FR301 THRU FR307

FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE:50 TO 1000V CURRENT:3.0A

GULF SEMI

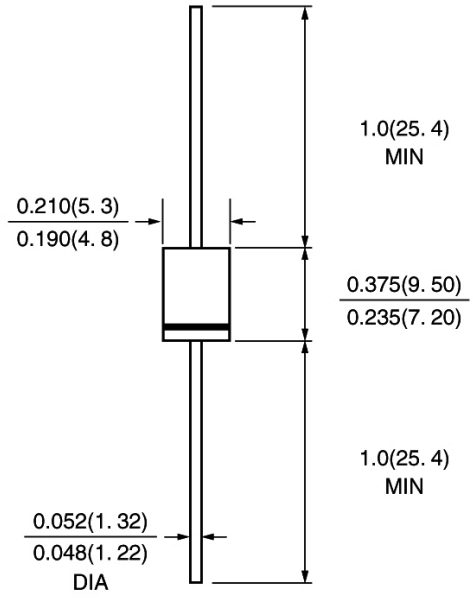
FEATURE

Molded case feature for auto insertion
High current capability
Low leakage current
High surge capability
High temperature soldering guaranteed
250°C/10sec/0.375"lead length at 5 lbs tension
Fast switching for high efficiency

MECHANICAL DATA

Terminal:Plated axial leads solderable per MIL-STD 202E, method 208C
Case:Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
Polarity:color band denotes cathode
Mounting position:any

DO- 201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	FR 301	FR 302	FR 303	FR 304	FR 305	FR 306	FR 307	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	Vrms	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	Vdc	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 3/8"lead length at Ta =75°C	If(av)	3.0							A
Peak Forward Surge Current 8.3ms single Half sine-wave superimposed on rated load	Ifsm	200.0							A
Maximum Forward Voltage at rated Forward Current and 25°C	Vf	1.3							V
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage	Ir	5.0							μA
Maximum Reverse Recovery Time (Note 1)	Trr	150				250	500		nS
Typical Junction Capacitance (Note 2)	Cj	65.0							pF
Typical Thermal Resistance (Note 3)	R(ja)	20.0							°C/W
Storage and Operating Junction Temperature	Tstg,Tj	-50 to +150							°C

Note:

1. Reverse Recovery Condition If =0.5A, Ir=1.0A, Irr =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient at 0.375"lead length, P.C. Board Mounted

RATINGS AND CHARACTERISTIC CURVES FR301 THRU FR307

[1]

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

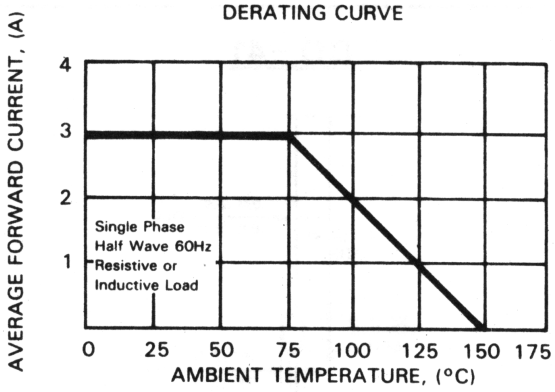


FIG. 2 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

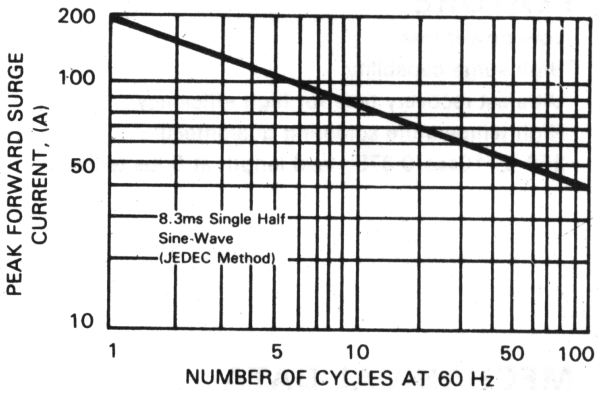


FIG. 3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

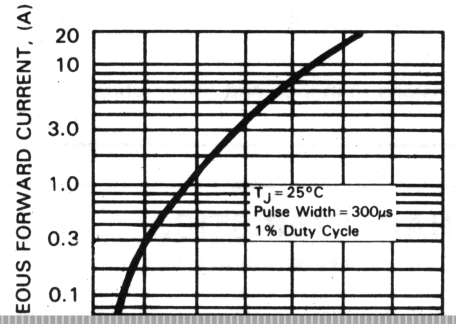


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

