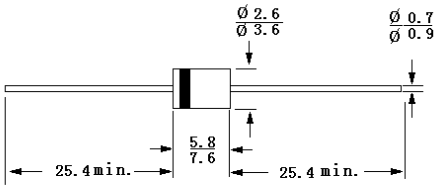
FR201 THRU FR207

FAST RECOVERY RECTIFIERS
Reverse Voltage – 50 to 1000 Volts
Forward Current – 2.0 Amperes

DO-15



Dimensions in mm

Features

- High Current Capability
- Fast switching for high efficiency
- Low Leakage.
- 2 ampere operation at T_A = 55℃ with no thermal runaway

Mechanical Data

- **Case:** Molded plastic, DO-15
- **Lead:** Axial leads, solderable per MIL-STD-202, method 208 guaranteed.
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

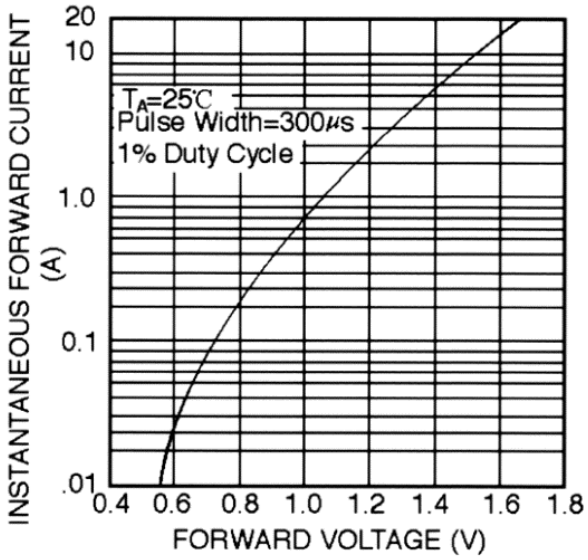
Absolute Maximum Ratings and Characteristics

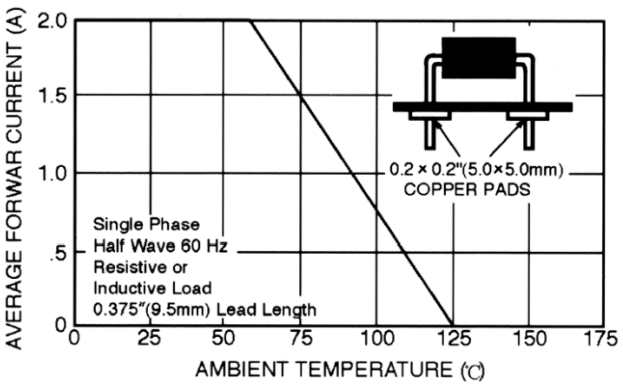
Ratings at 25℃ ambient temperature unless otherwise specified, single phase, half wave, 60Hz, resistive or inductive load, for capacitive load, derate current by 20%.

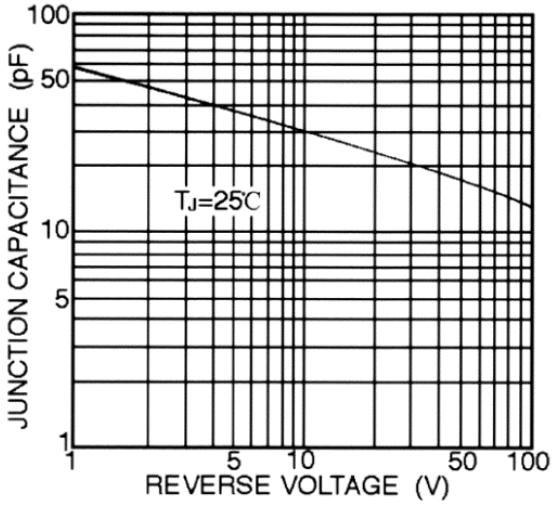
	Symbols	FR201	FR202	FR203	FR204	FR205	FR206	FR207	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average forward rectified current .375" (9.5mm) lead length at T_A = 55℃	$I_{(AV)}$	2							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	60							A
Maximum forward voltage at 2A DC and 25°C	V_F	1.3							V
Maximum reverse current T_A = 25℃	I_R	5							μA
at rated DC blocking voltage T_A = 100℃		100							
Maximum reverse recovery time [1]	T_{rr}	150				250	500		nS
Typical junction capacitance [2]	C_J	40							pF
Storage Temperature Rrange	T_{Stg}	-55 to +150							℃
Operating Temperature Range	T_{opr}	-55 to +125							℃

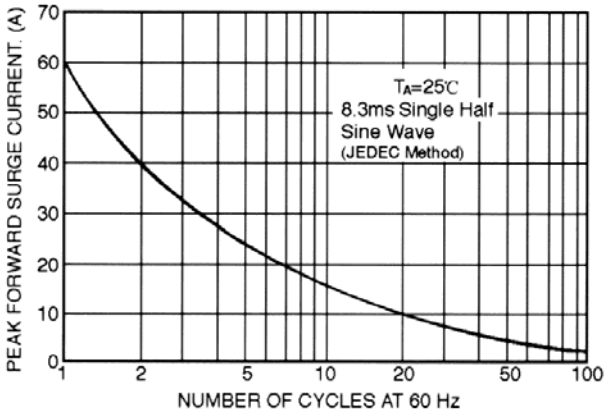
[1] Reverse recovery test conditions: I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A.

[2] Measured at 1MH_Z and applied reverse voltage of 4 VDC .


INSTANTANEOUS FORWARD CURRENT (A)
20
10
1.0
0.1
.01
T_A=25℃
Pulse Width=300μs
1% Duty Cycle
0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8
FORWARD VOLTAGE (V)


AVERAGE FORWAR CURRENT (A)
2.0
1.5
1.0
.5
0
0.2 × 0.2"(5.0×5.0mm)
COPPER PADS
Single Phase
Half Wave 60 Hz
Resistive or
Inductive Load
0.375"(9.5mm) Lead Length
0 25 50 75 100 125 150 175
AMBIENT TEMPERATURE (℃)


JUNCTION CAPACITANCE (pF)
100
50
10
5
1
T_J=25℃
1 5 10 50 100
REVERSE VOLTAGE (V)


PEAK FORWARD SURGE CURRENT. (A)
70
60
50
40
30
20
10
0
T_A=25℃
8.3ms Single Half
Sine Wave
(JEDEC Method)
1 2 5 10 20 50 100
NUMBER OF CYCLES AT 60 Hz