

FR201G thru FR207PG

Glass Passivated Junction Fast Switching Rectifiers
Reverse Voltage 50 to 1000V Forward Current 2.0A

Feature & Dimensions

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * High temperature metallurgically bonded construction
- * Glass passivated chip
- * Capable of meeting environmental standards of MIL-S-19500
- * 2.0 A operation at $T_A=55^{\circ}\text{C}$ with no thermal runaway
- * For use in high frequency rectifier circuits
- * Fast switching for high efficiency
- * Typical IR less than $1.0\mu\text{A}$
- * High temperature soldering guaranteed: $260^{\circ}\text{C}/10$ seconds
- * 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-15, molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.015 oz., 0.40 g

Handling precaution: None

1. Electrical Characteristic

Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	FR201 G	FR202 G	FR203 G	FR204 G	FR205 G	FR205P G	FR206 G	FR207 G	FR207 PG	Unit
device marking code		FR201 G	FR202 G	FR203 G	FR204 G	FR205 G	FR205P G	FR206 G	FR207 G	FR207 PG	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	600	800	1000	1000	V
Maximum RSM voltage	V_{RSM}	35	70	140	280	420	420	560	700	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	600	800	1000	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^{\circ}\text{C}$	$I_F(AV)$	2.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	70									A
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead lengths at $T_A = 55^{\circ}\text{C}$	$I_R(AV)$	100									μA
Typical thermal resistance (Note 2)	$R_{\theta JA}$	55									$^{\circ}\text{C}/\text{W}$
Operating junction and storage temperature range	TJ, TSTG	-50 to +150									$^{\circ}\text{C}$

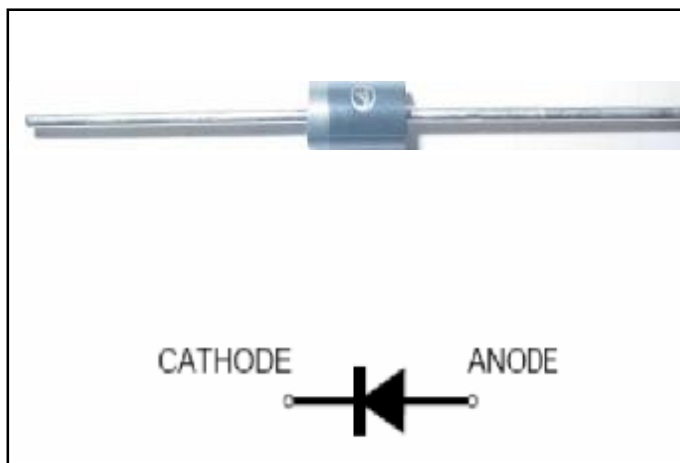
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	FR201 G	FR202 G	FR203 G	FR204 G	FR205 G	FR205P G	FR206 G	FR207 G	FR207 PG	Unit
Maximum instantaneous forward voltage at 2.0A	V_F	1.3									V
Maximum DC reverse current $T_A = 25^{\circ}\text{C}$ at rated DC blocking voltage $T_A = 125^{\circ}\text{C}$	I_R	5.0 200									μA
Typical reverse recovery time (Note 1)	t_{rr}	150				250	150	500	250		ns
Typical junction capacitance at 4.0V, 1MHz	CJ	35									PF

NOTES:

1. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$

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



We declare that the material of product compliance with ROHS requirements

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2. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

