

FR601 THRU FR607

FAST RECOVERY RECTIFIERS

Voltage – 50 to 1000 Volts

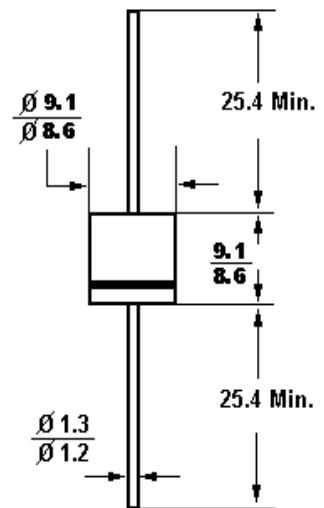
Current – 6.0 Ampere

Features

- Low forward voltage drop
- Low leakage
- High current capability
- High reliability
- High current surge
- Fast switching

Mechanical Data

- **Case:** Molded plastic.
- **Epoxy:** UL 94V-0 rate flame retardant.
- **Terminals:** MIL-STD-202E, method 208C guaranteed.
- **Polarity:** Color band denotes cathode end.
- **Mounting Position:** Any.



Dimensions in mm

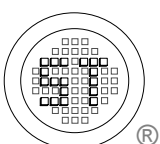
Absolute Maximum Ratings and Characteristics @ 25°C unless otherwise specified.

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

	Symbols	FR601	FR602	FR603	FR604	FR605	FR606	FR607	Units
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 $T_A = 75^\circ\text{C}$	$I_{(AV)}$	6.0							Amps
Peak forward surge current 8.3ms single half sine-wave, superimposed on rated load (JEDEC method)	I_{FSM}	300							Amps
Maximum instantaneous forward voltage at $I_{FM} = 6\text{ A}$,	V_F	1.3							Volts
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_L = 55^\circ\text{C}$	I_R	10 150							μA
Maximum reverse recovery time (Note 1)	T_{rr}	150			250	500		nS	
Typical junction capacitance (Note 2)	C_J	150							pF
Operating and storage temperature range	T_J, T_S	-65 to +150							$^\circ\text{C}$

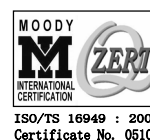
1) Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$

2) Measured at 1MHz and applied reverse voltage of 4volts D.C.



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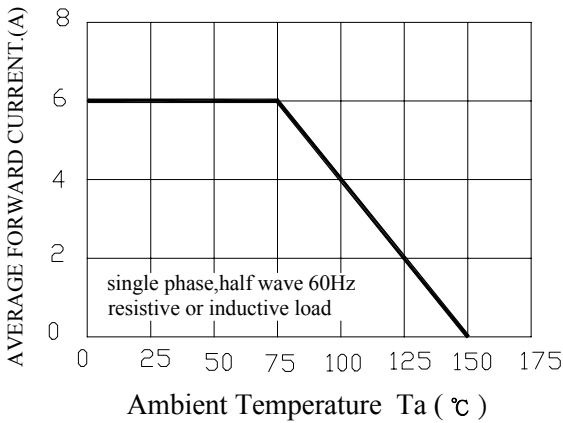
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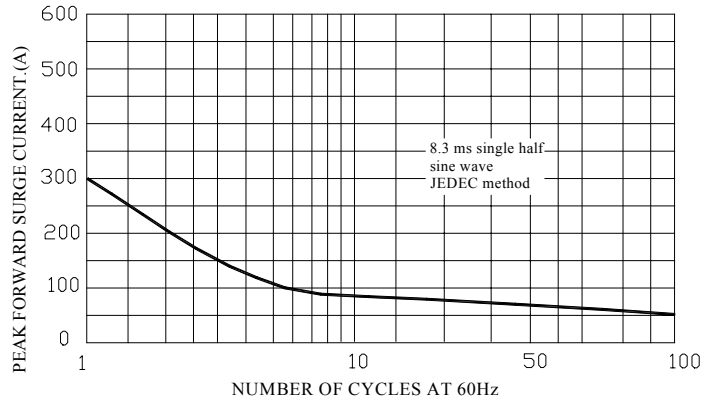
Dated : 12/04/2003

