



# GB502 thru GB504

Block Type Automotive Rectifier  
Voltage Range 200 to 400 Volts Current 50 Amps

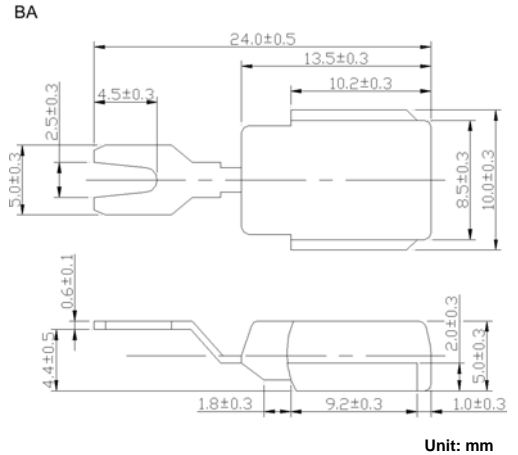
## Technical Specification:

### Features:

- ◆ Low leakage
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High forward surge current capability

### Mechanical Data:

- ◆ Technology : Vacuum soldered
- ◆ Copper cup with transfer molded plastic
- ◆ Glass passivated chip
- ◆ Polarity: GB50\*-P lead-P  
GB50\*-N lead-N
- ◆ Lead: Plated Ni lead, solderable per MIL-STD-202E method 208C
- ◆ Weight: 0.094 ounces, 2.65 grams



## Maximum Ratings and Electrical Characteristics

- ◆ Rating at 25°C ambient temperature unless otherwise specified.
- ◆ Single phase, half wave, 60Hz, resistive or inductive load.
- ◆ For capacitive load derate current by 20%.

Parameters	Symbols	GB 502-P GB 502-N	GB 503-P GB 503-N	GB 504-P GB 504-N	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	300	400	Volts
Maximum RMS voltage	$V_{RMS}$	140	210	280	Volts
Maximum DC blocking voltage	$V_{DC}$	200	300	400	Volts
Maximum Average rectified forward current at $T_c=105^\circ\text{C}$	$I_o$	50			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	600.0			Amps
Rating for fusing ( $t \leq 8.3\text{ms}$ )	$I_t$	1494			A <sup>2</sup> S
Maximum instantaneous forward voltage drop at 100A	$V_F$	1.08			Volts
Maximum DC reverse current at rated DC blocking voltage	$I_R$	5.0 450			$\mu\text{A}$
Typical thermal resistance	$R_{\theta JL}$	1.0			$^\circ\text{C}/\text{W}$
Operating and storage temperature range	$T_J, T_{STG}$	-65 to +175			$^\circ\text{C}$

**Notes:** 1. Enough heatsink must be considered in application.

## ■ Ratings and Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

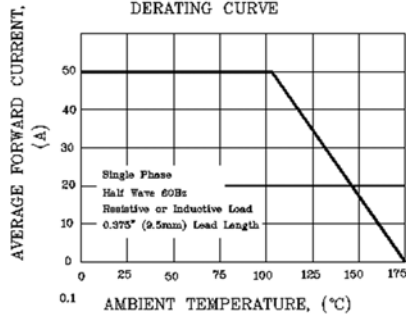


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

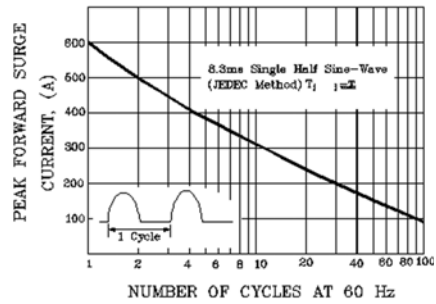


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

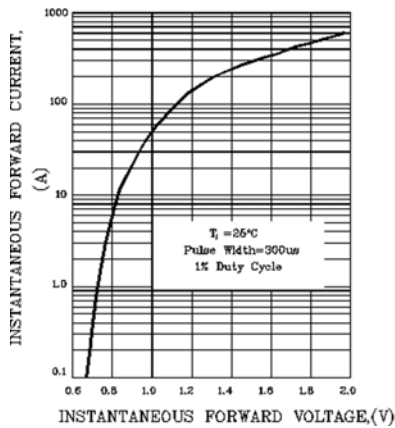


FIG.4- FORWARD POWER DISSIPATION

