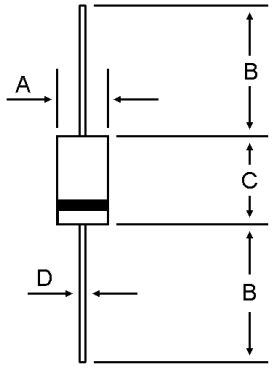
MOSPEC

FR201 THRU FR207

FAST RECOVERY RECTIFIER
Voltage range 50 TO 1000 Volts
Current 2.0 Ampere

DO-15



DIM	MILLIMETERS	
	MIN	MAX
A	2.60	3.60
B	25.40	---
C	5.80	7.60
D	0.70	0.90

FEATURES
- ＊Fast switching for high efficiency
- ＊Glass Passivated Chip junction
- ＊Low leakage
- ＊High temperature soldering guaranteed
  260℃/10 seconds, 0.375”(9.5 mm) lead length
  at 5 lbs(2.3kg) tension

MECHANICAL DATA
- ＊Case：Transfer Molded Plastic
- ＊Epoxy: UL94V-O rate flame retardant
- ＊Terminals：Plated axial lead, Solderable Per MIL-STD-202 Method 208
- ＊Polarity：Color band denotes cathode end
- ＊Mounting position: Any
- ＊ Weight： 0.014 ounce. 0.39 gram (approx)

In compliance with EU RoHs 2002/95/EC directives
The marking is indicated by part no. add. “M”.
ex: FR201M ~FR207M

MAXIMUM RATINGS AND ELECTRICAL CHARATERISTICS

* Rating at 25℃ ambient temperature unless otherwise specified
* Single phase,half wave. 60Hz, resistive or inductive load.
* For capacitive load derate current by 20 %

Characteristic	Symbol	FR201	FR202	FR203	FR204	FR205	FR206	FR207	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectifier Forward Current Per Leg T_C=55℃	$I_{F(AV)}$	2.0							A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	70							A
Maximum Instantaneous Forward Voltage (I_F =1.5 Amp T_C = 25℃)	V_F	1.3							V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	5.0 500							uA
Reverse Recovery Time (Note 3)	T_{rr}	150				250		500	ns
Typical Junction Capacitance (Note 1)	C_j	20							pF
Typical Thermal Resistance (Note 2)	$R_{\theta jA}$	40							℃/W
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +175							℃

NOTES:
1.Measured at 1.0MHz and applied reverse voltage of 4.0 volts
2.Thermal Resistance from Junction to ambient at .375”(9.5mm)lead length, P.C. board mounted
3.Test conditions: I_F = 0.5 A, I_R =1.0 , I_{RR}=0.25 A

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FIG-1 TYPICAL FORWARD CHARACTERISITICS

