

# GR3AB thru GR3MB

Fast Recovery Surface Mount Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 3.0 Amperes

## Features

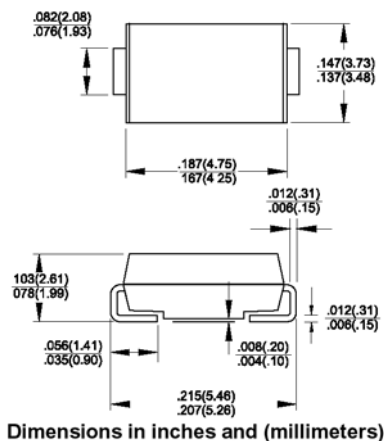
- ◆ Fast switching for high efficiency
- ◆ For surface mounted applications
- ◆ Glass passivated chip
- ◆ Low reverse leakage current
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ Plastic material has UL flammability classification 94V-0



DO-214AA (SMB)

## Mechanical Data

- ◆ Case : Molded plastic
- ◆ Polarity : Indicated by cathode band
- ◆ Weight : 0.003 ounce, 0.093 gram



## 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%

Parameter	Symbols	GR3AB	GR3BB	GR3DB	GR3GB	GR3JB	GR3KB	GR3MB	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current @ $T_c=75^\circ\text{C}$	$I_{AV}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100.0							Amps
Maximum forward voltage at 3.0A DC	$V_F$	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_j=25^\circ\text{C}$ @ $T_j=125^\circ\text{C}$	$I_R$	5.0 250							$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{rr}$	150			250		500		nS
Typical junction capacitance (Note 2)	$C_j$	50							pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 10.0							$^\circ\text{C/W}$
Operating temperature range	$T_j$	-55 to +150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

- Notes:**
1. Reverse Recovery Test Conditions:  $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.
  3. Thermal Resistance Junction to Ambient and from Junction to Lead

## RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

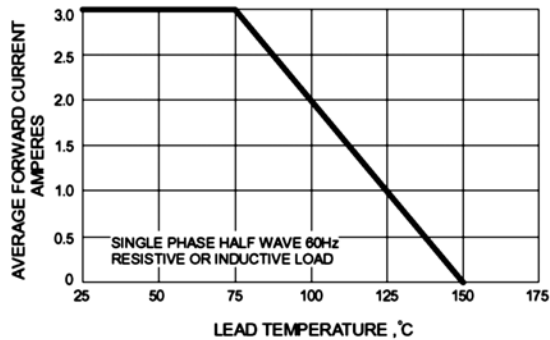


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

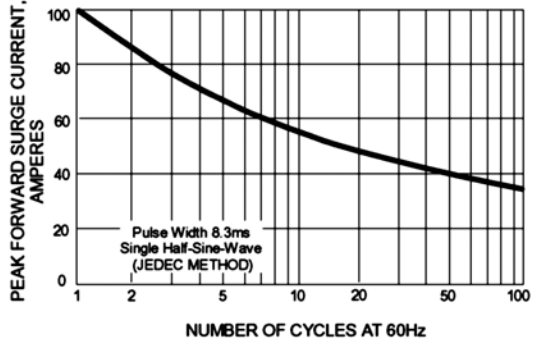


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

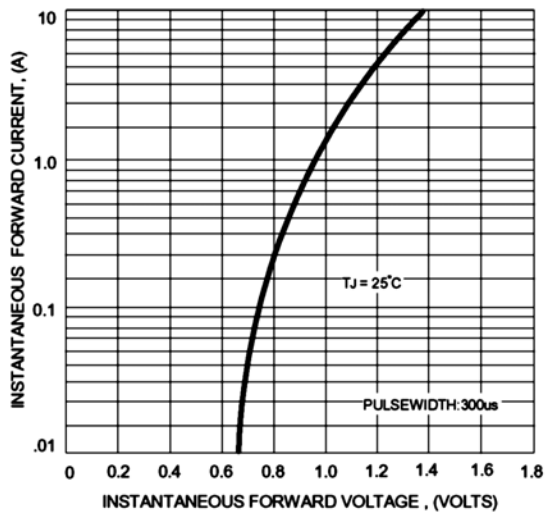


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

