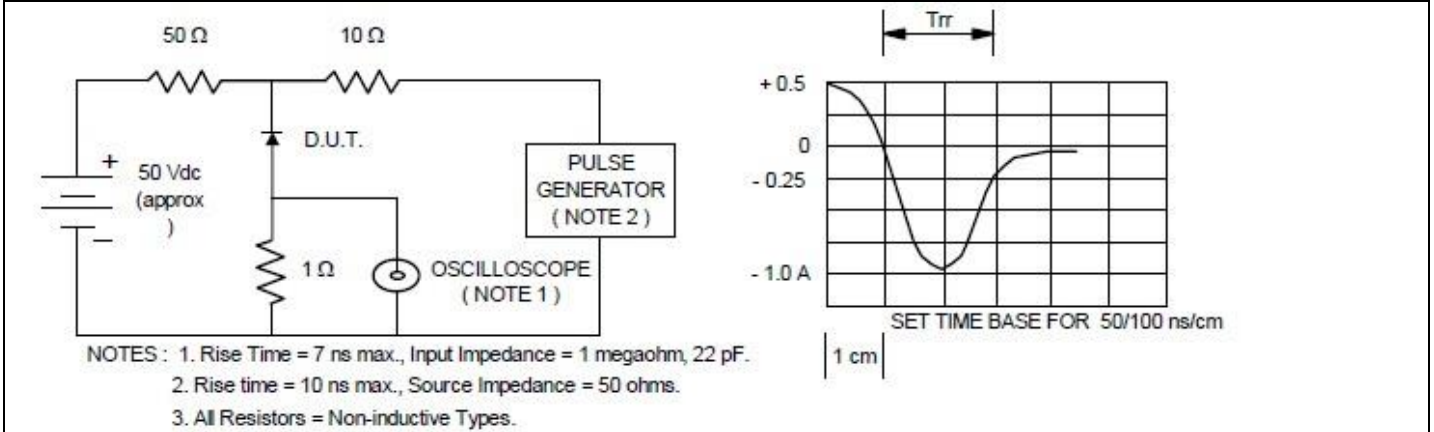


FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

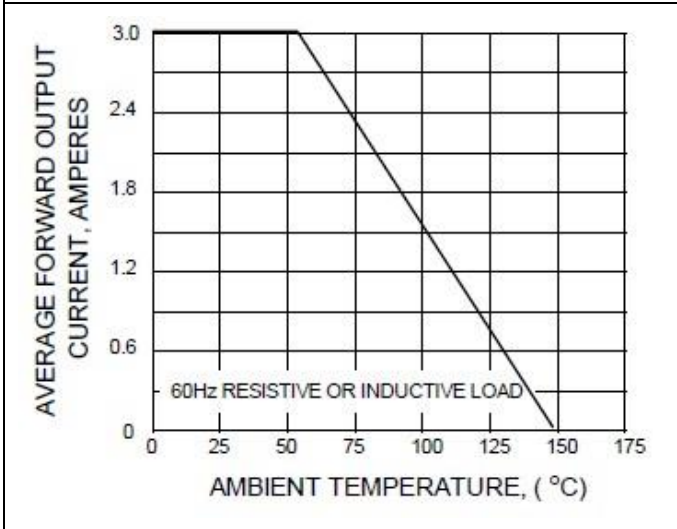


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

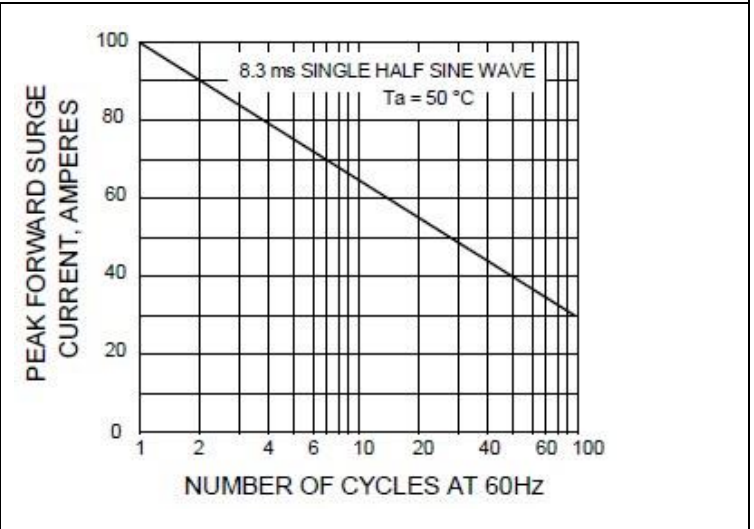


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

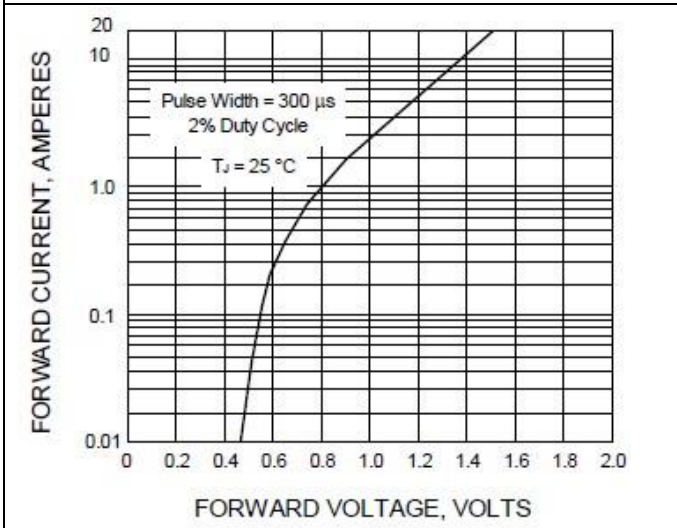


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

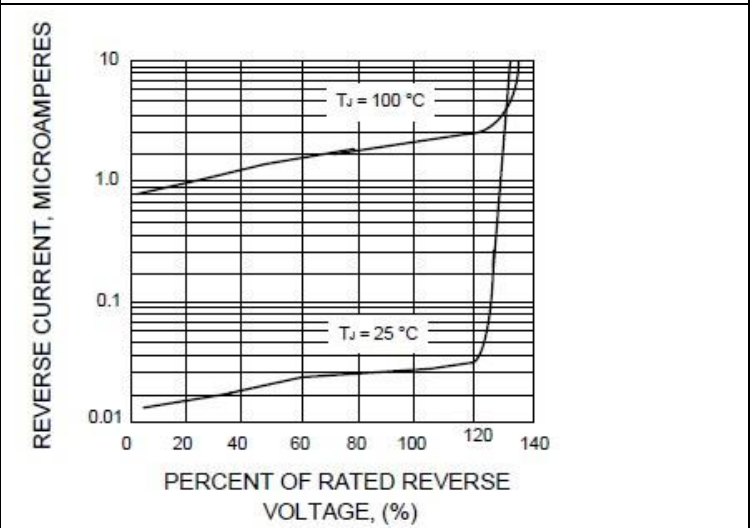


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

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