

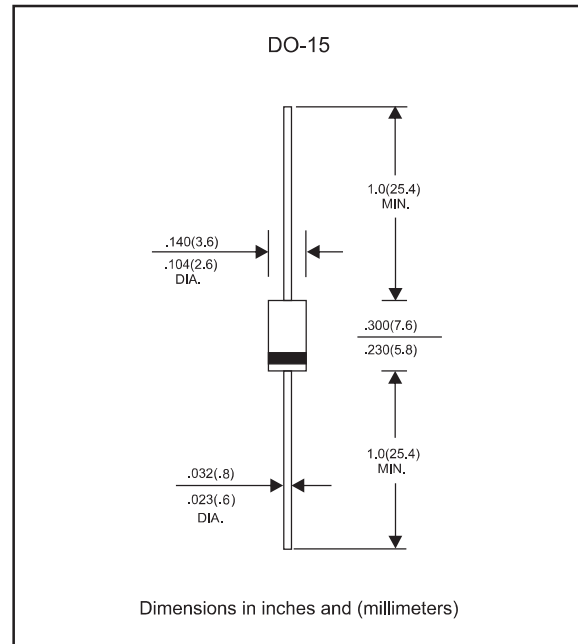
### Features

- Axial lead type devices for through hole design.
- High current capability.
- Fast switching for high efficiency.
- High surge current capability.
- Glass passivation junction chip inside.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen-free parts, ex. FR201G-H

### Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-15
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	$I_O$			2.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	$I_{FSM}$			70	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^\circ\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM}$ $T_J = 125^\circ\text{C}$				100	
Thermal Resistance	Junction to ambient	$R_{\theta JA}$		50		$^\circ\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		40		pF
Storage temperature		$T_{STG}$	-65		+175	$^\circ\text{C}$

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	$t_{rr}^{*5}$ (ns)	Operating temperature $T_J$ , ( $^\circ\text{C}$ )
FR201G	50	35	50	1.30	150	-55 to +150
FR202G	100	70	100			
FR203G	200	140	200			
FR204G	400	280	400			
FR205G	600	420	600		250	
FR206G	800	560	800		500	
FR207G	1000	700	1000			

Note 1. Reverse recovery time test condition,  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=2.0\text{A}$

\*5 Maximum Reverse recovery time, note 1

# Rating and characteristic curves (FR201G THRU FR207G)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

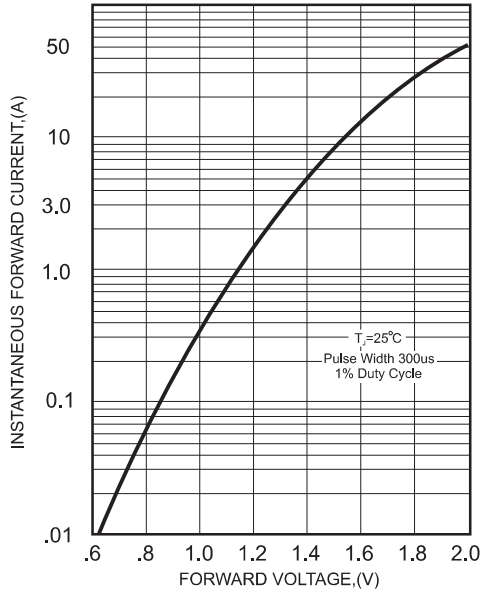


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

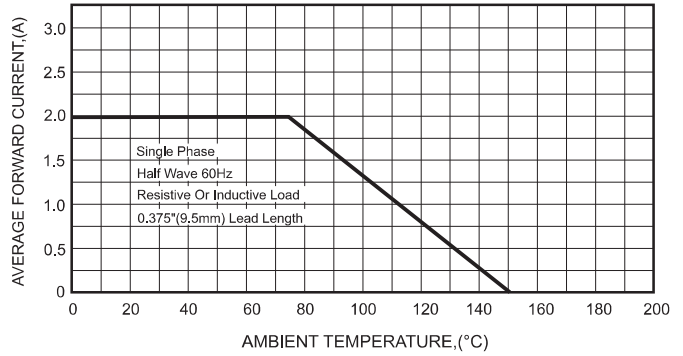


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

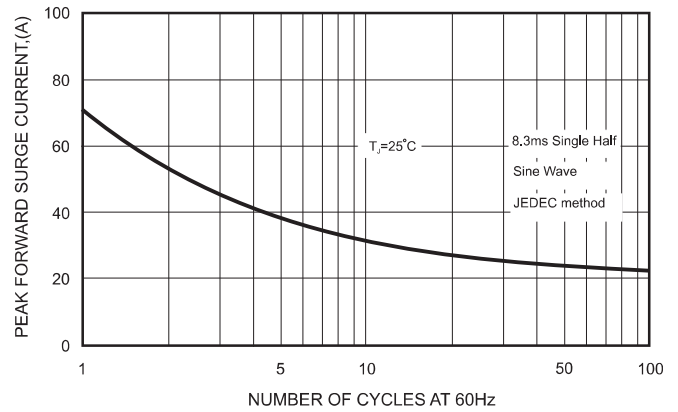
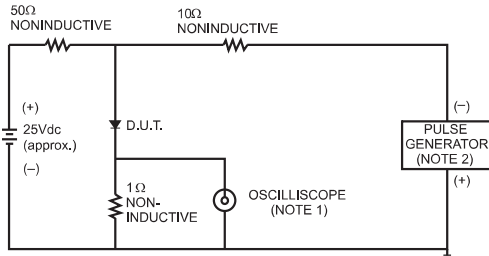


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



- NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
 2. Rise Time= 10ns max., Source Impedance= 50 ohms.

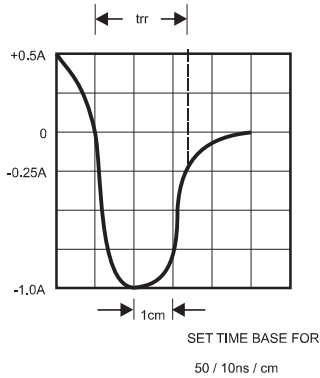
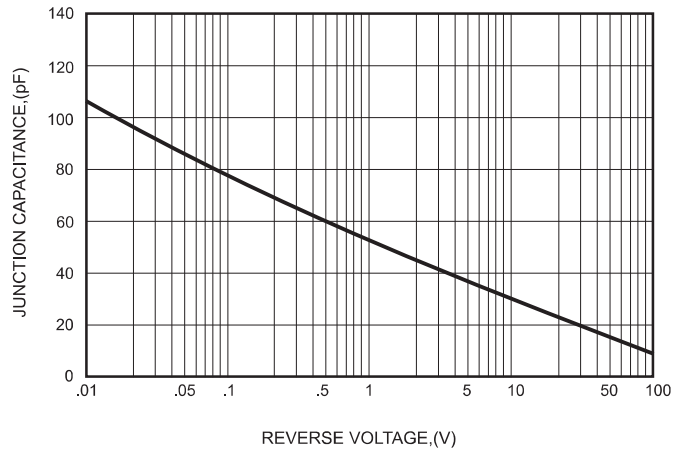




FIG.5-TYPICAL JUNCTION CAPACITANCE



## Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

## Marking

Type number	Marking code
FR201G	FR201G
FR202G	FR202G
FR203G	FR203G
FR204G	FR204G
FR205G	FR205G
FR206G	FR206G
FR207G	FR207G