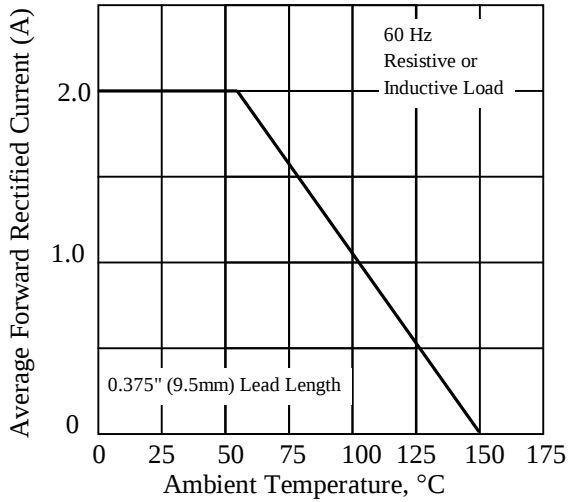


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

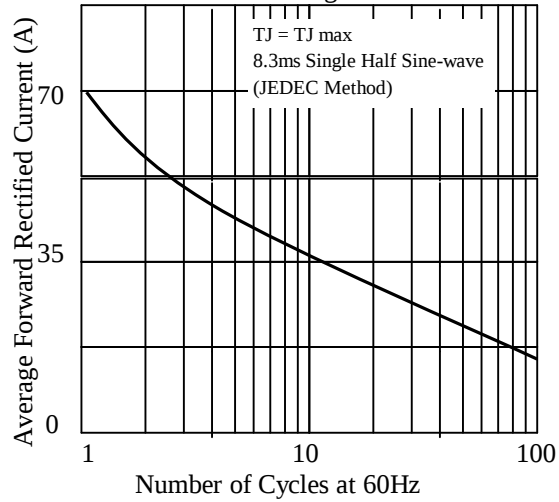


Fig. 3 - Typical Instantaneous Forward Characteristics

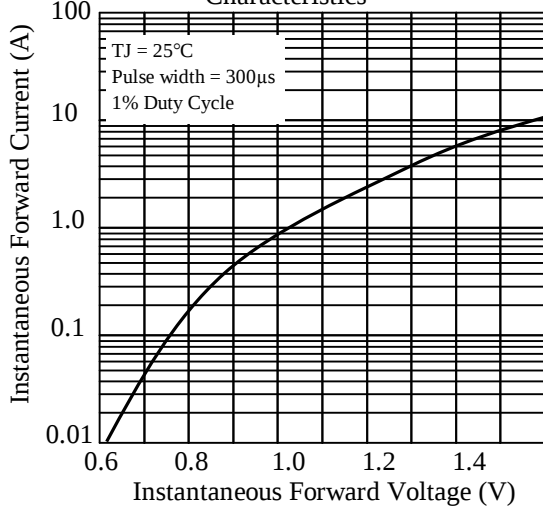


Fig. 4 - Typical Reverse Characteristics

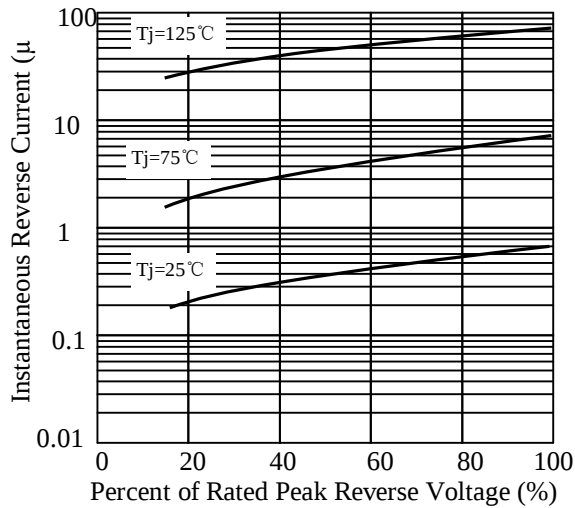


Fig. 5 - typical transient thermal impedance

