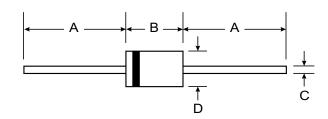


# FR106 / FR107

## 1.0A FAST RECOVERY RECTIFIER

#### **Features**

- Plastic Package: UL Flammability Classification Rating 94V-0
- Capable of Meeting the Environmental Tests in MIL-STD-750C
- High Reliability and Low Leakage
- Fast Switching for High Efficiency



## **Mechanical Data**

• Case: DO-41, Molded Plastic

Terminals: Axial Lead, Solderable per
 Nath ad 200

MIL-STD-202, Method 208
Mounting Position: Any

Polarity: Cathode Band

Weight: 0.35 grams (approx.)

DO-41				
Dim	Min	Max		
Α	25.4	_		
В	4.1	5.2		
С	0.71	0.86		
D	2.0	2.7		
All Dimensions in mm				

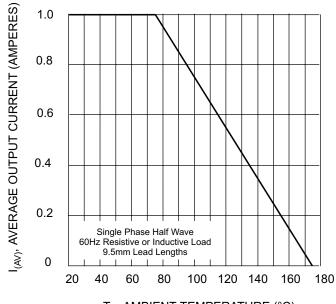
# **Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.

Characteristic	Symbol	FR106	FR107	Unit
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	800	1000	V
Maximum RMS Voltage	V <sub>RSM</sub>	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	800	1000	V
Maximum Average Forward Rectified Current 9.5mm Lead Lengths @ T <sub>A</sub> = 75°C	I <sub>(AV)</sub>	1.0		А
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30		А
Maximum Forward Voltage at 1.0A	V <sub>F</sub>	1.3		V
	I <sub>R</sub>	5.0 100		μА
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	50		K/W
Typical Junction Capacitance (Note 2)	CJ	15		pF
Maximum Reverse Recovery Time (Note 3)	T <sub>rr</sub>	250	500	ns
Storage and Operating Temperature	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175		°C

Notes: 1. Thermal Resistance from Junction to Ambient PC Board Mounting, 9.5mm Lead Length.

- 2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
- 3. Measured with I<sub>F</sub>= 0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=.25A



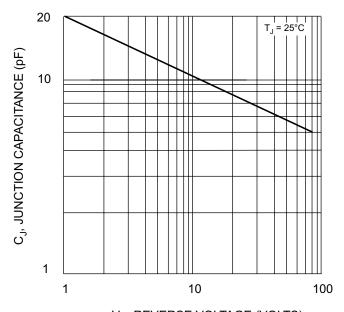
I<sub>F</sub>, INSTANTANEOUS FORWARD CURRENT (AMPERES) 0.6 8.0 1.0 1.2 1.4  $T_A$ , AMBIENT TEMPERATURE (°C) V<sub>F</sub>, INSTANTANEOUS FWD VOLTAGE (VOLTS) Fig. 1, Forward Current Derating Curve Fig. 2, Typical Forward Characteristics

4.0

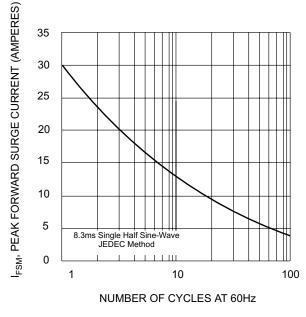
1.0

0.1

0.01



V<sub>R</sub>, REVERSE VOLTAGE (VOLTS) Fig. 3, Typical Junction Capacitance



T<sub>.1</sub> = 25°C

Pulse Width = 300 μs

2% Duty Cycle

1.6

Fig. 4, Max Non-Repetitive Peak Forward Surge Current

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