



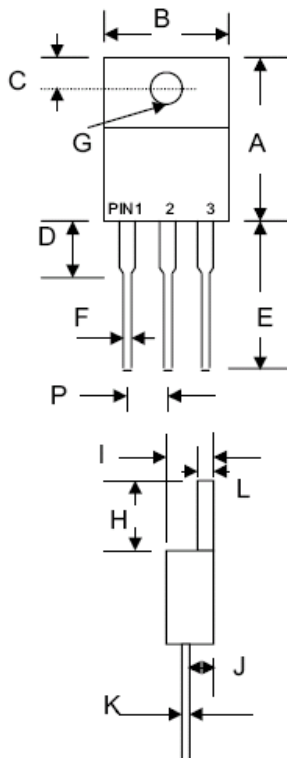
Technical Data
Data Sheet N0452, Rev. -

Features

- Glass Passivated Die Construction
- Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Data

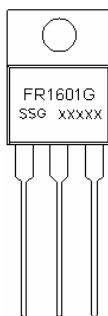
- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Weight: 2.24 grams (approx.)
- Polarity: See Diagram
- Mounting Position: Any
- Marking: Type Number



TO-220				
Dim	Min	Max	Min	Max
A	14.9	15.10	0.587	0.595
B	—	10.50	—	0.413
C	2.62	2.87	0.103	0.113
D	3.56	4.06	0.140	0.160
E	13.46	14.22	0.530	0.560
F	0.68	0.94	0.027	0.037
G	3.74 ϕ	3.91 ϕ	0.147 ϕ	0.154 ϕ
H	5.84	6.86	0.230	0.270
I	4.44	4.70	0.175	0.185
J	2.54	2.79	0.100	0.110
K	0.35	0.64	0.014	0.025
L	1.14	1.40	0.045	0.055
P	4.95	5.20	0.195	0.205
	In mm		In inch	



Marking Diagram:



Where XXXXX is YYWWL

- FR1601G = Part Name
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

Ordering Information

Device	Package	Shipping
FR1601G-FR1607G	TO-220 (Pb-Free)	50pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

- Weiqi Street, Airport Development Zone, Jiangning District, Nanjing, China 211113 ☎ (86) 25-87123907 ●
- FAX (86) 25-87123900 ● World Wide Web Site - <http://www.sangdest.com.cn> ● E-Mail Address - sales@sangdest.com.cn ●



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, derate current by 20%.

Characteristic	Symbol	FR 1601G	FR 1602G	FR 1603G	FR 1604G	FR 1605G	FR 1606G	FR 1607G	Unit
Peak Repetitive Reverse Voltage	V_{RRM}								
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_C = 105^{\circ}\text{C}$	I_O	16							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							A
Forward Voltage @ $I_F = 8.0\text{A}$	V_{FM}	1.3							V
Peak Reverse Current @ $T_A = 25^{\circ}\text{C}$	I_{RM}	5.0							μA
At Rated DC Blocking Voltage @ $T_A = 125^{\circ}\text{C}$		100							
Reverse Recovery Time (Note 1)	t_{rr}	150				250	500		nS
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150							$^{\circ}\text{C}$

Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$. See figure 1.

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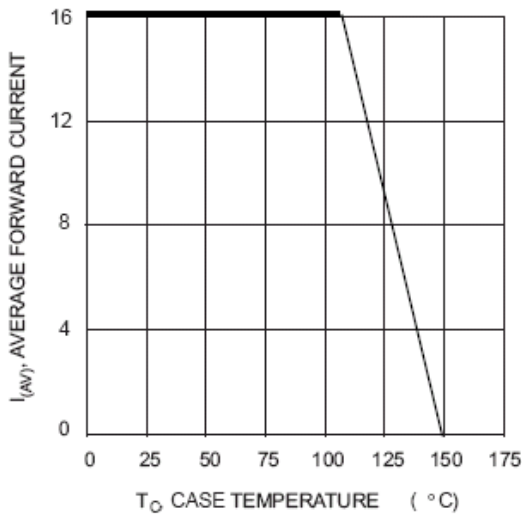


