

FR301 THRU FR307

3.0 AMP.Fast Recovery Rectifiers

DIA. 0. 220 (5.6)

DIA. 0.052 (1.3)

0.043 (1.1)

Dimensions in inches and (millimeters)

DO-201AD

0.96 (24.5)

MTN

0.96(24.5)

MIN.

 $\frac{0.375(9.5)}{0.335(8.5)}$

Features

- Low forward voltage drop
- · High current capability
- · High reliability
- High surge current capability
- Plastic material-UL flammability 94V-0

Mechanical Data

- Case: Molded plastic DO-201AD
- Terminals: Plated leads solderable per MIL-STD-202,Method 208 guaranteed
- · Polarity: Color band dentes cathode end
- Mounting Position: Any
- Making: Type Number
- · Lead Free: For RoHS/Lead Free Version

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load derate current by 20%

Type Number	SYMBOL	FR301	FR302	FR303	FR304	FR305	FR306	FR307	Unit
Maximum Recurrent Peak Reverse Voltage	Vrrm	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	Vrms	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	Vdc	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current.375"(9.5mm) lead length@TL=100°C	IF(AV)	3.0							А
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	Ігѕм	125							А
I ² t Rating for Fusing (t < 8.3ms)	l²t	64.84							A ² s
Forward Voltage @IF=3.0A	Vfm	1.3							V
Peak Reverse Current @T _A =25°C	5.0								
At Rated DC Blocking Voltage @T _A =125°C	- I _R 100								uA
Typical Junction Capacitance (Note 1)	CJ	65 40					pF		
Typical Thermal Resistance Junction to Ambient(Note 2)	Reja	25						°C /W	
Maximum Reverse Recovery Time(Note 3)	Trr		1:	50		250	50	00	ns
Operating Temperature Range	TJ	-55 to +125							°C
Storage Temperature Range	Tstg	-55 to +150							°C

Note:1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

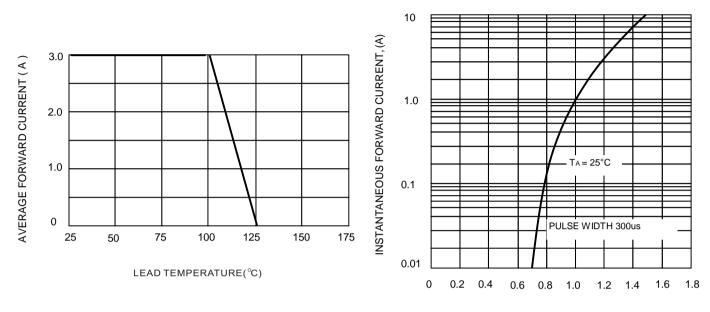
2. Leads maintained at ambient temperature at a distance of 9.5mm from the case

3.Reverse Recovery Test Conditions: IF=0.5A, IR=1A, Irr=0.25A



FIG. 1 – FORWARD CURRENT DERATING CURVE

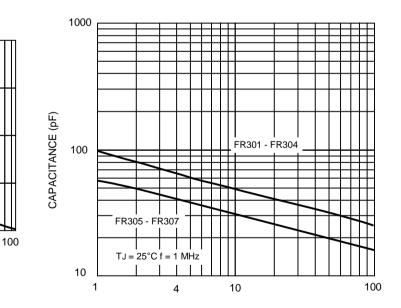
FIG.2-TYPICAL FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE (V)

FIG. 3 - MAXIMUM NON-REPETITIVE SURGE CURRENT





REVERSE VOLTAGE (V)

200

150

100

50

0

1

PULSE WIDTH 8.3ms SINGLE HALF-SINE-WAVE (JEDEC METHOD)

2

11

5

10

NUMBER OF CYCLES AT 60Hz

20

50



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