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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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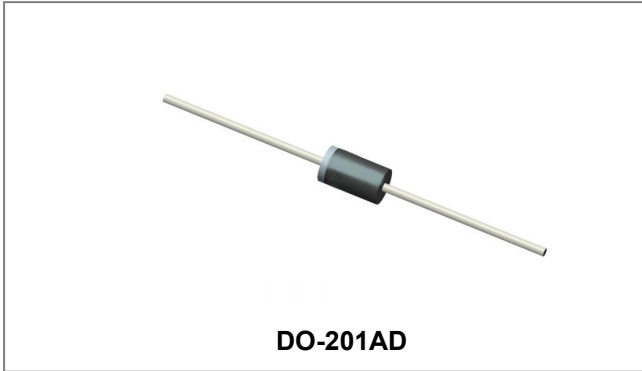
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FR301G THRU FR307G

GLASS PASSIVATED FAST RECOVERY RECTIFIERS



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

Circuit Diagram



Mechanical Data

- Case: DO-201AD molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.04 ounce, 1.10 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 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	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 @ $T_L=75^\circ\text{C}$	$I_{(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125							A
Maximum instantaneous forward voltage at 3.0A	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}	5.0 100							μA
Maximum reverse recovery time (Note 1)	t_r	150				250	500		ns
Typical Junction Capacitance (Note 2)	C_J	60							pF
Typical Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	20							$^\circ\text{C/W}$
Operating junction temperature range	T_J	-65 to +150							$^\circ\text{C}$
Operating storage temperature range	T_{STG}	-65 to +150							$^\circ\text{C}$

Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length, P.C.B. mounted

Ratings and Characteristics Curves

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

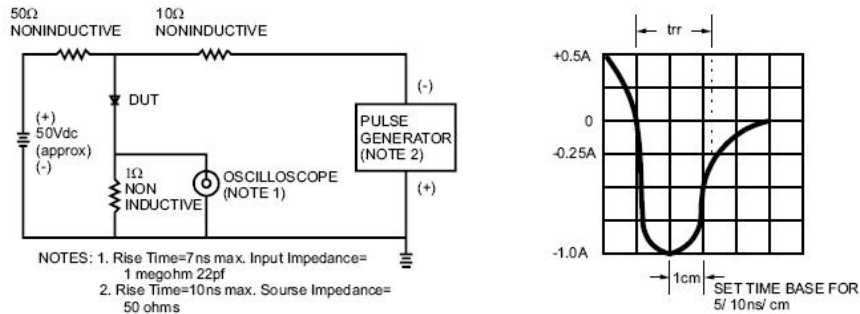


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

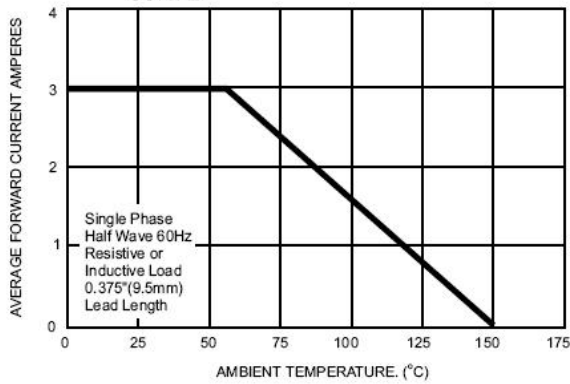


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

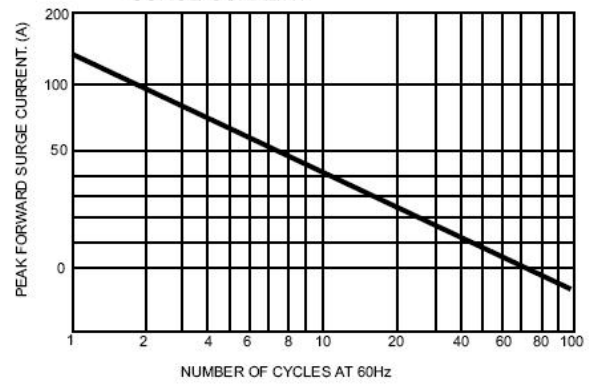


FIG.4- TYPICAL FORWARD CHARACTERISTICS

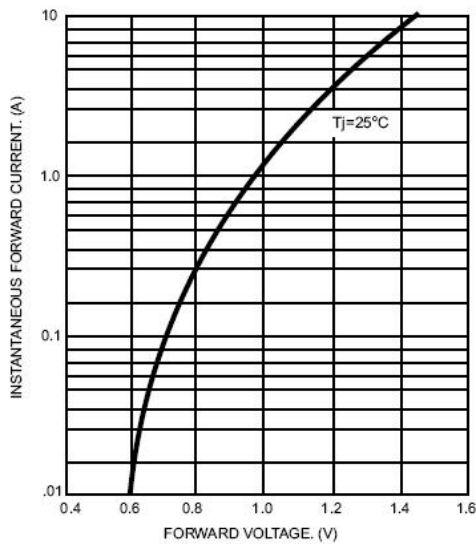
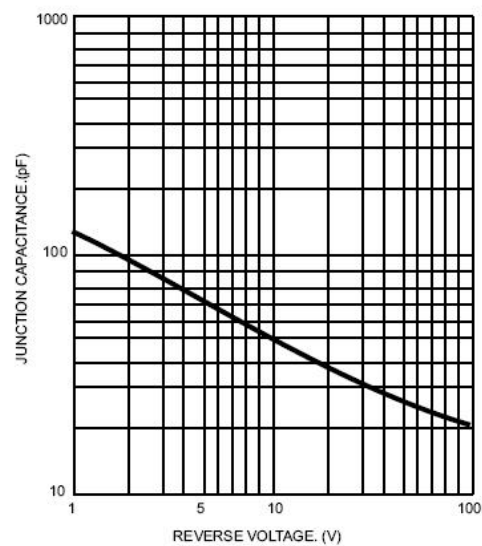
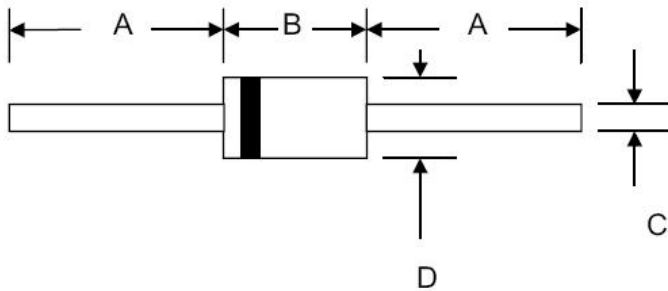


FIG.5- TYPICAL JUNCTION CAPACITANCE



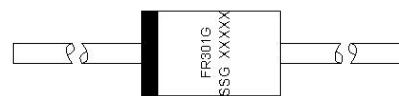
Mechanical Dimensions DO-201AD


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	7.2	9.5	0.285	0.375
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

Ordering Information

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

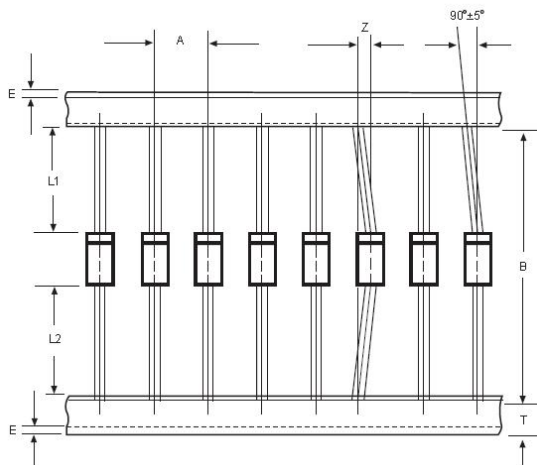
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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

Carrier Tape Specification DO-201AD


SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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