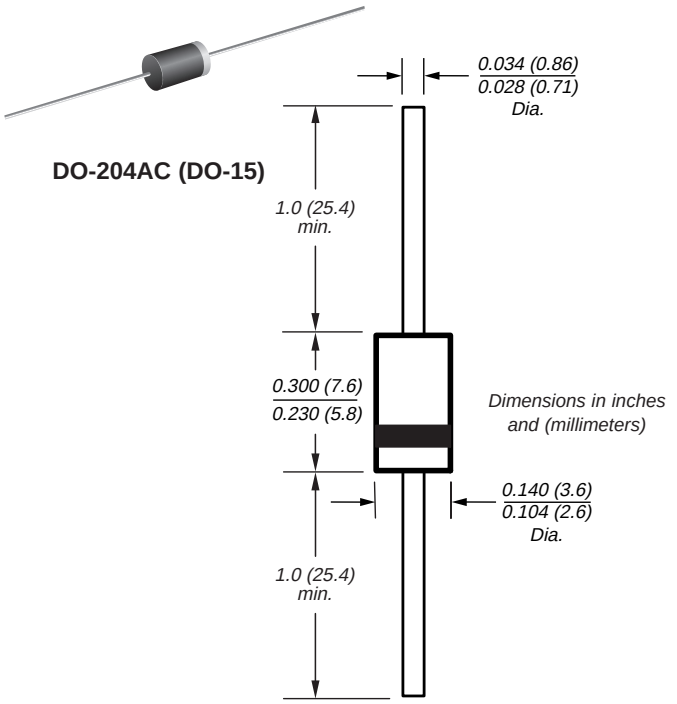
New Product

Vishay Semiconductors
formerly General Semiconductor

Fast Switching Plastic Rectifier

Reverse Voltage 50 to 800 V
Forward Current 2.0 A



Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Construction utilizes void-free molded plastic technique
- Fast switching for high efficiency
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension
- Low cost construction
- Low reverse leakage

Mechanical Data

Case: JEDEC DO-204AC 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., 0.4 g

Maximum Ratings & Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	RP 200A	RP 200B	RP 200D	RP 200G	RP 200J	RP 200K	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A = 75°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
Typical thermal resistance (Note 1)	$R_{\theta JA}$	40						°C/W
Operating junction and storage temperature range	T_J, T_{STG}	–65 to +150						°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	RP 200A	RP 200B	RP 200D	RP 200G	RP 200J	RP 200K	Unit
Maximum instantaneous forward voltage at 2.0A	V_F	1.3						V
Maximum DC reverse current T_A = 25°C at rated DC blocking voltage T_A = 100°C	I_R	5.0 200						µA
Maximum reverse recovery time I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A	t_{rr}	150				250	500	ns
Typical junction capacitance at 4.0V, 1MHz	C_J	25						pF

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

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

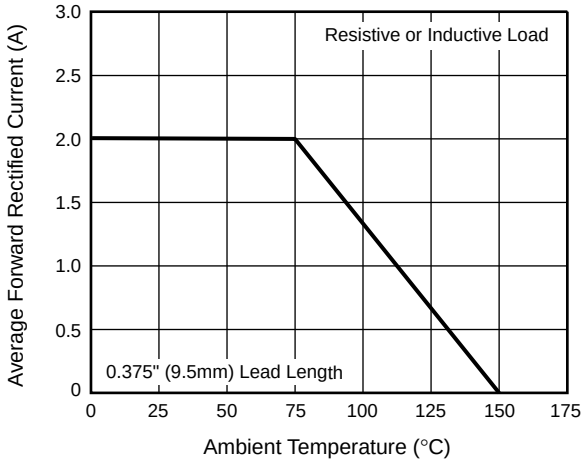


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

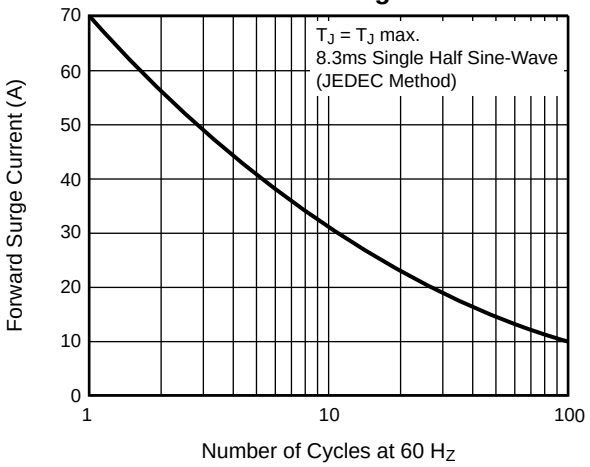


Fig. 3 – Typical Instantaneous Forward Characteristics

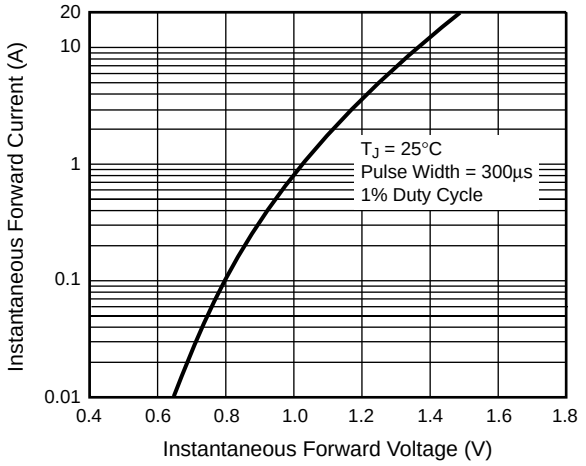


Fig. 4 – Typical Reverse Characteristics

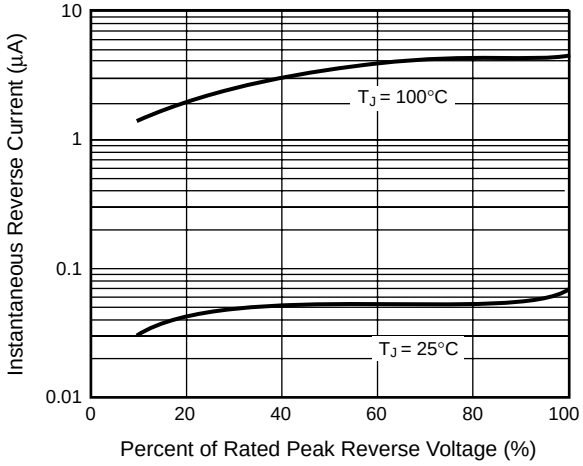
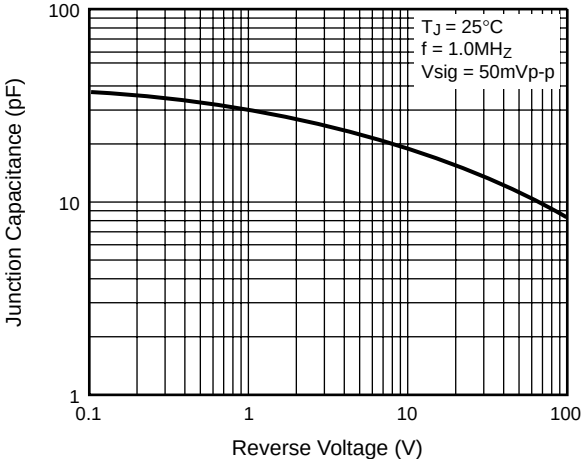


Fig. 5 – Typical Junction Capacitance



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