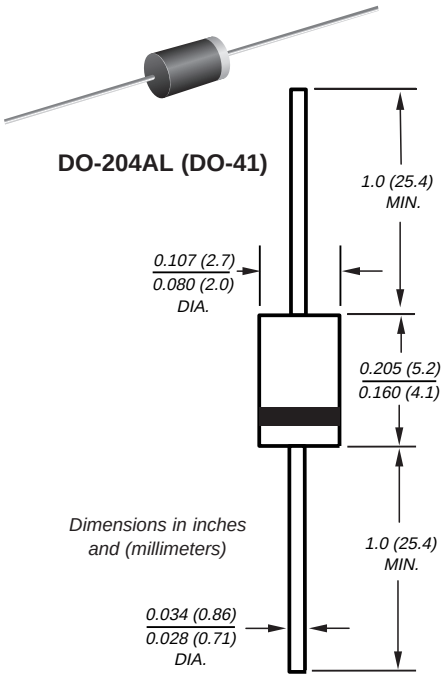
General Purpose Plastic Rectifiers

Reverse Voltage
50 to 1000V
Forward Current 1.0A



Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High surge current capability
- 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
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
Packaging Codes/Options:
1/5K per bulk box, 50k per carton
4/5.5K per 13" reel (52.4mm tape), 22K per carton
23/3K per ammo mag. (52.4mm tape), 27K per carton

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	M100A	M100B	M100D	M100G	M100J	M100K	M100M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A = 100°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°C		50							A
Maximum full load reverse current full cycle average 0.375" (9.5mm) lead length at T_A = 55°C	$I_{R(AV)}$	100							µA
Typical thermal resistance(1)	$R_{\theta JA}$ $R_{\theta JL}$	50 25							°C/W
Operating junction and storage temperature range	T_J,T_{STG}	–50 to +150							°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	M100A	M100B	M100D	M100G	M100J	M100K	M100M	Unit
Maximum instantaneous forward voltage at 1.0A	V_F	1.0					1.1		V
Maximum DC reverse current T_A = 25°C at rated DC blocking voltage T_A = 100°C	I_R	1.0 50							µA
Typical reverse recovery time at I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A	t_{rr}	2.0							µs
Typical junction capacitance at 4.0V, 1MHz	C_J	15							pF

Note: (1) Thermal resistance from junction to ambient and from junction to lead 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

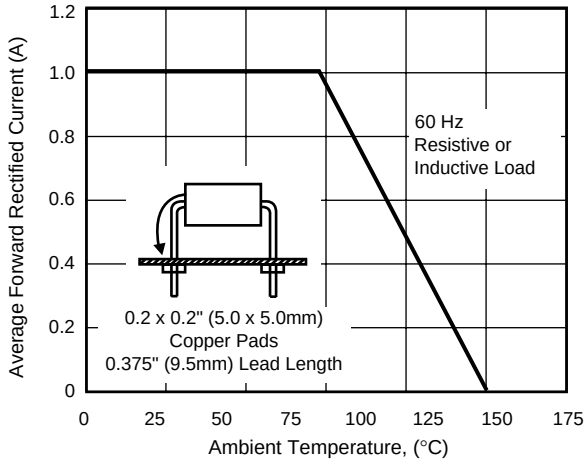


Fig 2 – Maximum Non-repetitive Peak Forward Surge Current

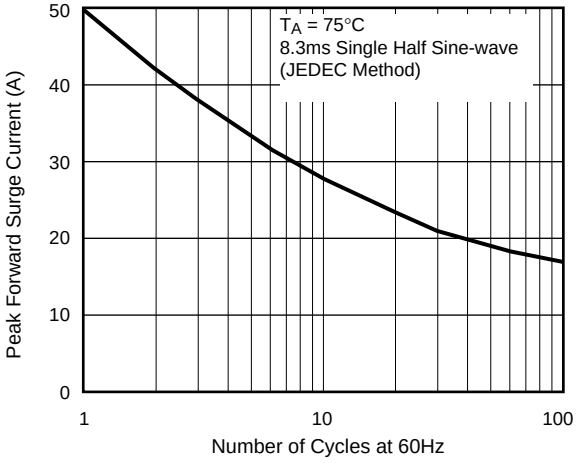


Fig 3 – Typical Instantaneous Forward Characteristics

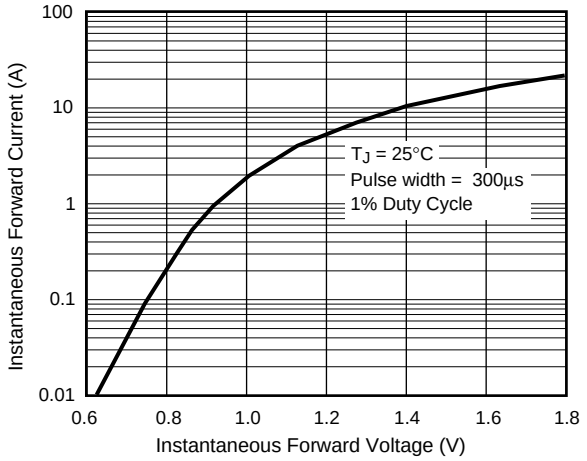


Fig 4 – Typical Reverse Characteristics

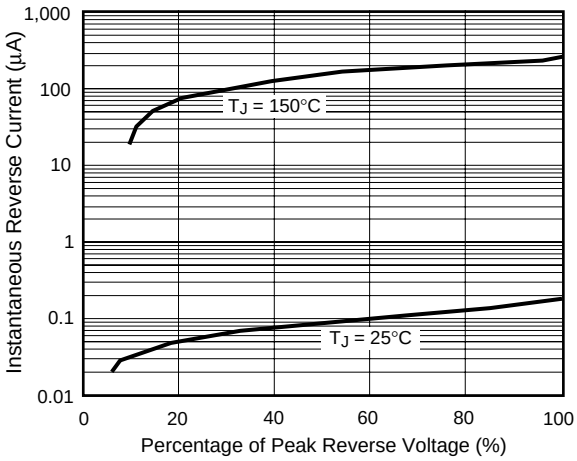


Fig 5 – Typical Junction Capacitance

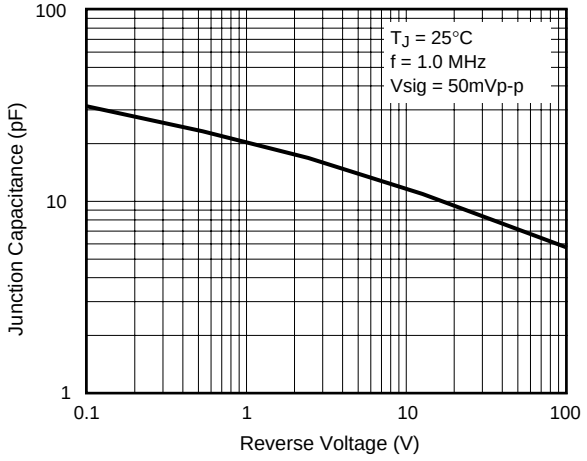


Fig. 6 – Typical Transient Thermal Impedance