



BYD187Z

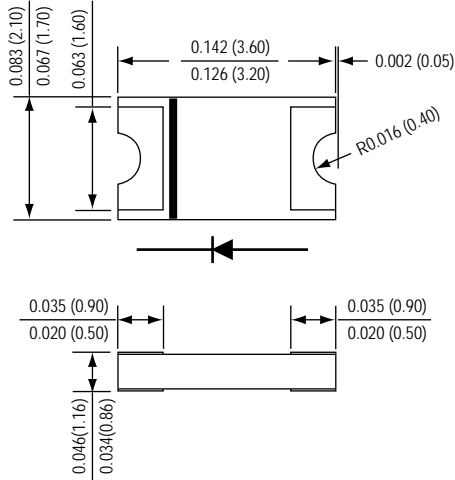
SURFACE MOUNT GLASS PASSIVATED JUNCTION ULTRAFAST EFFICIENT RECTIFIER

Reverse Voltage - 800 Volts

Forward Current - 1.0 Ampere

PATENTED

1206



*Dimensions in inches and (millimeters)

SuperChipTM
SUPEREX IITM



* Equivalent to SOD87, GL1M , SOD123

FEATURES

- * Lead free product
- * Leadless chip form , no lead damage
- * Lead-free solder Joint , No Wire bond & Lead Frame
- * Low profile package
- * For surface mounted applications
- * Built-in strain relief
- * Low power loss , High efficiency
- * High current capability
- * High surge capacity
- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0

MECHANICAL DATA

Case : Packed with FRP substrate and epoxy underfilled

Terminals : Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.

Polarity : Cathode Band, Laser marking

Weight : 0.012 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| <i>Ratings at 25 °C ambient temperature unless otherwise specified.</i> | SYMBOLS | BYD187Z | UNITS |
|---|---------|-------------|-------|
| Maximum repetitive peak reverse voltage | VRRM | 800 | Volts |
| Maximum RMS voltage | VRMS | 560 | Volts |
| Maximum DC blocking voltage | VDC | 800 | Volts |
| Maximum average forward rectified current $T_L=110^{\circ}\text{C}$ | I (AV) | 1.0 | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | IFSM | 25 | Amps |
| Maximum instantaneous forward voltage at 1.0 A | VF | 2.50 | Volts |
| Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=125^{\circ}\text{C}$ | IR | 5 50 | uA |
| Maximum reverse recovery time (NOTE 1) | trr | 35 | nS |
| Typical junction capacitance (NOTE 2) | CJ | 10 | pF |
| Operating junction and storage temperature range | TJ,TSTG | -65 to +175 | °C |

NOTES : (1) Reverse recovery test condition : IF 0.5A, IR=1.0A, Irr=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Preliminary draft.

RATINGS AND CHARACTERISTIC CURVES OF BYD187Z

FIG.1 - FORWARD CURRENT DERATING CURVE

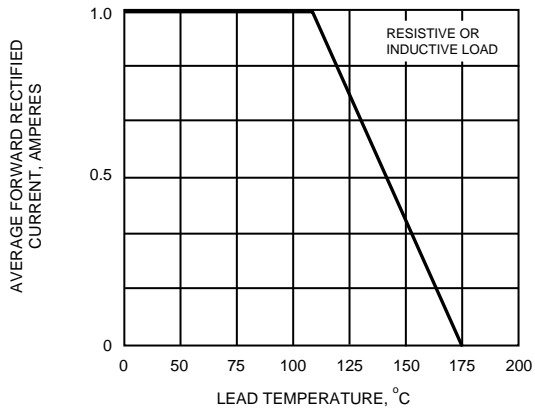


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

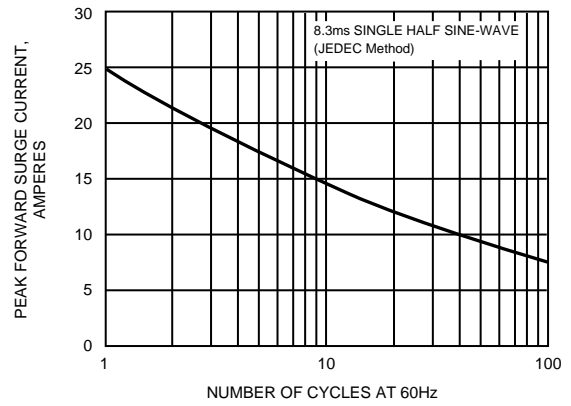


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

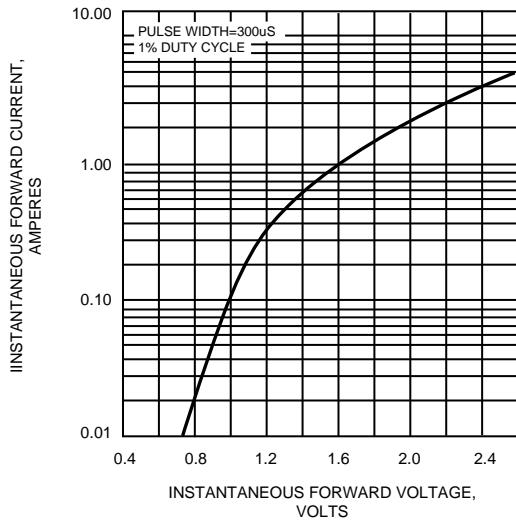


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

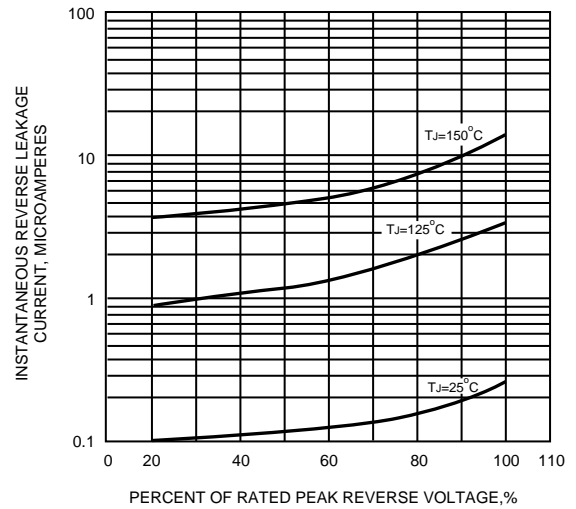


FIG.5 - TYPICAL JUNCTION CAPACITANCE

