

# RGP15A THRU RGP15M

## FAST SWITCHING RECTIFIERS

### GLASS PASSIVATED JUNCTION

Reverse Voltage – 50 to 1000 Volts

Forward Current – 1.5 Amperes

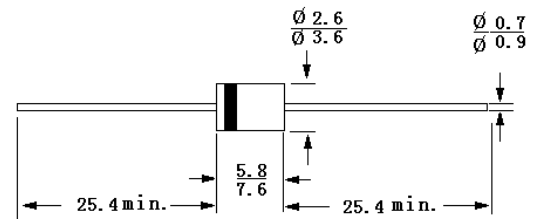
### Features

- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction.
- 1.5 Ampere operation at  $T_A = 55^\circ\text{C}$  with no thermal runaway.
- Typical  $I_R$  less than  $0.1\mu\text{A}$
- High temperature soldering guaranteed:  
350°C/10seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### Mechanical Data

- **Case:** JEDEC DO-204AC, molded plastic over glass body.
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

DO-15



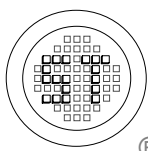
Dimensions in mm

### Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	RGP 15A	RGP 15B	RGP 15D	RGP 15G	RGP 15J	RGP 15K	RGP 15M	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	1.5							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50							A
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{R(AV)}$	100							$\mu\text{A}$
Maximum instantaneous forward voltage at 1.5A	$V_F$	1.3							V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 150^\circ\text{C}$	$I_R$	5 200							$\mu\text{A}$ $\mu\text{A}$
Maximum reverse recovery time $I_F=0.5\text{A}$ , $I_R=1\text{A}$ , $I_{rr}=0.25\text{A}$ .	$T_{rr}$	150				250	500		nS
Typical junction capacitance at 4 V, 1MHz	$C_J$	25							pF
Typical thermal resistance (Note 1)	$R_{\theta JA}$	45							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_S$	-65 to +175							$^\circ\text{C}$

Notes:1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B.mounted.



## SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001  
Certificate No. 7116



ISO 9001 : 2000  
Certificate No. 550-159-04-002-04

Dated : 20/06/2003

# RGP15A THRU RGP15M

RATINGS AND CHARACTERISTIC CURVES (  $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG.1-FORWARD CURRENT DERATING CURVE

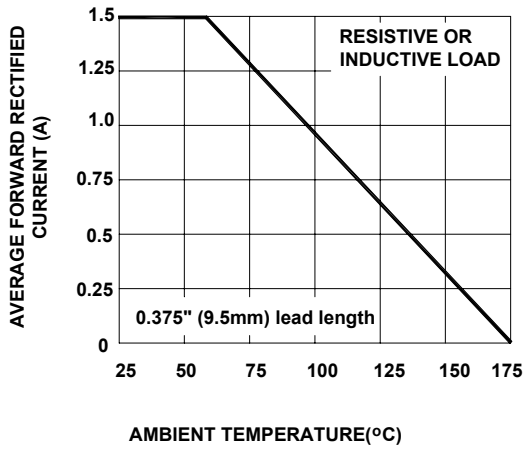


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

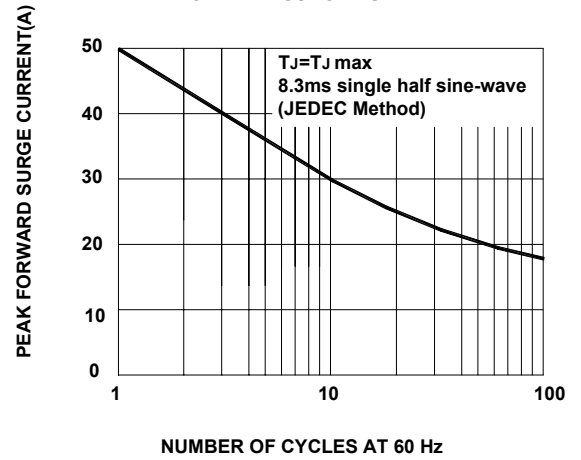


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

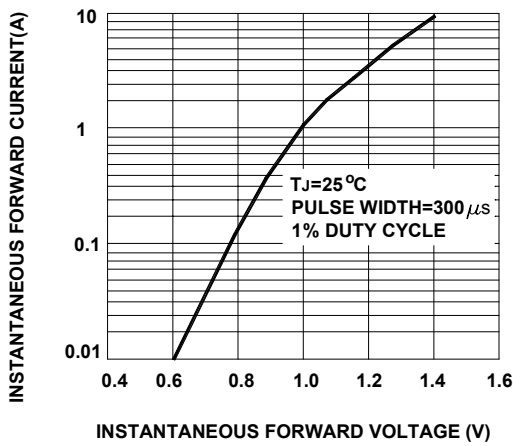


FIG.4-TYPICAL REVERSE CHARACTERISTICS

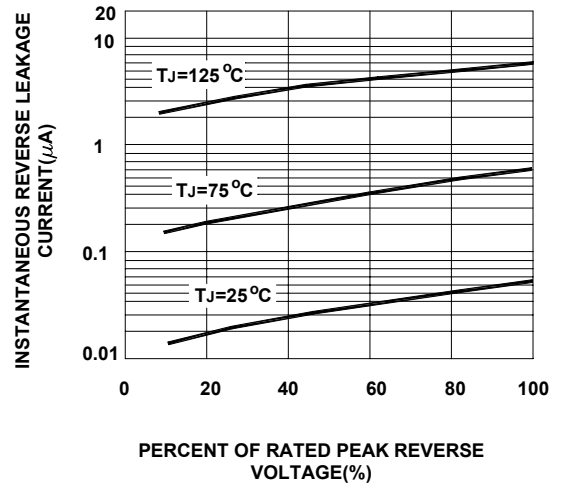


FIG.5-TYPICAL JUNCTION CAPACITANCE

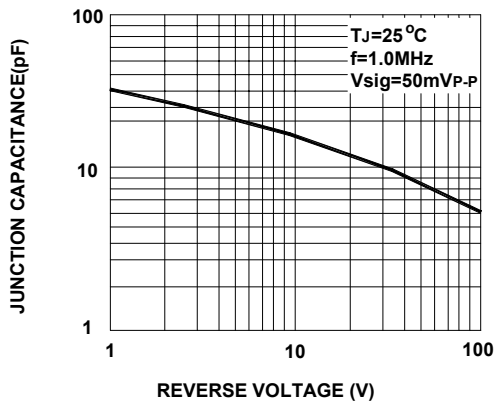
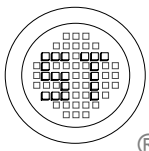
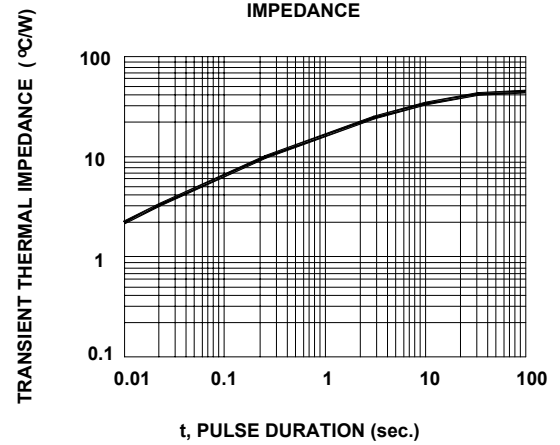


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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