

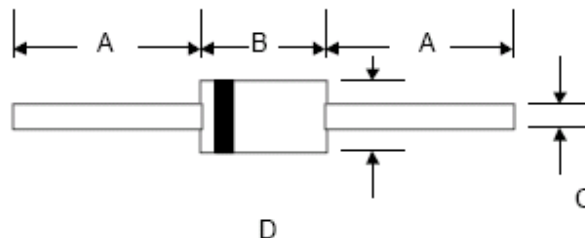


Technical Data  
Data Sheet N0449, Rev. -

*Green Products*

### Features

- Glass Passivated Die Construction
- High current capability
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Fast Recovery Time
- 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



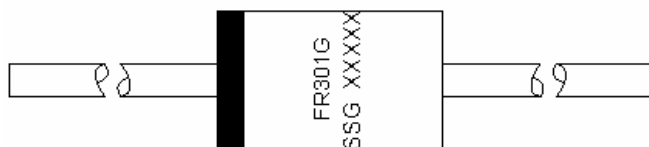
### Mechanical Data

- Case: Molded Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Mounting Position: Any
- High temperature soldering guaranteed: 250°C/10 seconds/.375" (9.5mm) lead

DO-201AD				
Dim	Min	Max	Min	Max
A	25.4	—	1.000	—
B	8.50	9.50	0.335	0.374
C	1.20	1.30	0.047	0.051
D	5.0	5.60	0.197	0.220
All	In mm		In inch	

### Marking Diagram:

Where XXXXX is YYWWL



FR301G = Part Name  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

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

### Ordering Information

Device	Package	Shipping
FR301G-FR307G	DO-201AD (Pb-Free)	1250pcs / tape

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



**Maximum Ratings and Electrical Characteristics** @T<sub>A</sub>=25° C unless otherwise specified

Characteristic	Symbol	FR 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current @T <sub>L</sub> = 75° C	I <sub>o</sub>	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	125							A
Forward Voltage @I <sub>F</sub> = 3.0A	V <sub>FM</sub>	1.3							V
Peak Reverse Current @T <sub>A</sub> = 25° C At Rated DC Blocking Voltage @T <sub>A</sub> = 125° C	I <sub>RM</sub>	5.0 100							μA
Reverse Recovery Time (Note 1)	t <sub>rr</sub>	150				250	500		nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	60							pF
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							°C

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>T</sub> = 0.25A,  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.

RATINGS AND CHARACTERISTIC CURVES (FR301G THRU FR307G)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

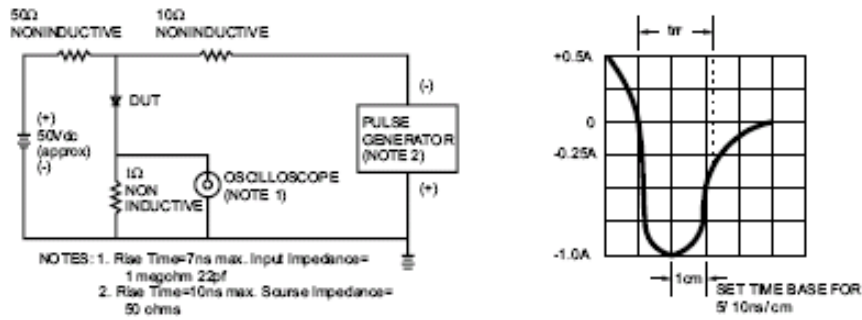


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

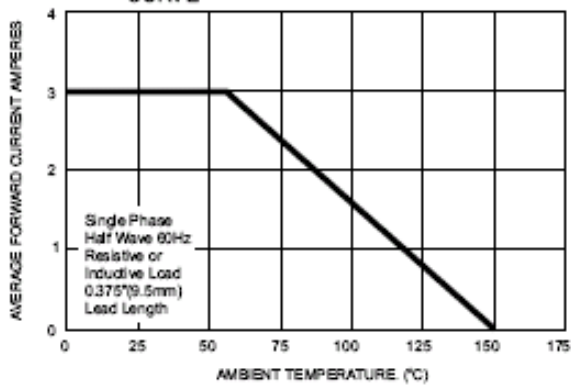


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

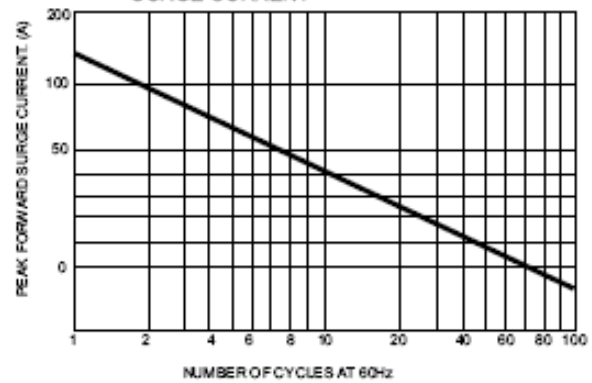


FIG.4- TYPICAL FORWARD CHARACTERISTICS

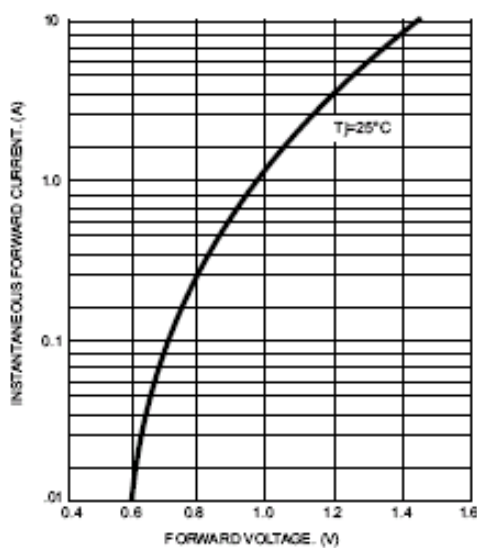
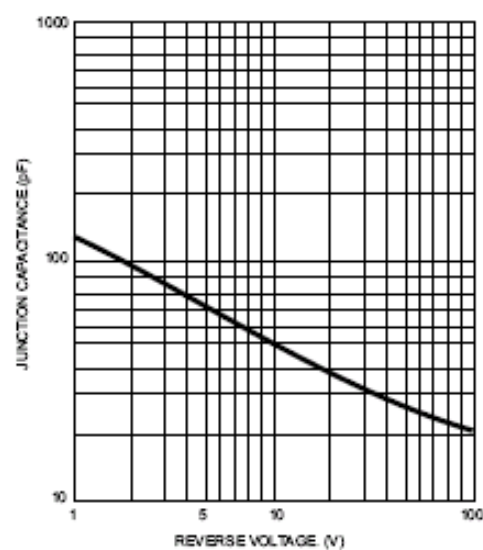


FIG.5- TYPICAL JUNCTION CAPACITANCE





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