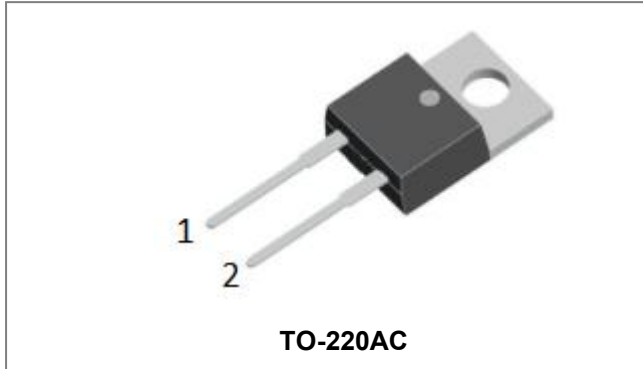


## FR801G THRU FR807G

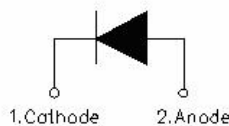
### GLASS PASSIVATED FAST RECOVERY RECTIFIERS



#### Features

- Glass Passivated Die Construction
- High Current Capability
- Low Reverse Leakage Current
- Fast Switching
- High Surge Current Capability
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

#### Circuit Diagram



#### Mechanical Data

- Case: TO-220AC molded plastic
- Terminals: Plated axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 1.8 grams

#### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	FR 801G	FR 802G	FR 803G	FR 804G	FR 805G	FR 806G	FR 807G	Units
Maximum repetitive peak reverse voltage Maximum DC blocking voltage	$V_{RRM}$ $V_{DC}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum average forward rectified current 0.375"(9.5mm) lead length at @ $T_C=90^\circ\text{C}$	$I_{(AV)}$	8.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200							A
Maximum instantaneous forward voltage at 8.0A	$V_F$	1.3							V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_{RM}$	5.0 300							$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_r$	150				250	500		ns
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	2							$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
Operating storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

