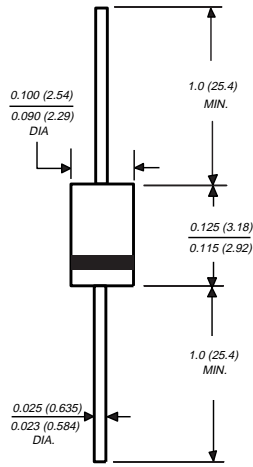


MPG06A THRU MPG06M

MINIATURE GLASS PASSIVATED JUNCTION PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

Case Style MPG06



Dimensions are in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Low forward voltage, high current capability
- ◆ Glass passivated chip junction
- ◆ High surge capability
- ◆ Typical I_R less than $0.1\mu A$
- ◆ High temperature soldering guaranteed: $250^\circ C/10$ seconds, $0.375"$ ($9.5mm$) lead length, 5 lbs. ($2.3kg$) tension

MECHANICAL DATA

Case: Molded plastic over 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 AND ELECTRICAL CHARACTERISTICS

Ratings at $25^\circ C$ ambient temperature unless otherwise specified.

| | SYMBOLS | MPG 06A | MPG 06B | MPG 06D | MPG 06G | MPG 06J | MPG 06K | MPG 06M | UNITS |
|--|------------------------------------|--------------|---------|---------|---------|---------|---------|---------|--------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current $0.375"$ ($9.5mm$) lead length at $T_A=25^\circ C$ | $I_{(AV)}$ | 1.0 | | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 40.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.1 | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage | I_R | 5.0 50.0 | | | | | | | μA |
| Typical junction capacitance (NOTE 1) | C_J | 10.0 | | | | | | | pF |
| Typical reverse recovery time (NOTE 2) | t_{rr} | 0.6 | | | | | | | μs |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ $R_{\theta JL}$ | 67.0 30.0 | | | | | | | $^\circ C/W$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ C$ |

NOTES:

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (2) Reverse recovery test conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$
- (3) Thermal resistance from junction to ambient and from junction to lead at $0.375"$ ($9.5mm$) lead length, P.C.B. mounted with $0.22 \times 0.22"$ ($5.5 \times 5.5mm$) copper pads

RATINGS AND CHARACTERISTIC CURVES MPG06A THRU MPG06M

FIG. 1 - FORWARD CURRENT DERATING CURVE

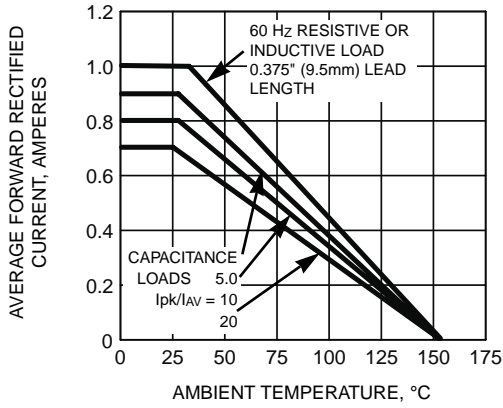


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

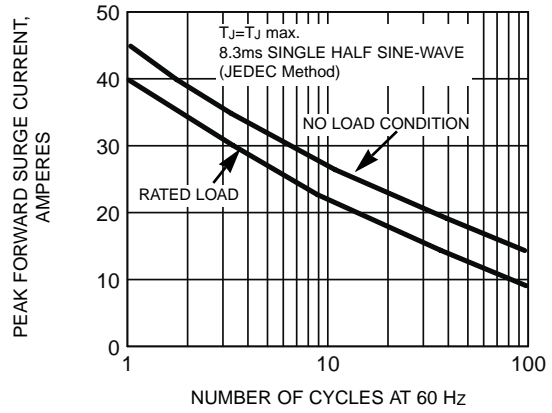


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

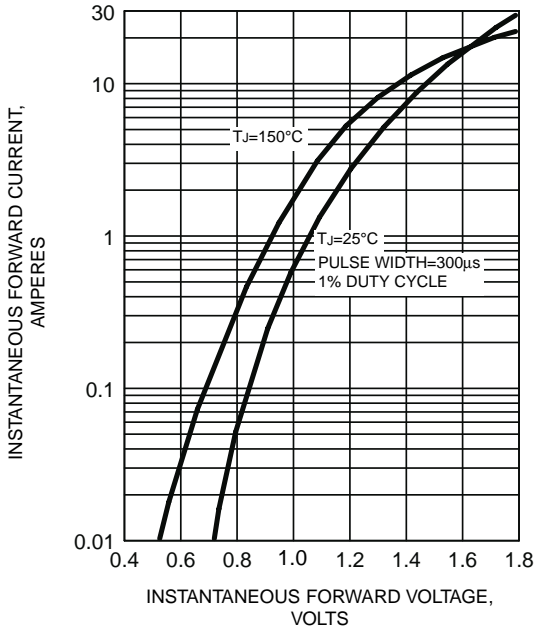


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

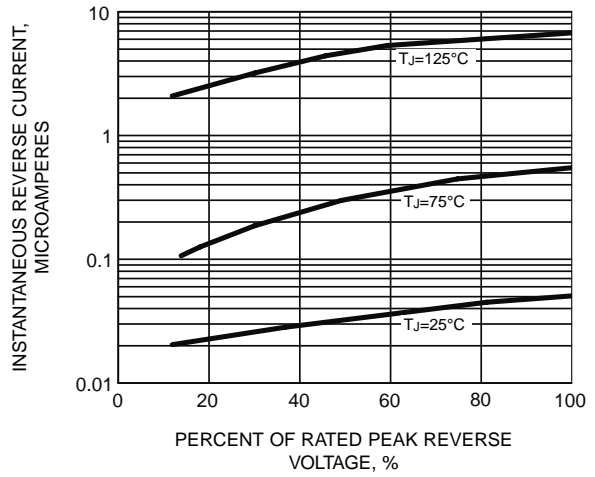


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

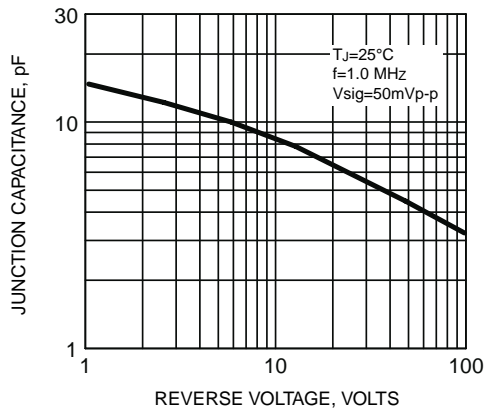


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