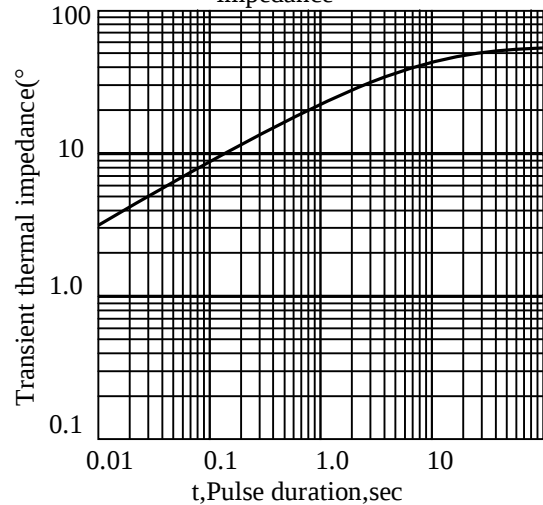
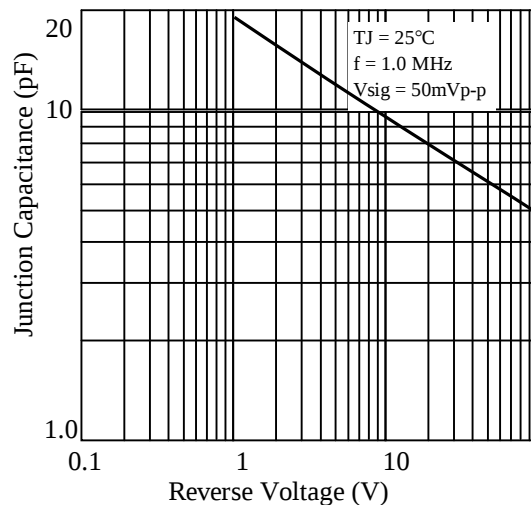
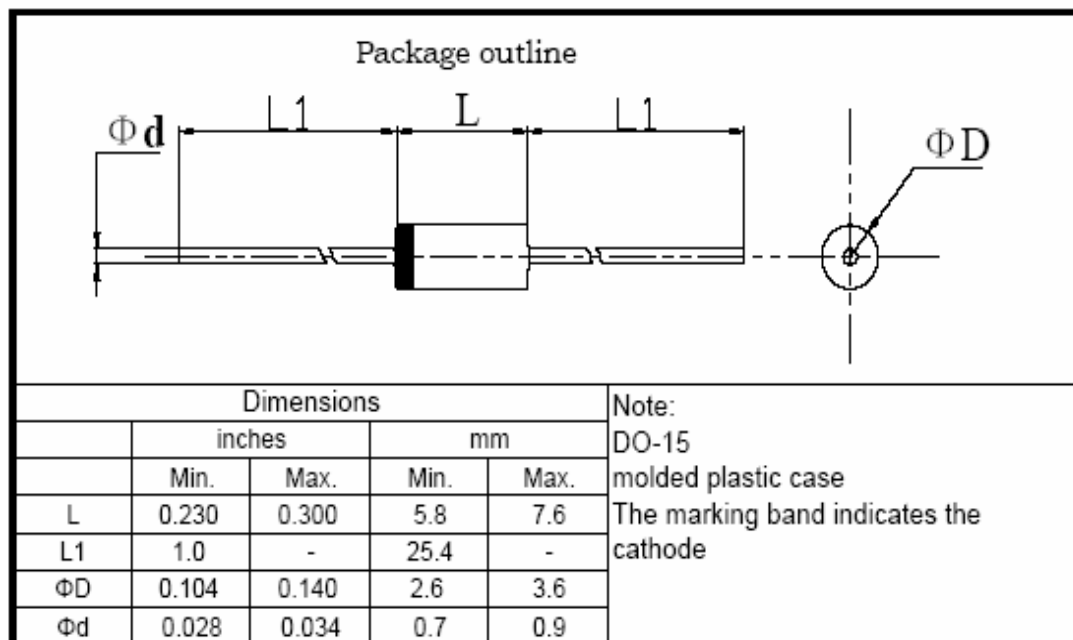


Fig. 6 - Typical Junction Capacitance



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3. dimension:



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4.Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2012-1-9
2	更新版面	周杰	2012-8-2