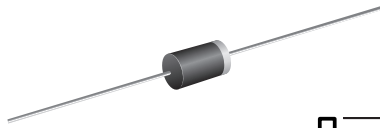
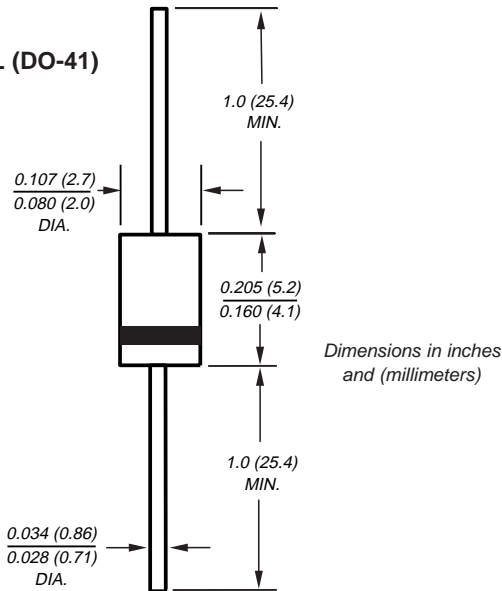


General Purpose Plastic Rectifiers

Reverse Voltage
50 to 1000V
Forward Current 1.5A


DO-204AL (DO-41)


Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- 1.5 Ampere operation at $T_L = 70^\circ\text{C}$ with no thermal runaway
- Low reverse leakage
- Construction utilizes void-free molded plastic technique
- 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., 0.3 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symb.	1N5391	1N5392	1N5393	1N5394	1N5395	1N5396	1N5397	1N5398	1N5399	Unit
* Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	V
* Maximum RMS voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	V
* Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	500	600	800	1000	V
* Maximum average forward rectified current 0.500" (12.7mm) lead length at $T_L = 70^\circ\text{C}$	$I_{F(AV)}$	1.5									A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_A = 75^\circ\text{C}$	I_{FSM}	50									A
* Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at $T_L = 70^\circ\text{C}$	$I_{R(AV)}$	300									μA
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$	55 25									$^\circ\text{C}/\text{W}$
* Maximum DC blocking temperature	T_A	+150									$^\circ\text{C}$
* Operating junction temperature range	T_J	-50 to +170									$^\circ\text{C}$
* Storage temperature range	T_{STG}	-50 to +175									$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

* Max. instantaneous forward voltage at 1.5A $T_A = 70^\circ\text{C}$	V_F	1.4	V
* Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$	I_R	5.0 300	μA
Typical reverse recovery time at $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$	t_{rr}	2.0	μs
Typical junction capacitance at 4.0V, 1MHz	C_J	15	pF

Note: (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted *JEDEC registered values

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

Fig. 1 – Forward Current Derating Curve

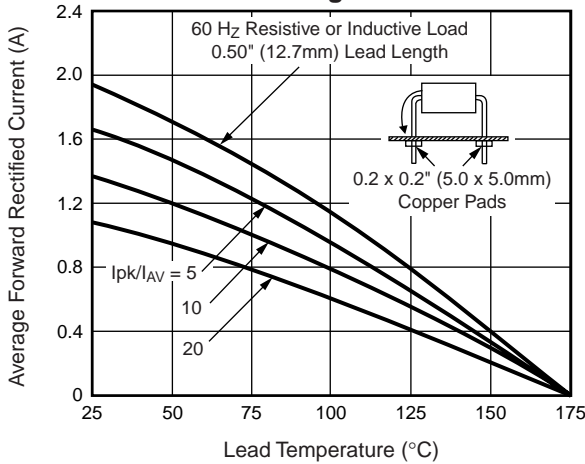


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

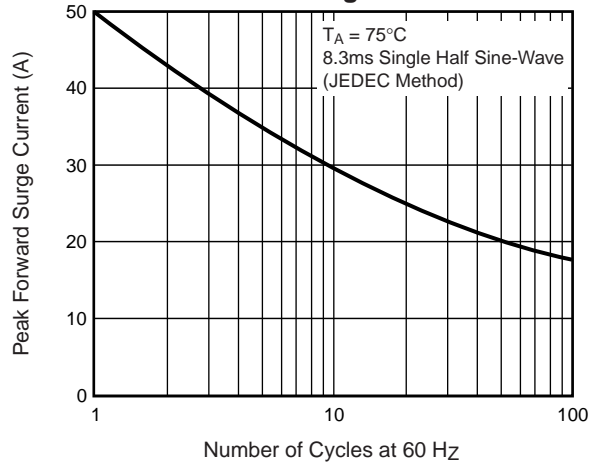


Fig. 3 – Typical Instantaneous Forward Characteristics

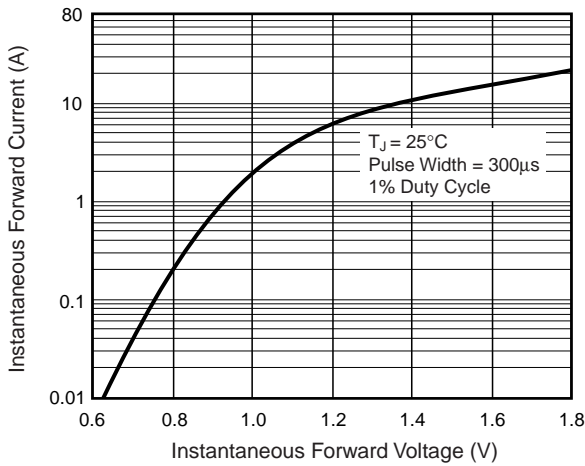


Fig. 4 – Typical Reverse Characteristics

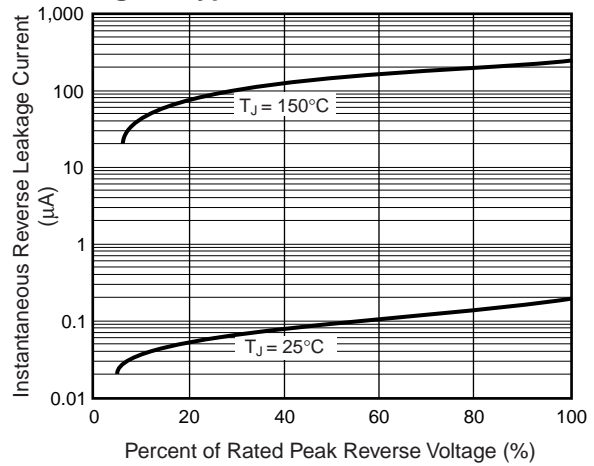


Fig. 5 – Typical Junction Capacitance

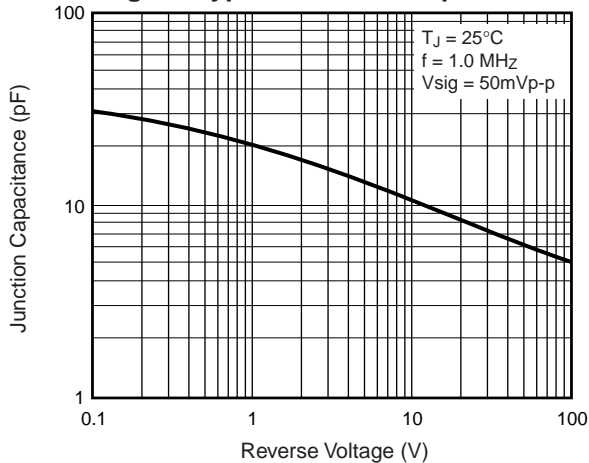


Fig. 6 – Transient Thermal Impedance

