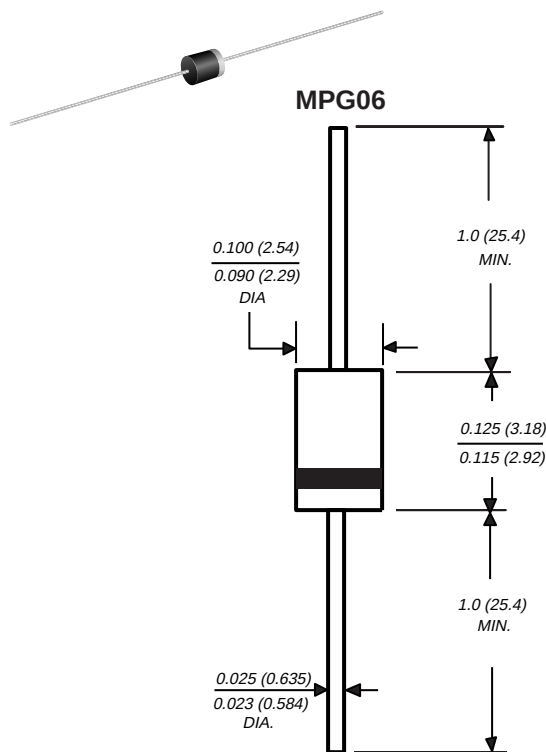


Miniature Ultrafast Plastic Rectifier

Reverse Voltage 50 to 200 V

Forward Current 0.6 A



Dimensions in inches and (millimeters)

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 ounce, 0.181 gram

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°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°C	I _{FSM}	40				A
Typical thermal resistance ⁽¹⁾	R _{θJA} R _{θJL}	97 28				°C/W
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.

Parameters	Symbols	Value	Units
Maximum instantaneous forward voltage at 0.6A	V _F	0.95	V
Maximum DC reverse current T _A = 25°C at rated DC blocking voltage T _A = 100°C	I _R	5.0 100	μA
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 T _J = 25°C I _F =0.6A, V _R =30V, di/dt=50A/μs, I _{rr} =10% I _{RM} T _J = 100°C	t _{rr}	25 35	ns
Maximum recovered stored charge T _J = 25°C I _F =0.6A, V _R =30V, di/dt=50A/μs, I _{rr} =10% I _{RM} T _J = 100°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: 300μs 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

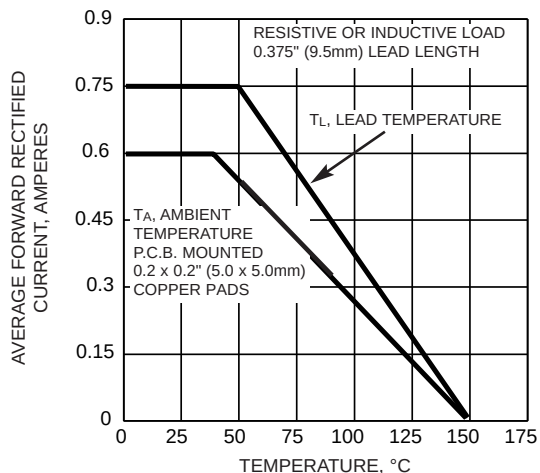


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

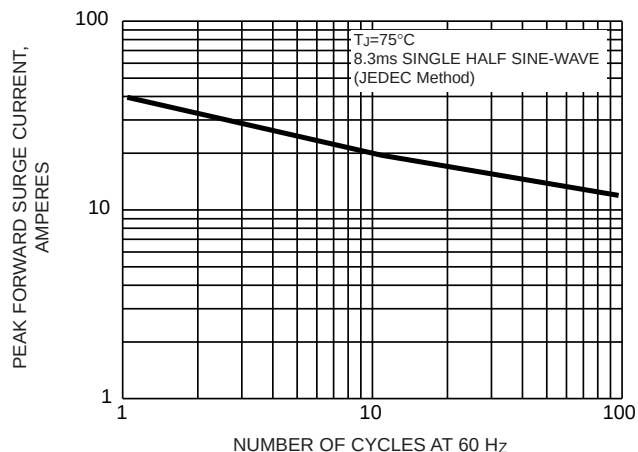


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

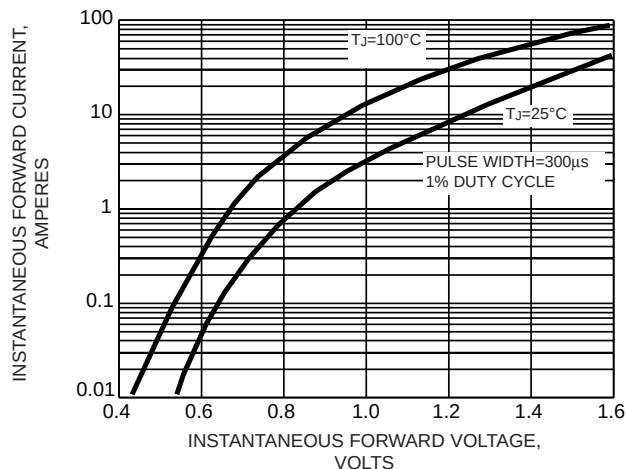


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

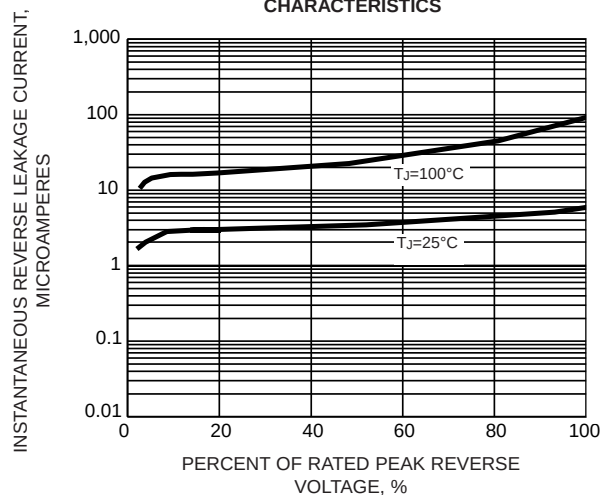


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

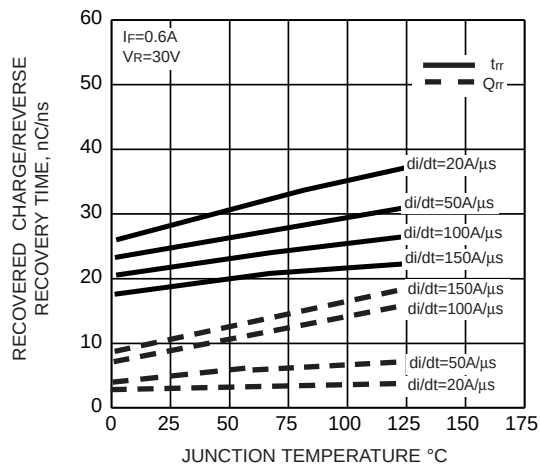


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

