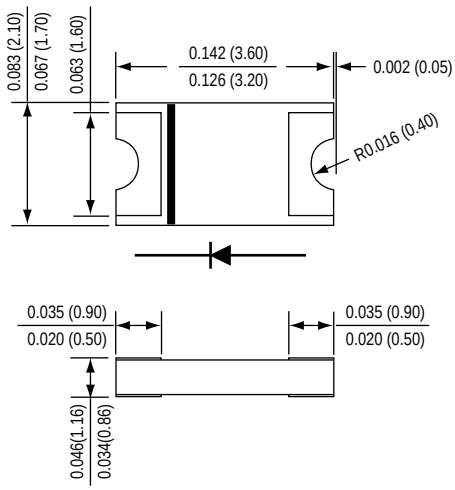
BYD187Z

SURFACE MOUNT GLASS PASSIVATED JUNCTION ULTRAFAST EFFICIENT RECTIFIER

Reverse Voltage - 800 Volts *Forward Current - 1.0 Ampere*

PATENTED

1206



*Dimensions in inches and (millimeters)

SuperChip™
SUPEREX II™

* 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

Ratings at 25 °C ambient temperature unless otherwise specified.	*SYMBOLS*	***BYD187Z***	*UNITS*
Maximum repetitive peak reverse voltage	V_{RRM}	800	Volts
Maximum RMS voltage	V_{RMS}	560	Volts
Maximum DC blocking voltage	V_{DC}	800	Volts
Maximum average forward rectified current T_L=110°C	$I_{(AV)}$	1.0	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	25	Amps
Maximum instantaneous forward voltage at 1.0 A	V_F	2.50	Volts
Maximum DC reverse current T_A=25°C at rated DC blocking voltage T_A=125°C	I_R	5 50	uA
Maximum reverse recovery time (NOTE 1)	trr	35	nS
Typical junction capacitance (NOTE 2)	C_J	10	pF
Operating junction and storage temperature range	T_J,T_{STG}	-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

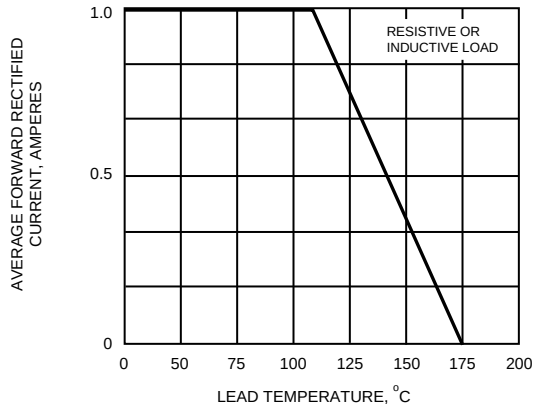


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

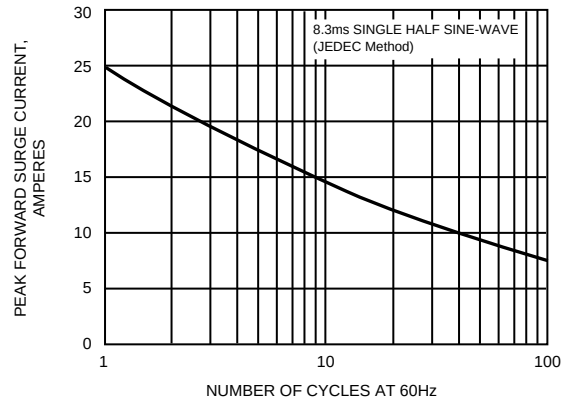


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

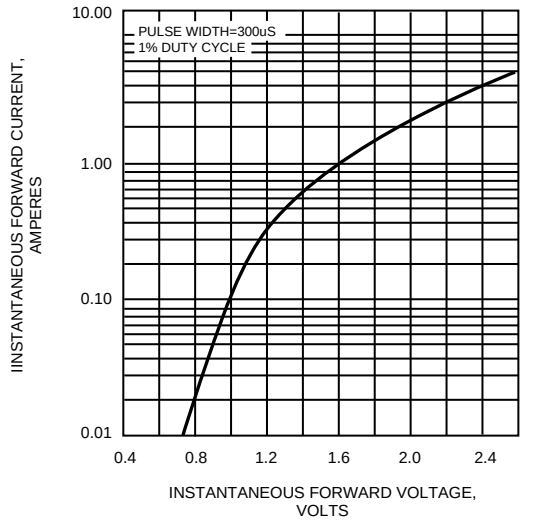


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

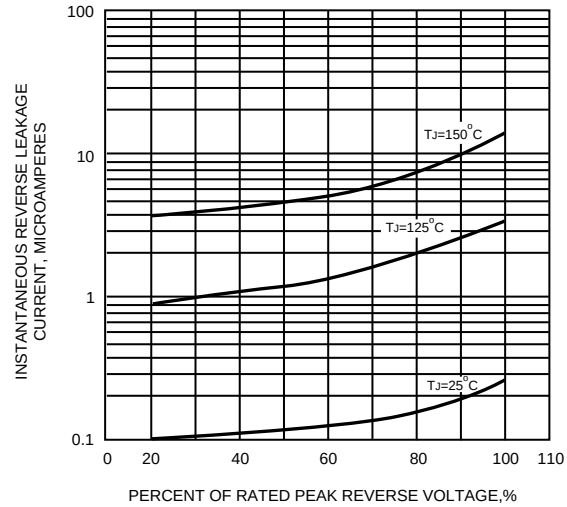


FIG.5 - TYPICAL JUNCTION CAPACITANCE