

# FR105-10E

## FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE: 600V

CURRENT: 1.0A



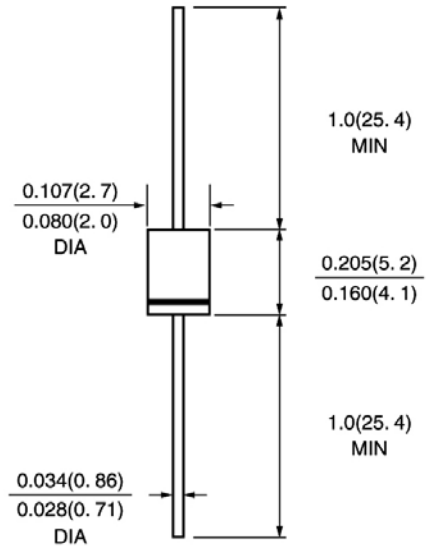
### FEATURE

Molded case feature for auto insertion  
High current capability  
Low leakage current  
High surge capability  
High temperature soldering guaranteed  
250°C10sec/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- 41\DO-204AL



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	FR105-10E	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	600	V
Maximum RMS Voltage	V <sub>rms</sub>	420	V
Maximum DC blocking Voltage	V <sub>dc</sub>	600	V
Maximum Average Forward Rectified Current 3/8"lead length at Ta =75°C	I <sub>f(av)</sub>	1.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	30.0	A
Maximum Forward Voltage at rated Forward Current and 25°C	V <sub>f</sub>	1.3	V
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C	I <sub>r</sub>	5.0 100.0	μA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	250	nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	15.0	pF
Typical Thermal Resistance (Note 3)	R <sub>th(ja)</sub>	50.0	°C/W
Storage and Operating Junction Temperature	T <sub>stg,Tj</sub>	-50 to +150	°C

Note:

- Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
- Thermal Resistance from Junction to Ambient at 0.375"lead length, P.C. Board Mounted

## RATINGS AND CHARACTERISTIC CURVES FR105-10E

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

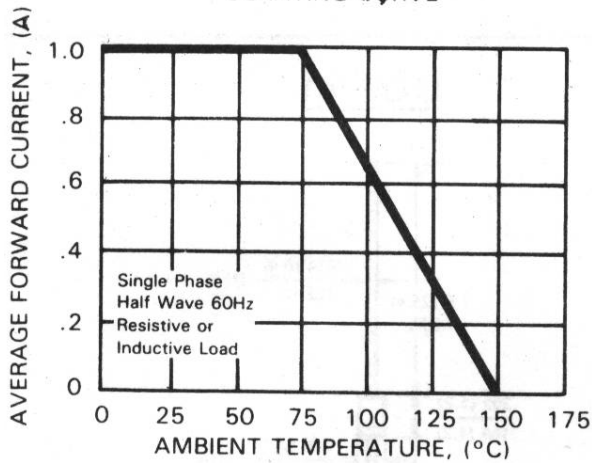


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

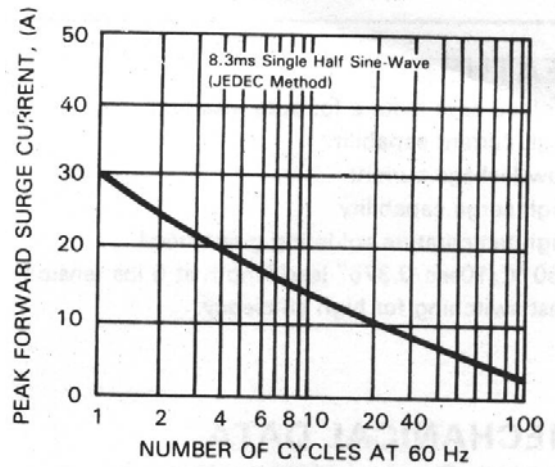


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

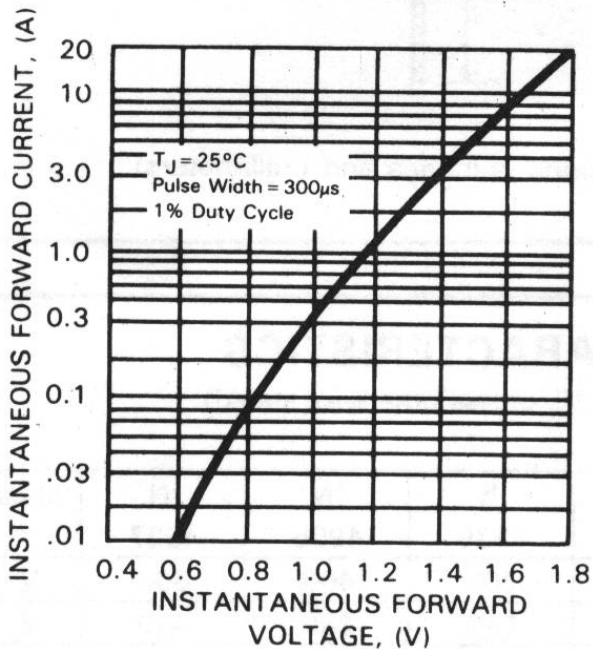


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

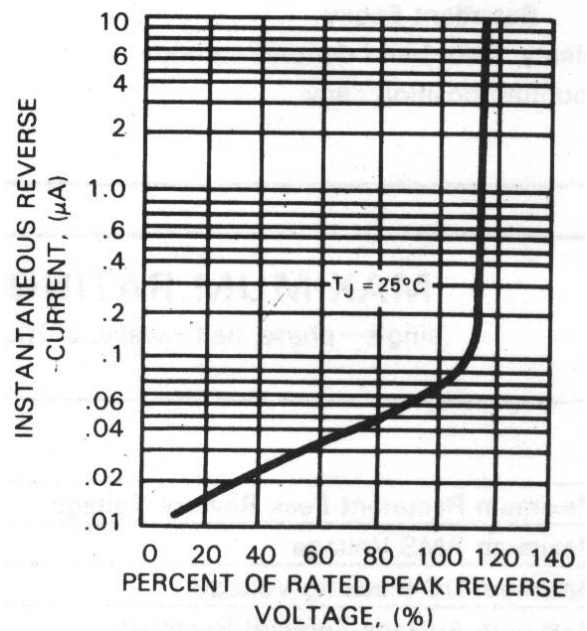


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

