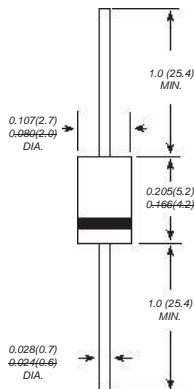


## FR104 THRU FR107

### FAST RECOVERY RECTIFIERS

**Reverse Voltage - 400 to 1000 Volts    Forward Current - 1.0 Ampere**

#### DO-41



Dimensions in inches and (millimeters)

#### 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

#### MECHANICAL DATA

**Case:** JEDEC DO-41 molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.012 ounce, 0.33 grams

### 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	FR104	FR105	FR107	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	400	600	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	280	420	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	400	600	1000	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	1.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0			Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.3			Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0 50.0			mA
Maximum reverse recovery time    (NOTE 1)	$t_{rr}$	150	250	500	ns
Typical junction capacitance (NOTE 2)	$C_J$	15.0			pF
Typical thermal resistance (NOTE 3)	$R_{qJA}$	50.0			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-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 CHARACTERISTIC CURVES FR104 THRU FR107

FIG. 1- FORWARD CURRENT DERATING CURVE

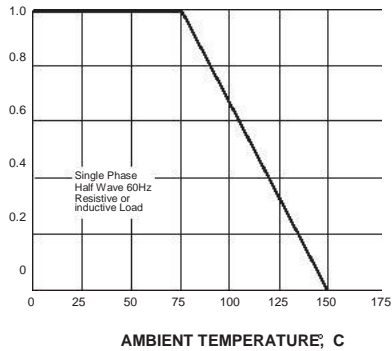


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

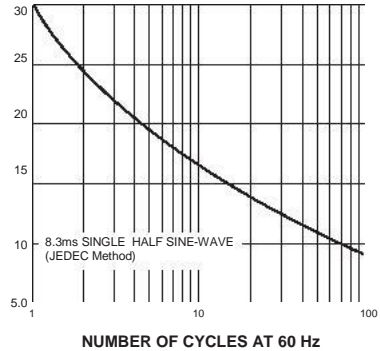


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

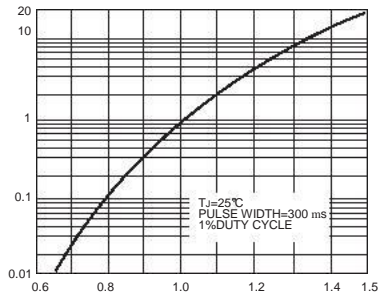


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

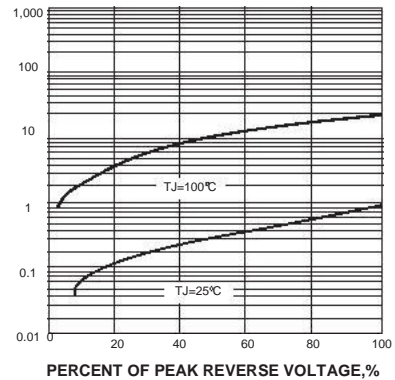


FIG. 5-TYPICAL JUNCTION CAPACITANCE

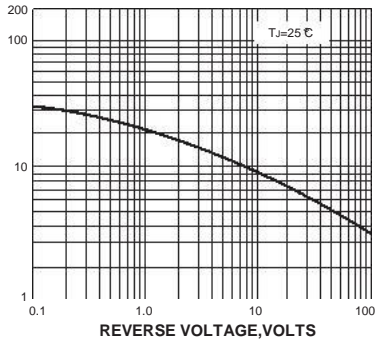


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

