



Pb Free Plating Product

B302N thru B304N

30.0 Ampere Heatsink Block Automotive Rectifier Diodes

Feature:

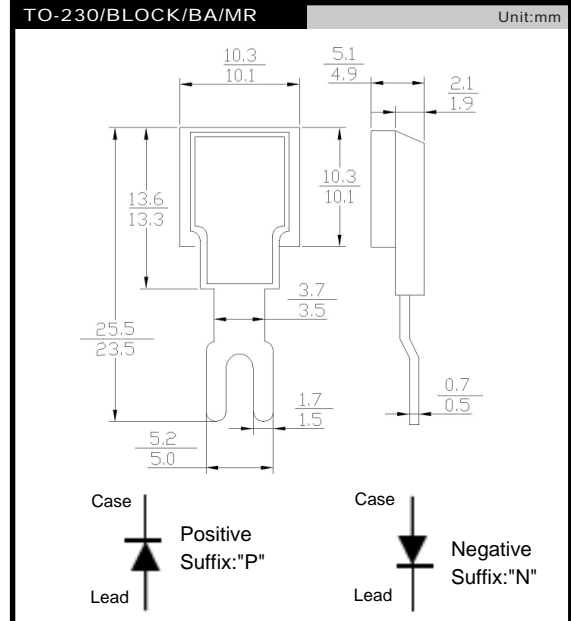
- ◆ Low leakage
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High forward surge current capability

Mechanical Data:

- ◆ Technology: Glass Passivation Pellet/Clip Bonding
- ◆ Case: Vacuum soldered/Sintered temperature < 260°C
- ◆ Polarity: As marked on body. (Note2)
- ◆ Lead: Plated lead, solderable per MIL-STD-202E method 208C
- ◆ Mounting: BLOCK/TO-230/BA/MR package type

Application:

- ◆ Block Diode/Alternator Diode
- ◆ Stack Silicon Diffused Diode alternative
- ◆ Special for Car AC Alternator rectifier application



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60HZ, resistive or inductive load
- For capacitive load derate current by 20%

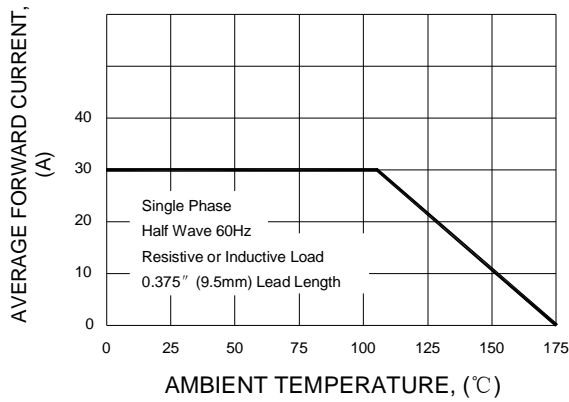
	SYMBOLS	B302N	B303N	B304N	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	300	400	Volts
Maximum RMS Voltage	V_{RMS}	140	210	280	Volts
Maximum DC Blocking Voltage	V_{DC}	200	300	400	Volts
Maximum Average Forward Rectified Current, At $T_c=105^\circ C$	I_O	30			Amps
Peak Forward Surge Current 3.3mS single half sine wave superimposed on Rated load (JEDEC method)	I_{FSM}	400			Amps
Rating for fusing ($t < 8.3ms$)	I^2t	664			A ² S
Maximum instantaneous Forward Voltage at 100A	V_F	1.10			Volts
Maximum DC Reverse Current at Rated $T_A=25^\circ C$ DC Blocking Voltage $T_A=100^\circ C$	I_R	5.0			UA
		450			
Typical Thermal Resistance	$R_{\theta JC}$	1.0			°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	(-65 to +175)			°C

Notes:

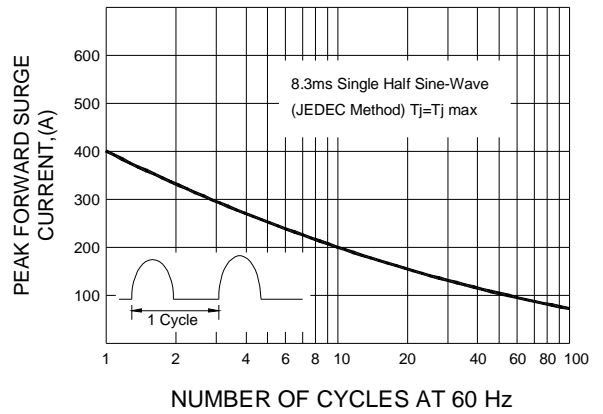
1. Enough heatsink must be considered in application.
2. Suffix "N" is for lead Negative. Suffix "P" is for lead Positive.

RATINGS AND CHARACTERISTIC CURVES B302N thru B304N

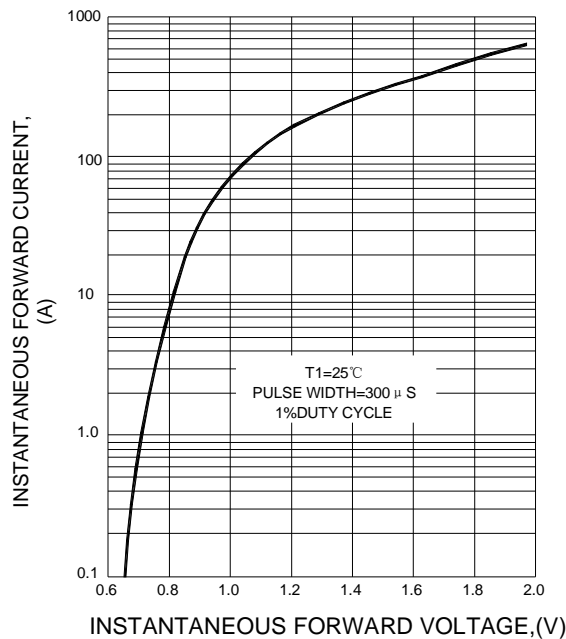
F1G.1 TYPICAL FORWARD CURRENT DERATING CURVE



F1G.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



F1G.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4 FORWARD POWER DISSIPATION