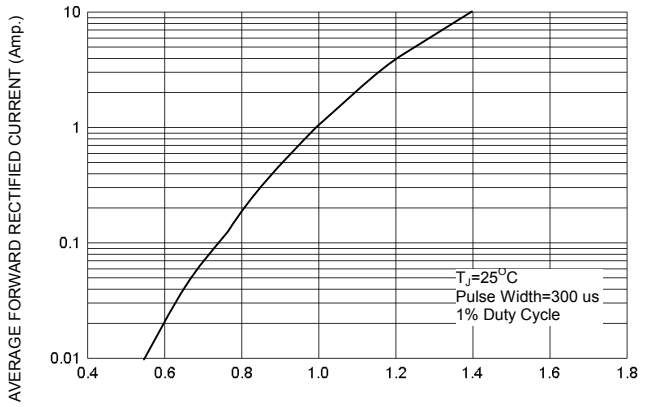


FIG-2 TYPICAL REVERSE CHARACTERISTICS

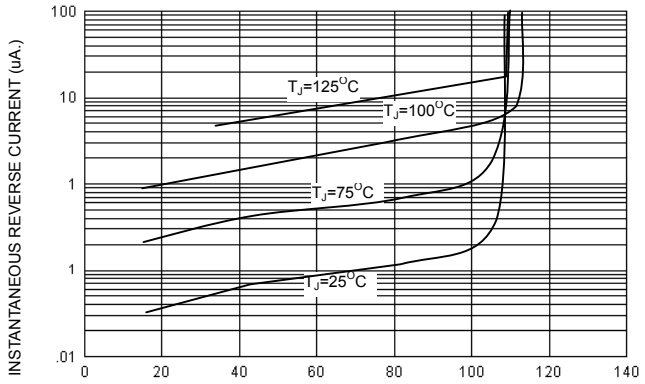


FIG-3 FORWARD CURRENT DERATING CURVE

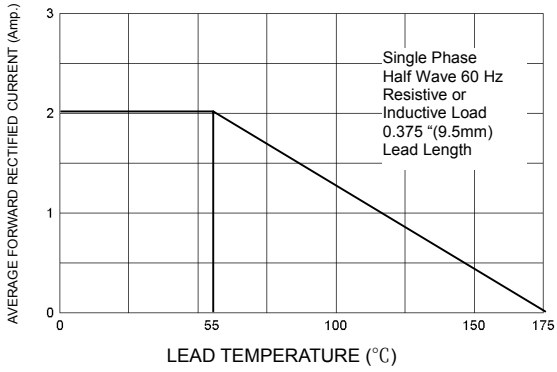


FIG-4TYPICAL JUNCTION CAPACITANCE

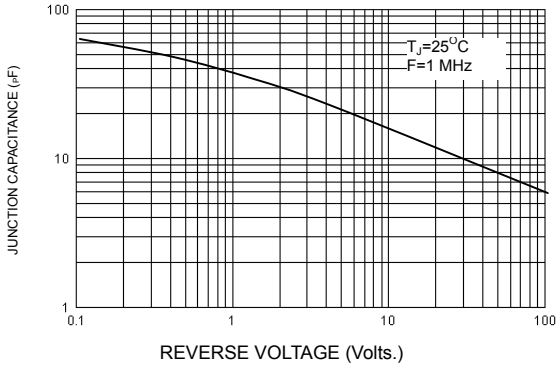
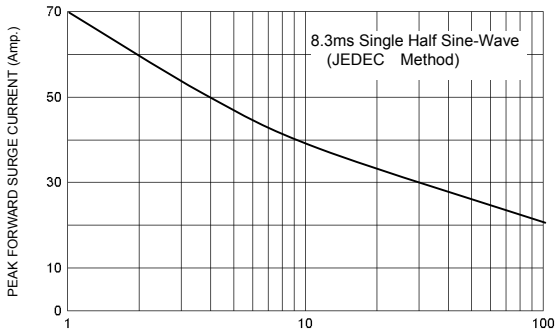
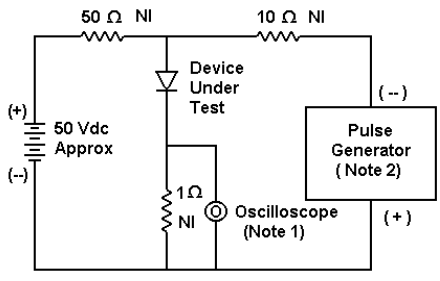


FIG-5PEAK FORWARD SURGE CURRENT





Notes:
1. Rise Time = 7 ns max. Input Impedance =1 M Ω , 22 pF
2. Rise Time = 10 ns max. Input Impedance = 50 Ω

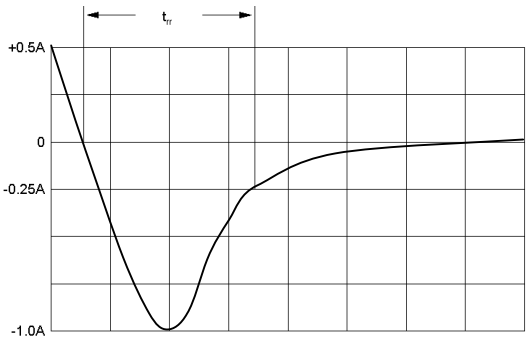


FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram

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