Fig. 1, Typical Forward Current Derating Curve

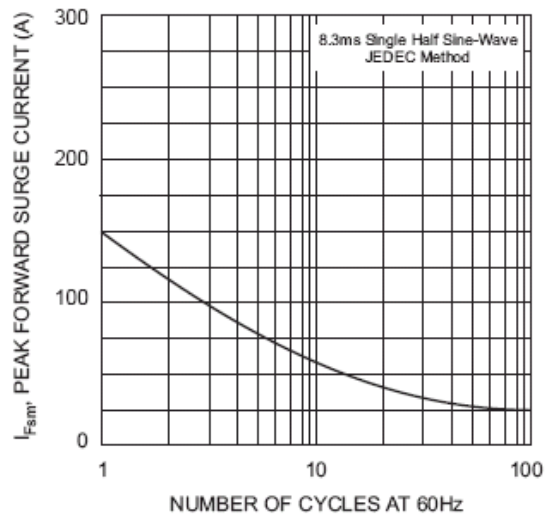


Fig. 2, Max Non-Repetitive Peak Surge Current

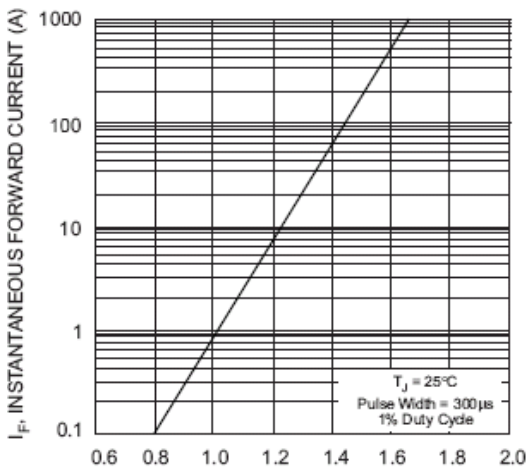


Fig. 3, Typical Instantaneous Forward Characteristics

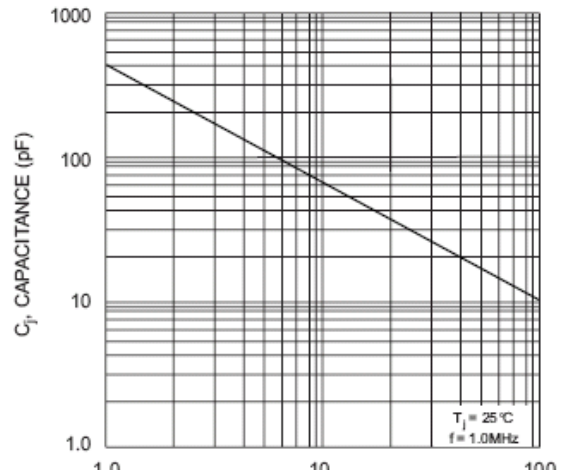
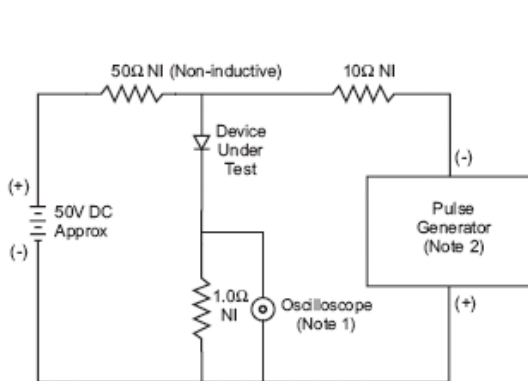


Fig. 4, Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.

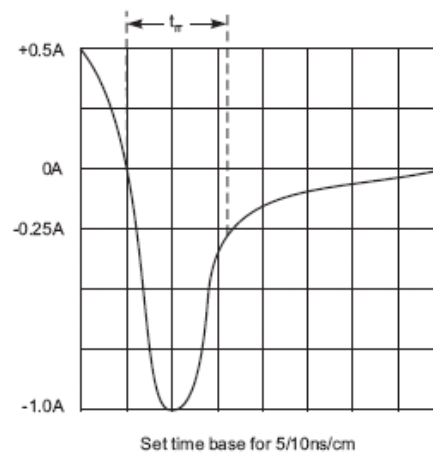


Fig. 5, Reverse Recovery Time Characteristic and Test Circuit



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