

FR201 THRU FR207

FAST RECOVERY RECTIFIERS

REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 2.0 Ampere

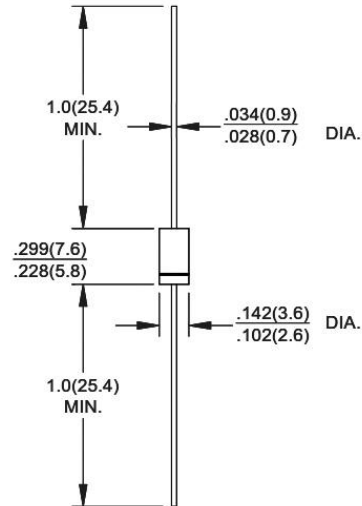
FEATURES

- ◆ Low forward voltage drop
 - ◆ Low leakage current
 - ◆ High forward surge capability
 - ◆ High reliability
 - ◆ High temperature soldering guaranteed
- 260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs(2.3kg) tension

Mechanical Data

- ◆ Case: Transfer molded plastic
- ◆ Epoxy: UL94V-0 rate flame retardant
- ◆ Polarity: Color band denotes cathode end
- ◆ Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- ◆ Mounting position: Any

DO-15



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%

PARAMETER	SYMBOL	FR201	FR202	FR203	FR204	FR205	FR206	FR207	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	2.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60							Amps
Maximum instantaneous forward voltage at 1.5A	V_F	1.3							VOLTS
Maximum DC Reverse Current at $T_A=25^\circ\text{C}$	I_R	5.0							uA
Rated DC blocking voltage $T_A=100^\circ\text{C}$		100							
Maximum reverse recovery time (NOTE 1)	t_{rr}	150			250	500		ns	
Typical Junction Capacitance (Note 2)	C_J	40							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°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 1 MHz and applied reverse voltage of 4.0 VDC.

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

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RATING AND CHARACTERISTIC CURVES FR201 THRU FR207

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

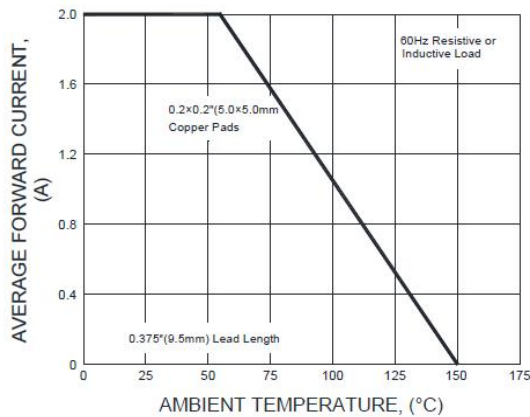


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

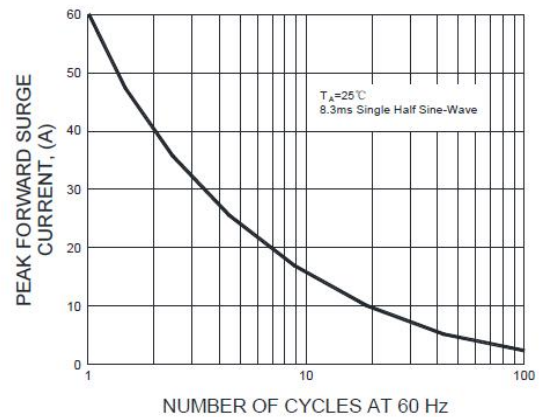


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

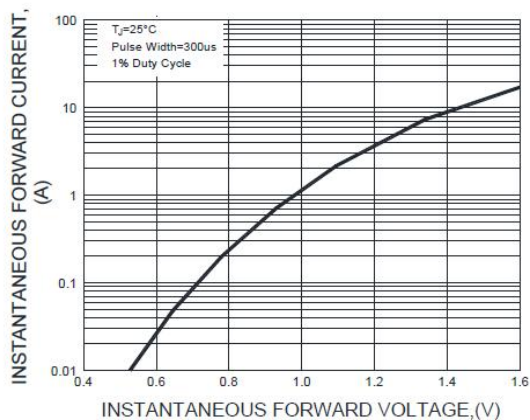


FIG.4-TYPICAL JUNCTION CAPACITANCE

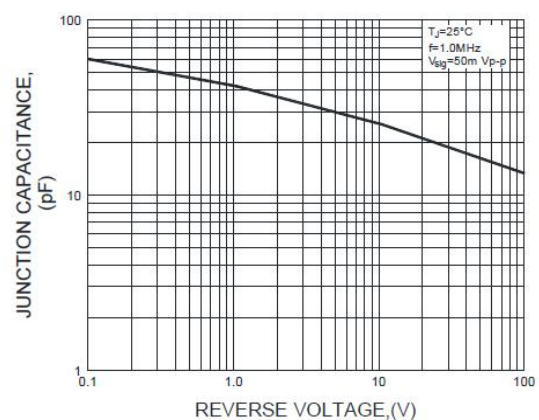
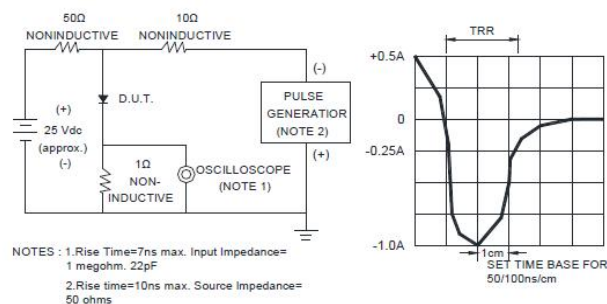


FIG.5-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.