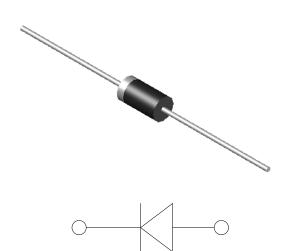
# FR301G THRU FR307G



# **Fast Recovery Rectifier**

#### Features

- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### **Mechanical Data**

• Package: DO-201AD(DO-27)

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant

- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity:Color band denotes cathode end

## ■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G
Device marking code			FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	50	100	200	400	600	800	1000
Average Forward Current @60Hz sine wave, Resistance load, Ta=50 $^\circ\mathbb{C}$	IF(AV)	А	3.0						
Forward Surge Current(Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta= $25^{\circ}$ C	I <sub>FSM</sub>	А	125						
Storage Temperature	T <sub>stg</sub>	°C	-55 ~+150						
Junction Temperature	Тј	°C	-55~+150						

## ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =3.0A	1.3						
Maximum DC reverse current at	T C C C C C C C C C C C C C C C C C C C		Ta=25℃		2.5					
rated DC blocking voltage per diode	I <sub>RRM2</sub>	μA	Ta=125℃		100					
Reverse Recovery time	t <sub>rr</sub>		I <sub>F</sub> =0.5A I <sub>R</sub> =1A I <sub>RR</sub> =0.25A	150 250 500				00		
Typical junction capacitance	Cj	pF	Neasured at 1MHZ and pplied Reverse Voltage 55 f 4.0 V.D.C.							

## **Thermal Characteristics** $(T_a=25^{\circ}C \text{ Unless otherwise specified})$

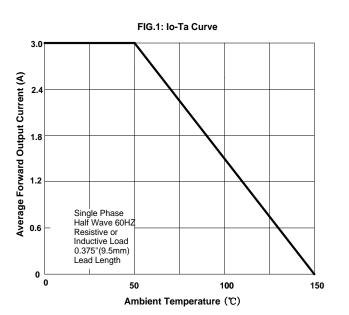
PARAMETER	SYMBOL	UNIT	FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G
Thermal Resistance(Typical)	$R_{\theta J-A}$	°C/W				30			

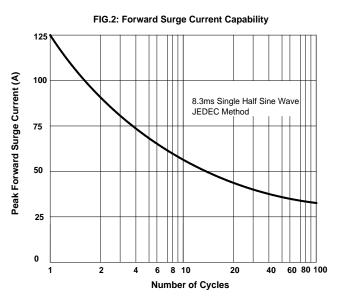


PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE			
FR301G~FR307G	D1	Approximate 1.05	1250	1250	12500	Таре			
FR301G~FR307G	C1	Approximate 1.05	250	250	12500	Bulk			

## ■Ordering Information (Example)

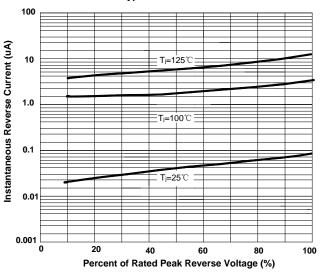
# Characteristics (Typical)





#### FIG.3: Forward Voltage 20 10 Instantaneous Forward Current (A) 4.0 2.0 1.0 0.4 0.2 0.1 **TJ=25℃** Pulse width=300us 1% Duty Cycle 0.02 0.01 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 Instantaneous Forward Voltage (V)

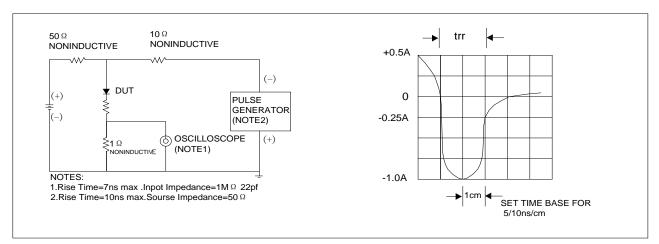
FIG.4: Typical Reverse Characteristics



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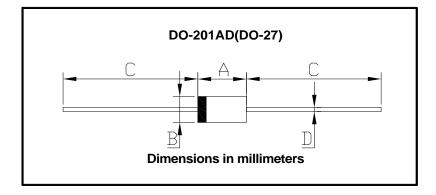


# FR301G THRU FR307G



#### FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

## Outline Dimensions



DO-201AD(DO-27)						
Dim	im Min M					
А	8.50	9.50				
В	5.00	5.60				
С	25.4	/				
D	1.20	1.30				

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