



THE DATASHEET OF FR307TA





FR301 THRU FR307 FAST RECOVERY RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
- ◆ 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension
- ◆ This is a Pb - Free Device
- ◆ All SMC parts are traceable to the wafer lot
- ◆ Additional testing can be offered upon request

MECHANICAL DATA

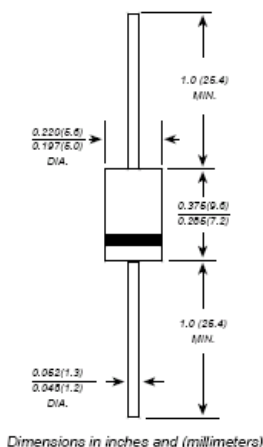
Case: JEDEC DO-201AD molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

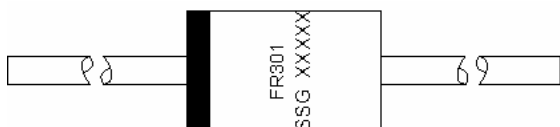
Mounting Position: Any

Weight: 0.04 ounce, 1.10 grams

DO-201AD



MARKING DIAGRAM



Where XXXXX is YYWWL

FR301 = Part Name
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

ORDERING INFORMATION

| Device | Package | Shipping |
|-------------|-----------------------|----------------|
| FR301-FR307 | 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.



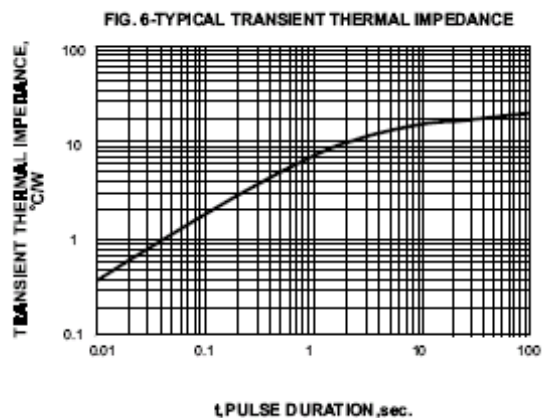
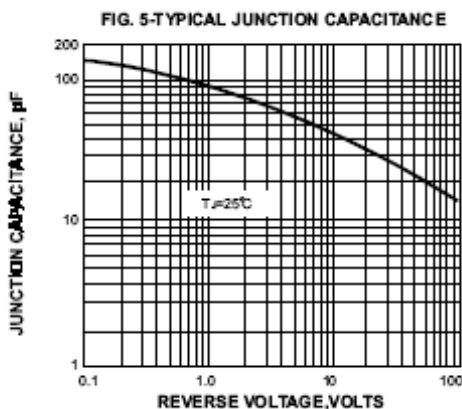
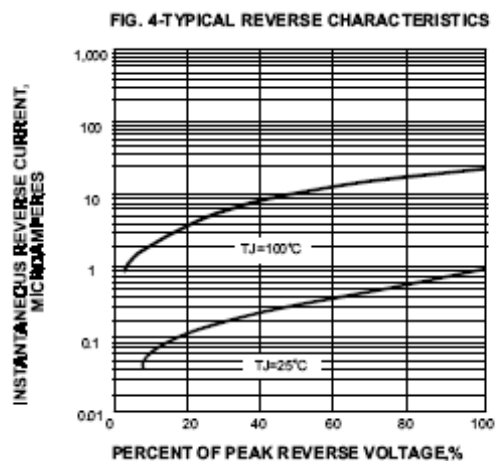
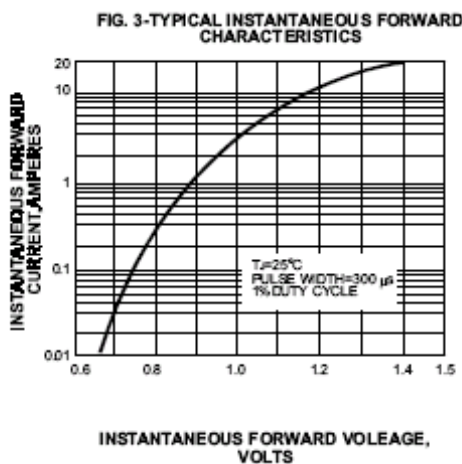
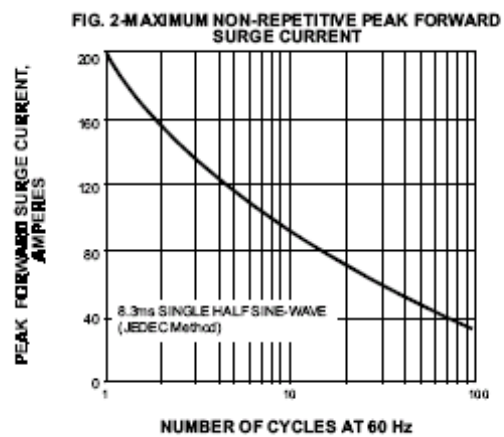
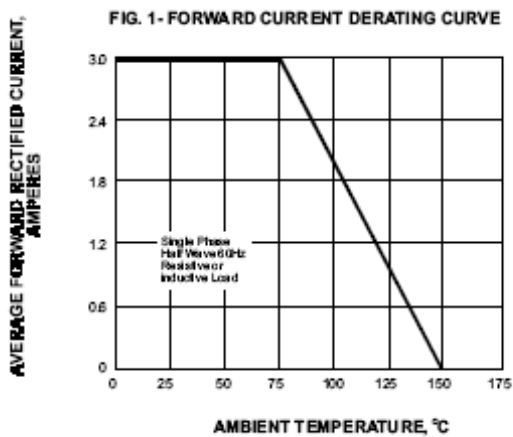
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| | SYMBOLS | FR 301 | FR 302 | FR 303 | FR 304 | FR 305 | FR 306 | FR 307 | UNITS |
|--|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | VOLTS |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum average forward rectified current 0.375"(9.5mm) lead length at $T_A=75^\circ C$ | $I_{(AV)}$ | 3.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 200.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 3.0A | V_F | 1.3 | | | | | | | Volts |
| Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=100^\circ C$ | I_R | 5.0 100.0 | | | | | | | μA |
| Maximum reverse recovery time (NOTE 1) | t_{rr} | 150 | | | | 250 | 500 | | ns |
| Typical junction capacitance (NOTE 2) | C_J | 60.0 | | | | | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | 20.0 | | | | | | | $^\circ C/W$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -65 to +150 | | | | | | | $^\circ C$ |

Note: 1.Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
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 CHARACTERISTIC CURVES FR301 THRU FR307



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