GB302 thru GB304

Block Type Automotive Rectifier
Voltage Range 200 to 400 Volts Current 30 Amps

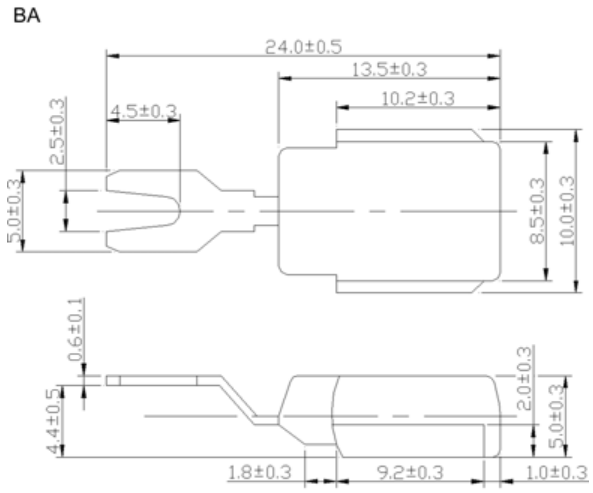
Technical Specification:

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: GB30*-P lead-P
  GB30*-N lead-N
- Lead: Plated Ni lead, solderable per MIL-STD-202E method 208C
- Weight: 0.094 ounces, 2.65 grams



Unit: mm

■Maximum Ratings and Electrical Characteristics

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

Parameters	Symbols	GB302-P GB302-N	GB303-P GB303-N	GB304-P GB304-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°C	I_O	30			Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated bad (JEDEC Method)	I_{FSM}	400.0			Amps
Rating for fusing (t<8.3mS)	I^2t	664			A^2S
Maximum instantaneous forward voltage drop at 100A	V_F	1.10			Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25°C T_A=100°C	I_R	5.0 450			uA
Typical thermal resistance	$R_{\theta JL}$	1.0			°C/W
Operating and storage temperature range	T_J, T_{STG}	-65 to +175			°C

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

■Ratings and Characteristic Curves

FIG.1—TYPICAL FORWARD CURRENT DERATING CURVE

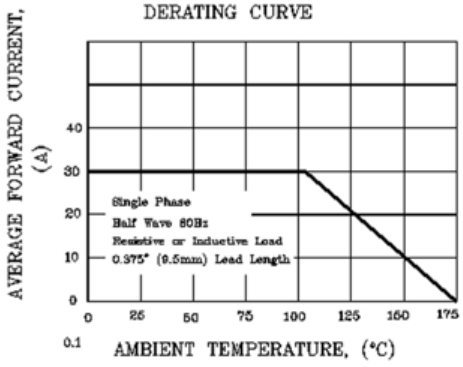


FIG.2—MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

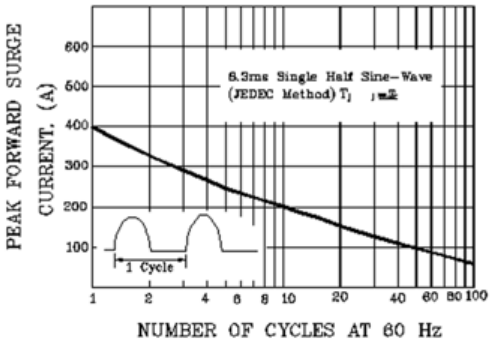


FIG.3—TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

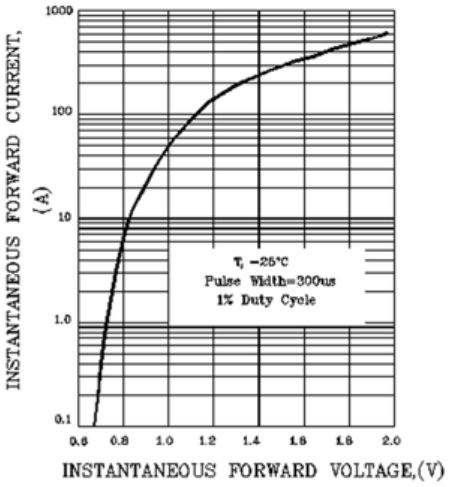


FIG.4— FORWARD POWER DISSIPATION