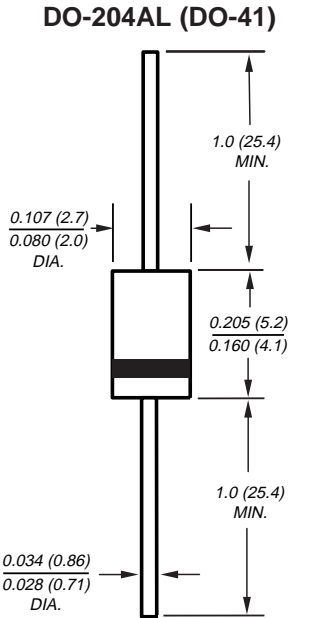


Ultrafast Plastic Rectifier

Reverse Voltage 50 to 200V
Forward Current 1.0A



Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultrafast recovery time for high efficiency
- Excellent high temperature switching
- Soft recovery characteristics
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-204AL molded plastic body over passivated chip

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 oz., 0.34 g

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

Parameter	Symbols	UG1A	UG1B	UG1C	UG1D	Units
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	V
Maximum average forward rectified current at 0.375" (9.5mm) lead length at T _L = 75°C	I _{F(AV)}	1.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at T _L = 75°C	I _{FSM}	40				A
Typical thermal resistance ⁽¹⁾	R _{θJA}	60				°C/W
	R _{θJL}	20				
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150°C				°C

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

Parameter	Symbols	Value	Units
Maximum instantaneous forward voltage at 1.0A (NOTE 2)	V _F	0.95	V
Maximum DC reverse current at rated DC blocking voltage T _A = 25°C T _A = 100°C	I _R	5.0	μA
		200	
Maximum reverse recovery time at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	15	ns
Maximum reverse recovery time at I _F =1.0A, V _R =30V, di/dt=50A/μs, I _{rr} =10% I _{RM}	t _{rr}	T _J = 25°C 25	ns
		T _J = 100°C 35	
Maximum recovered stored charge I _F =1.0A, V _R =30V, di/dt=50A/μs, I _{rr} =10% I _{RM}	Q _{rr}	T _J = 25°C 8.0	nC
		T _J = 100°C 12	
Typical junction capacitance at 4V, 1MHz	C _J	7.0	pF

Notes:

(1) t_{rr} and Q_{rr} measured at tester: I_F=4.0A, V_R=30V, di/dt=50A/μs, I_{rr}=10% I_{RM} for measurement of t_{rr}

(2) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length

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

Fig. 1 — Forward Current Derating Curves

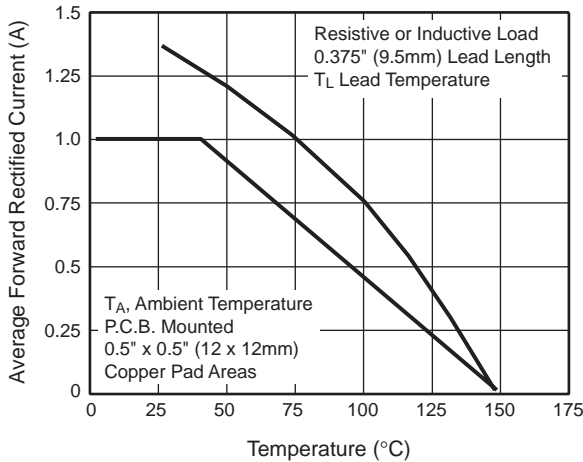


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

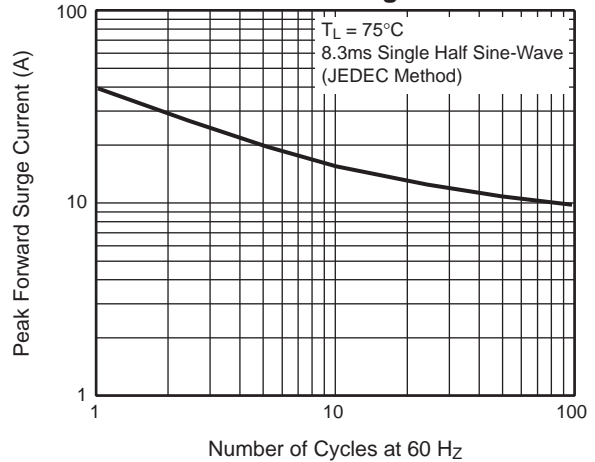


Fig. 3 — Typical Instantaneous Forward Characteristics

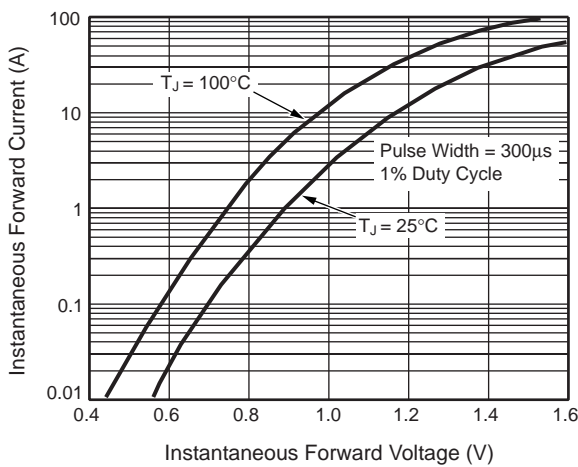


Fig. 4 — Typical Reverse Characteristics

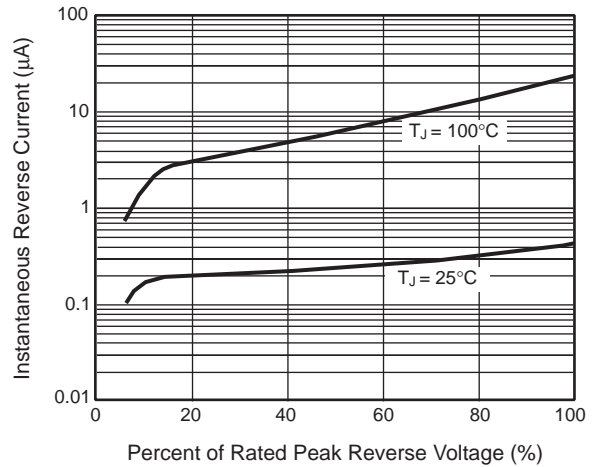


Fig. 5 — Reverse Switching Characteristics

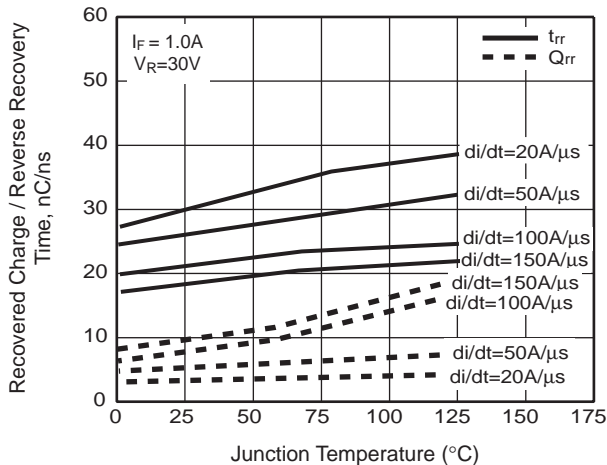


Fig. 6 — Typical Junction Capacitance

