

Fast Recovery Rectifiers

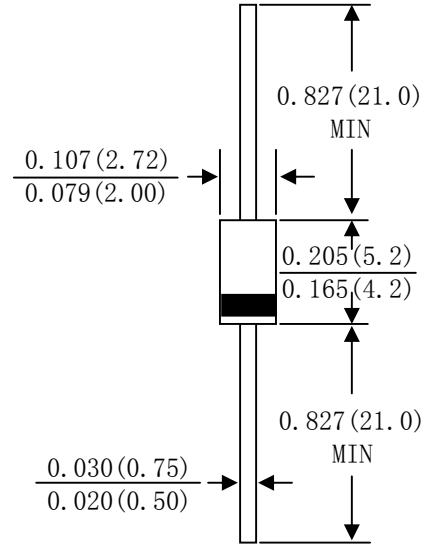
Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94-0
- Fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:260°C/10seconds, 0.375"(9.5mm) lead length,5lbs. (2.3kg) tension

Mechanical Data

- **Case:** JEDEC DO-41 molded plastic body
- **Terminals:** Plated leads solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

DO-41



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half-wave 60Hz, resistive or inductive load, For capacitive load derate current by 20%.

Type Number	SYMBOL	FR 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	Units
Maximum recurrent peak reverse voltage	V_{RM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average rectified output current 0.375"(9.5mm) lead length(see fig.1)	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.30							V
Maximum DC reverse current @TA=25°C	I_R	5.0							uA
At Rated DC blocking voltage @TA=100°C		50.0							
Maximum reverse recovery time (Note 1)	T_{rr}	150.0				250.0	500.0		ns
Typical junction capacitance (Note 2)	C_j	15.0							pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	50.0							°C/W
Operating junction and storage temperature range	T_j, T_{STG}	-55 to +150							°C

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

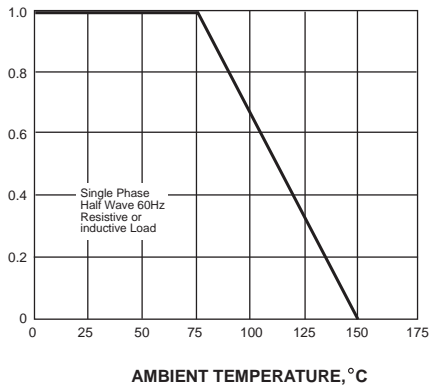
2. Measured at 1.0 MHz and applied reverse Voltage of 4.0V D.C

3. Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length, P.C.B. mounted.

RATINGS AND CHARACTERISTIC CURVES FR101 THRU FR107

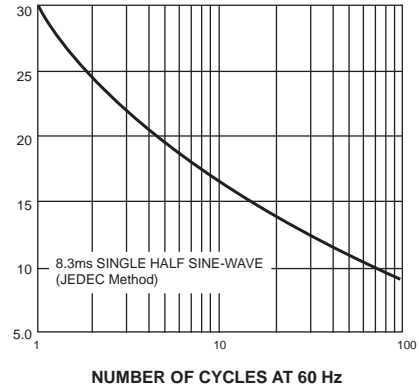
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



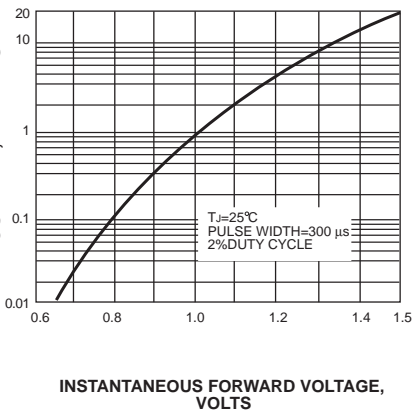
PEAK FORWARD SURGE CURRENT, AMPERES

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



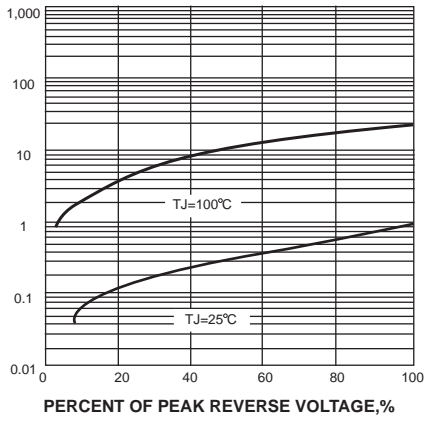
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



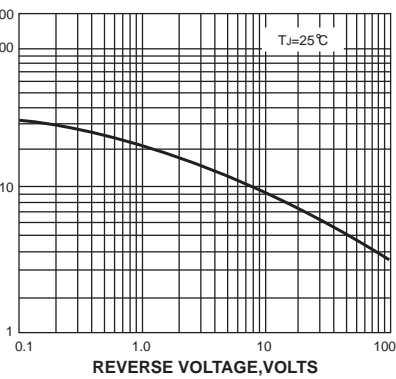
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



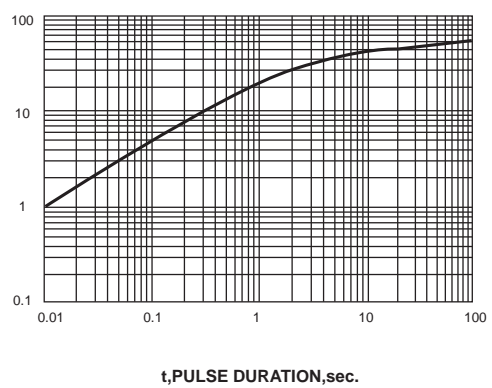
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

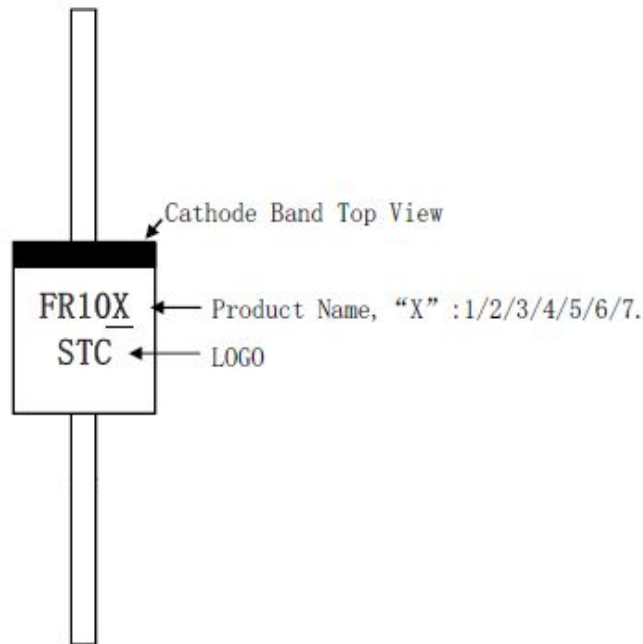


TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



PRINTING INSTRUCTIONS



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