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

**Ratings and Characteristics Curves**

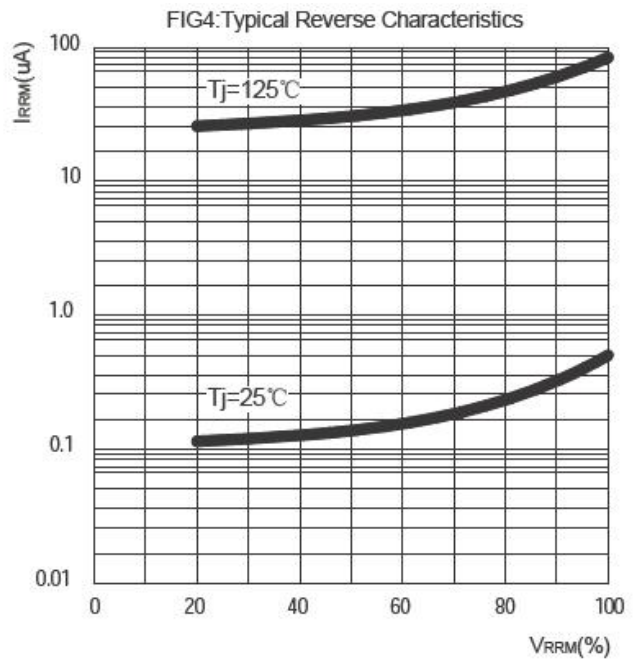
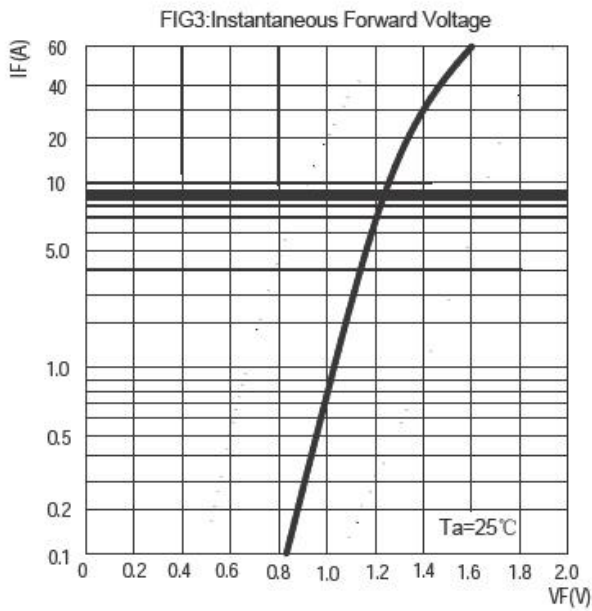
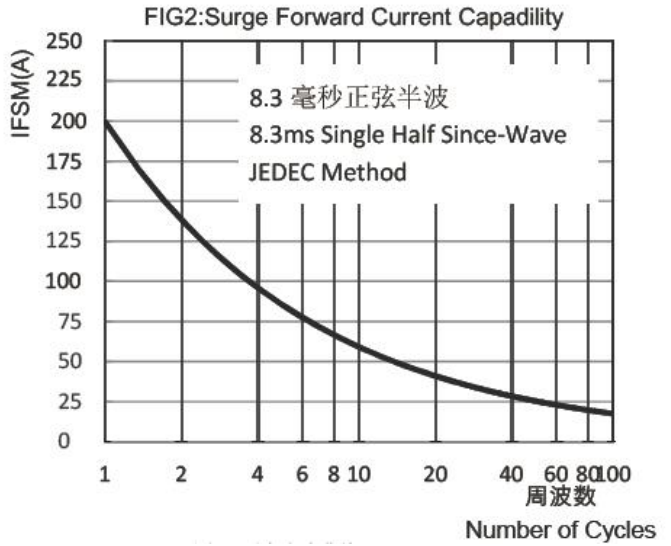
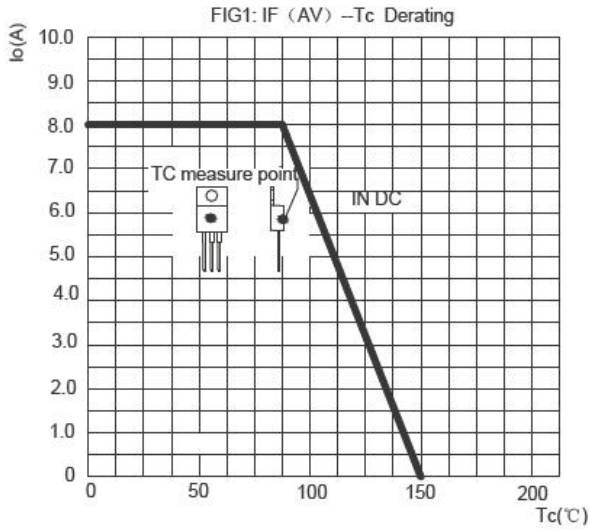
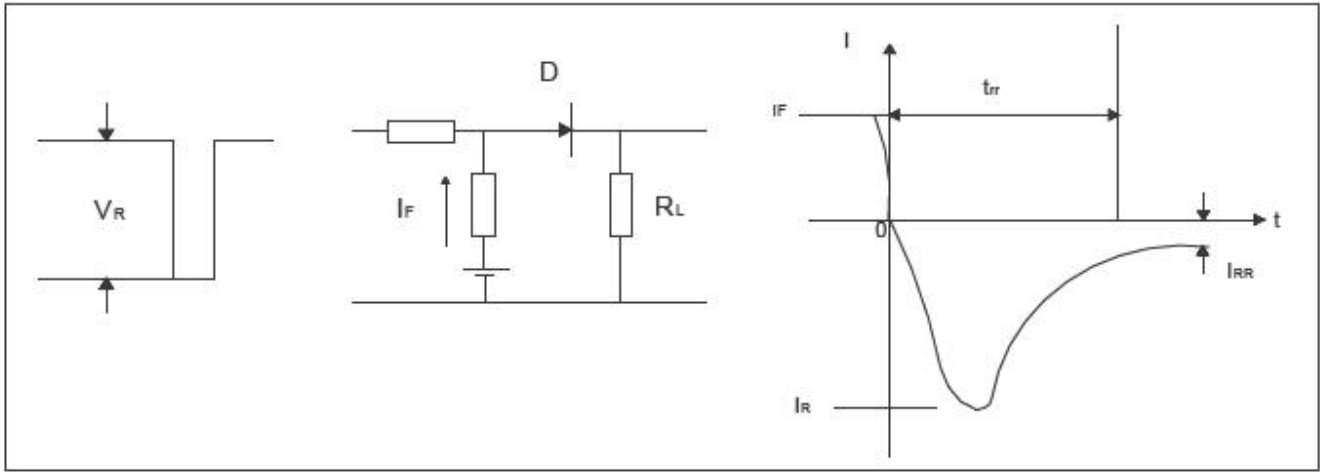
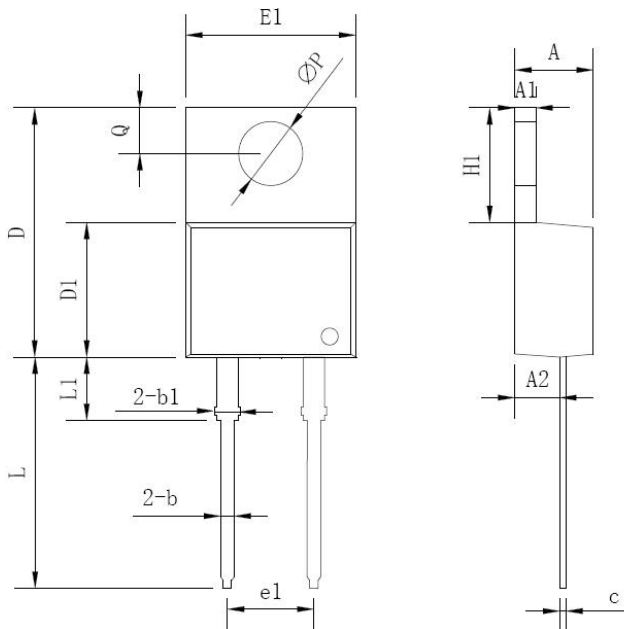


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



### Mechanical Dimensions TO-220AC

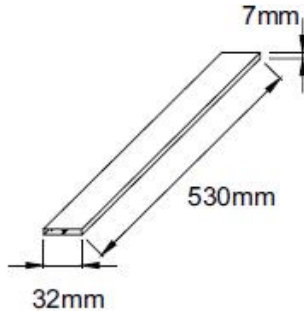


Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	3.56	-	4.83
A1	0.51	-	1.40
A2	2.03	-	2.92
b	0.38	-	1.02
b1	1.14	-	1.78
c	0.31	-	0.61
D	14.22	-	16.51
D1	8.38	-	9.42
E1	9.65	10.16	10.67
e1	-	5.08	-
H1	5.84	-	6.86
L	12.70	-	14.73
L1	-	-	6.35
$\Phi P$	-	3.56	-
Q	2.54	-	3.43

### Ordering Information

Device	Package	Shipping
FR801G-FR807G	TO-220AC (Pb-Free)	50 pcs/ tube

**Tube Specification**



**Marking Diagram**



Where XXXXX is YYWWL

FR801G = Part Name  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

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