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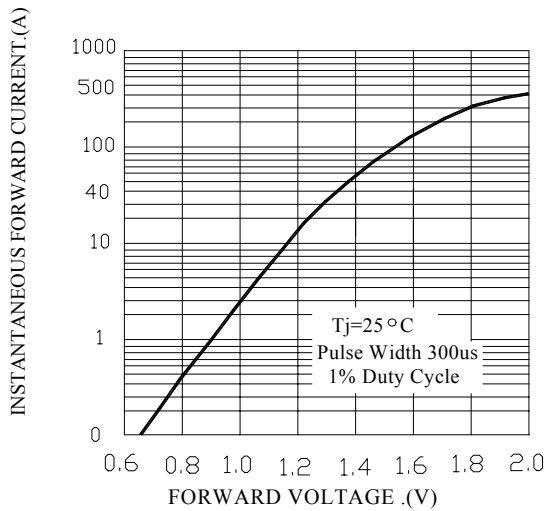
TYPICAL FORWARD CURRENT DERATING CURVE



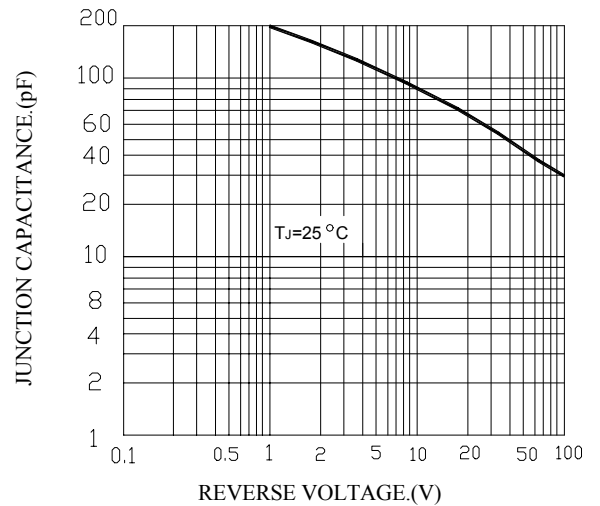
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



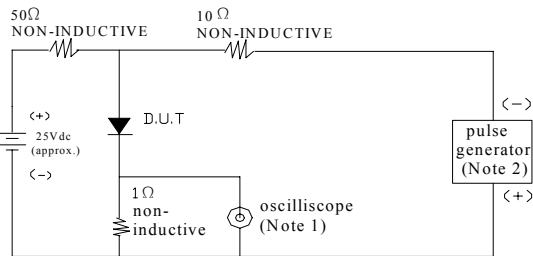
TYPICAL FORWARD CHARACTERISTICS



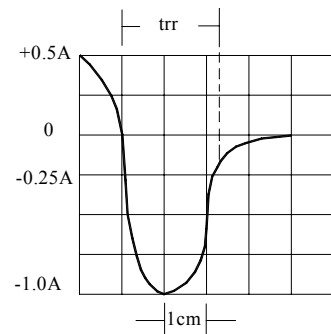
TYPICAL JUNCTION CAPACITANCE



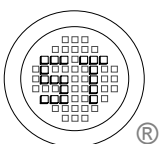
TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



Notes: 1. Rise time = 2ns max. Input impedance = 1megohm, 22pF
 2. Rise time = 10ns max. Source impedance = 50ohms.

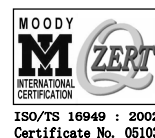


set time base for 50/10ns/cm



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ISO/TS 16949 : 2002
 Certificate No. 05103

ISO 14001
 Certificate No. 7116

ISO 9001 : 2000
 Certificate No. 000-199-01-002-001

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