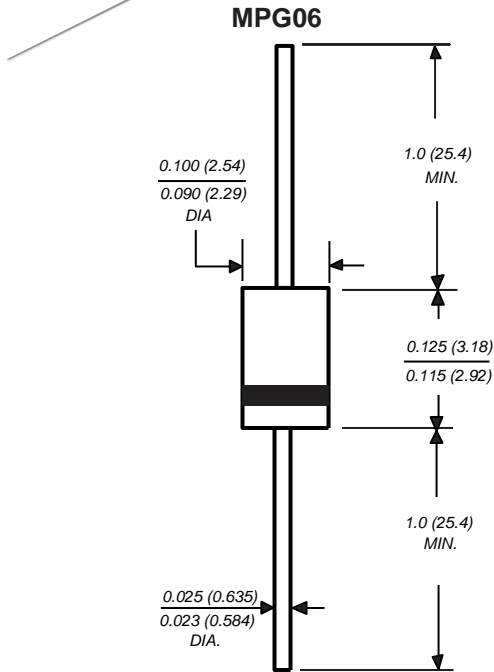


Miniature Ultrafast Plastic Rectifier

Reverse Voltage 50 to 200V
Forward Current 0.6A



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: Void free molded plastic body over glass passivated chip

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0064 oz., 0.181 g

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

Parameters	Symbols	UG06A	UG06B	UG06C	UG06D	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 $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	0.6				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_L = 75^\circ\text{C}$	I_{FSM}	40				A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$	97 28				$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150°C				$^\circ\text{C}$

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

Parameters	Symbols	UG06A	UG06B	UG06C	UG06D	Units
Maximum instantaneous forward voltage at 0.6A	V_F	0.95				V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	I_R	5.0 100				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}	15				ns
Maximum reverse recovery time $I_F = 0.6\text{A}$, $V_R = 30\text{V}$, $di/dt = 50\text{A}/\mu\text{s}$, $I_{rr} = 10\% I_{RM}$ $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	t_{rr}	25 35				ns
Maximum recovered stored charge $I_F = 0.6\text{A}$, $V_R = 30\text{V}$, $di/dt = 50\text{A}/\mu\text{s}$, $I_{rr} = 10\% I_{RM}$ $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	Q_{rr}	8.0 20				nC
Typical junction capacitance at 4V, 1MHz	C_J	9.0				pF

Notes: (1) Thermal resistance from junction to ambient and junction to lead at 0.375" (9.5mm) lead length

P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pads

(2) Pulse test: 300 μs pulse width, 1% duty cycle



Ratings and

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

Fig. 1 — Maximum Forward Current Derating Curves

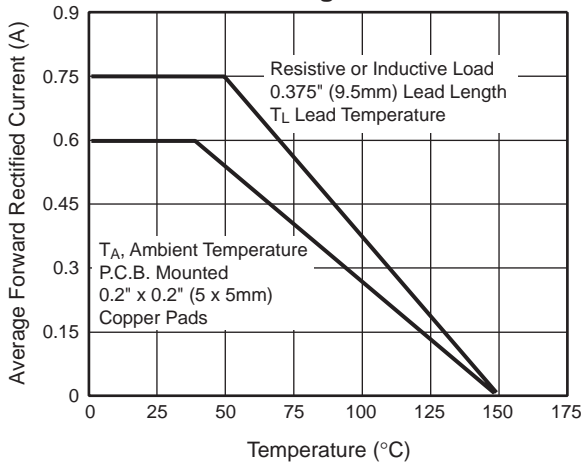


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

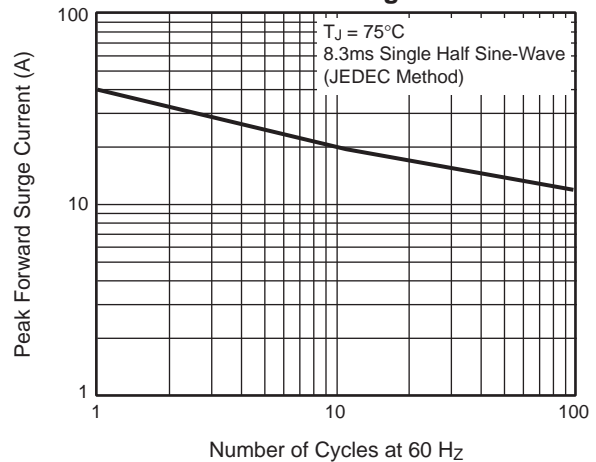


Fig. 3 — Typical Instantaneous Forward Characteristics

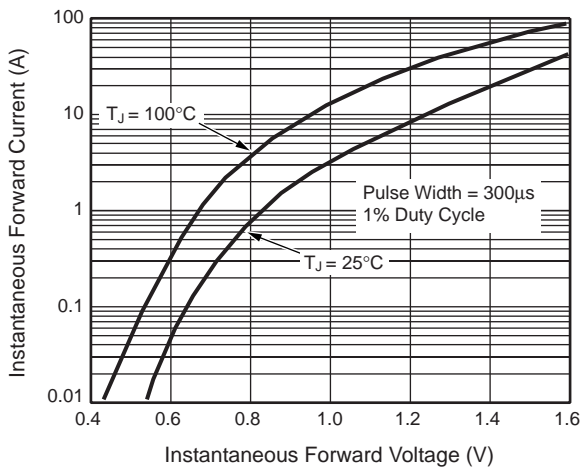


Fig. 4 — Typical Reverse Leakage Characteristics

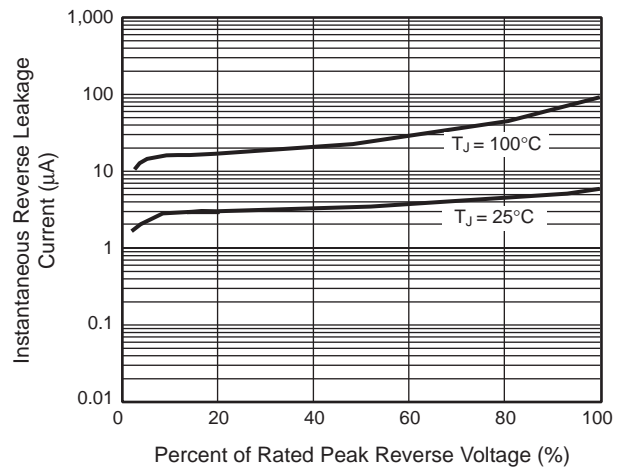


Fig. 5 — Reverse Switching Characteristics

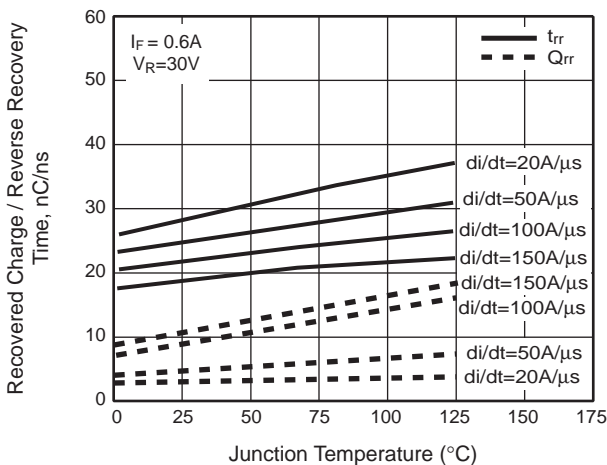


Fig. 6 — Typical Junction Capacitance

