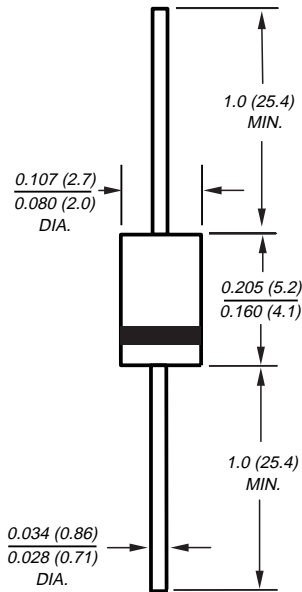


Fast Switching Plastic Rectifier

Reverse Voltage 50 to 800V
Forward Current 1.0A

DO-204AL (DO-41)



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Construction utilizes void-free molded plastic technique
- 1.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- Fast switching for high efficiency
- High temperature soldering guaranteed: $250^\circ\text{C}/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-204AL, molded plastic body

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 oz., 1.3 g

Packaging codes/options:

1/5K per Bulk Box

4/5.5K per 13" Reel (52mm Tape)

23/3K per Ammo. Box (52mm Tape)

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

Parameter	Symbol	SRP 100A	SRP 100B	SRP 100D	SRP 100G	SRP 100J	SRP 100K	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 $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	1.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A = 75^\circ\text{C}$	I_{FSM}	30						A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	41						$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-50 to +125						$^\circ\text{C}$
Storage temperature range	T_{STG}	-50 to +150						$^\circ\text{C}$

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

Maximum instantaneous forward voltage at 1.0A	V_F	1.3						V
Maximum DC reverse current at rated DC blocking voltage	I_R	10 200						μA
Maximum reverse recovery time at $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$	t_{rr}	100				200		ns
Typical junction capacitance at 4.0V, 1MHz	C_J	12						pF

Notes:

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

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curves

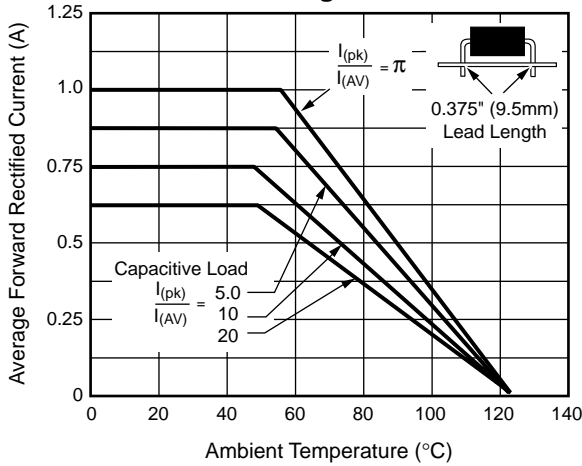


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

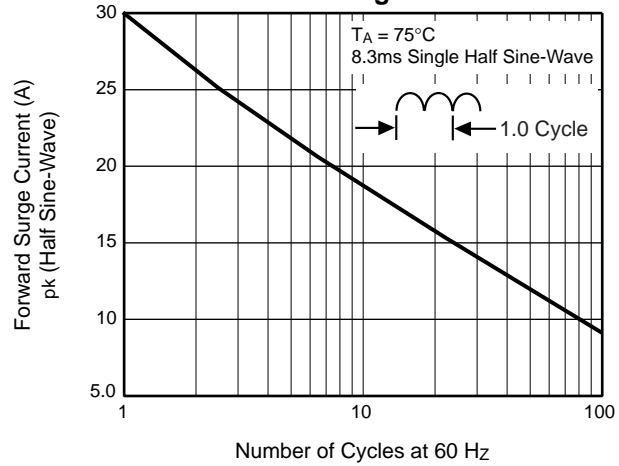


Fig. 3 – Typical Instantaneous Forward Characteristics

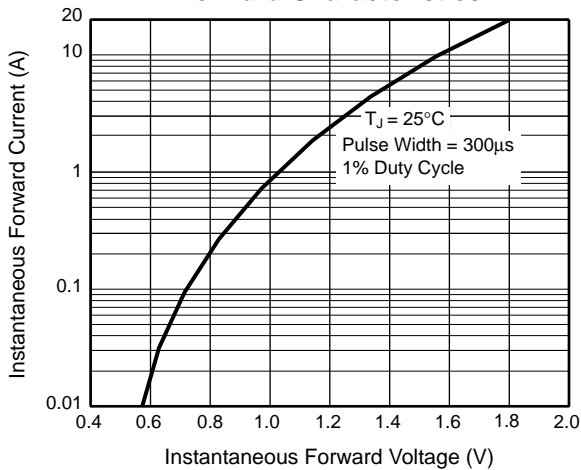


Fig. 4 – Typical Reverse Characteristics

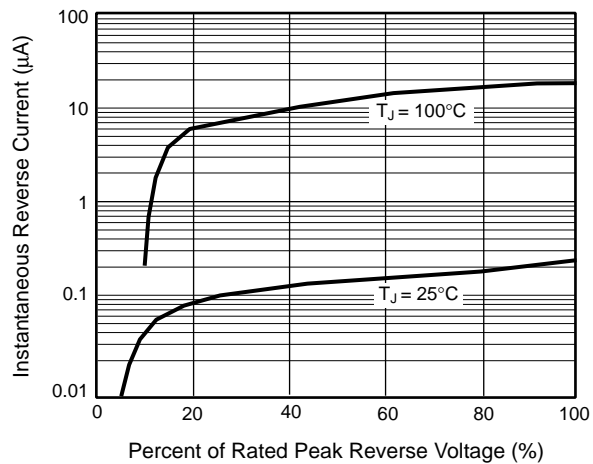


Fig. 5 – Typical Junction Capacitance

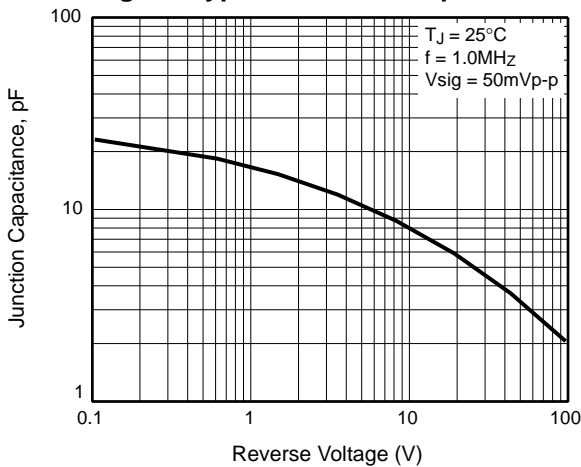
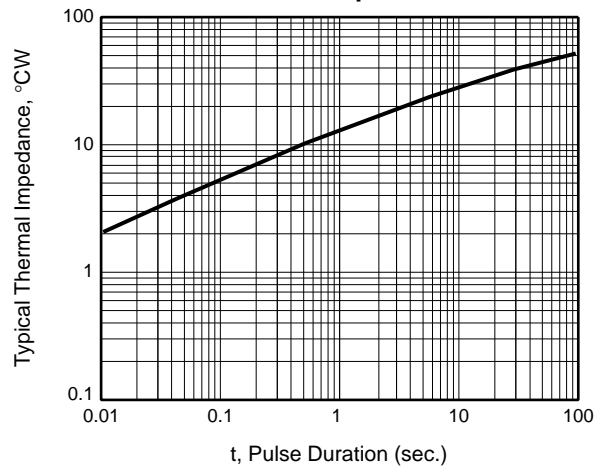


Fig. 6 – Typical Transient Thermal Impedance



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