GRL1A-R THRU GRL1M-R

SURFACE MOUNT FAST SWITCHING RECTIFIER

VOLTAGE: 50 to 1000V **CURRENT: 1.0A**

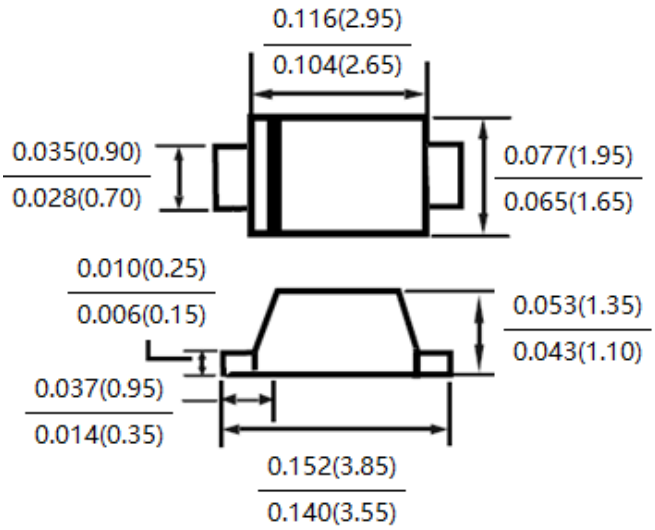
FEATURE

Ideal for surface mount pick and place applications
Low profile package
Built-in strain relief
High surge capability
High temperature soldering guaranteed
260℃/10sec/at terminals
Glass passivated chip
Fast recovery time for high efficiency

MECHANICAL DATA

Terminal：Plated leads solderable per J-STD-002
Case：Molded with UL-94 class V-0 recognized Flame Retardant Epoxy
Polarity：color band denotes cathode
Marking：R1A～R1M

SMF



Dimensions in inches and (millimeters)

MAXIMUMRATINGSANDELECTRICALCHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25℃, unless otherwise stated)

	Symbol	GRL1 A-R	GRL1 B-R	GRL1 D-R	GRL1 G-R	GRL1 J-R	GRL1 K-R	GRL1 M-R	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	Vrms	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	Vdc	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 3/8″lead length at TL=110℃	If(av)	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	Ifsm	30							A
Maximum Forward Voltage at rated forward current	Vf	1.3							V
Maximum DC Reverse Current Ta =25℃ at rated DC blocking voltage Ta =125℃	Ir	5.0 300							μA
Maximum Reverse Recovery Time (Note1)	Trr	150				250	500		nS
Typical Junction Capacitance (Note 2)	Cj	9.0							pF
Typical Thermal Resistance (Note 3)	Rth(jl) Rth(ja) Rth(jc)	21 62 22							℃/W
Storage and Operating Junction Temperature	Tstg, Tj	-50 to +150							℃

Note：

1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to terminal mounted on 3×3mm copper pad area

RATINGS AND CHARACTERISTIC CURVES GRL1A-R THRU GRL1M-R

FIG. 1 - FORWARD CURRENT DERATING CURVE

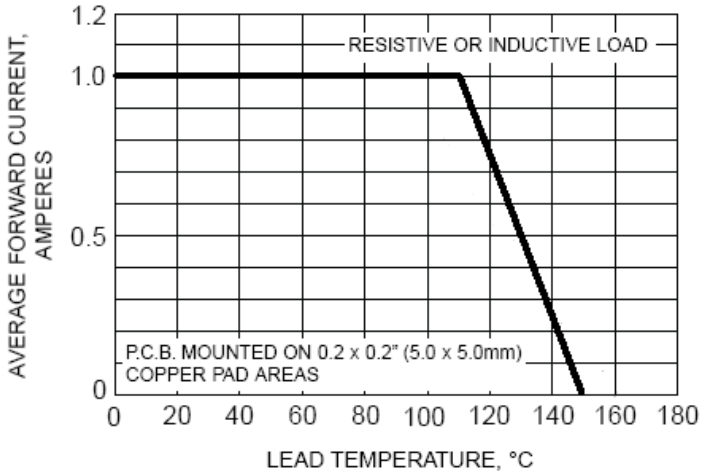


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

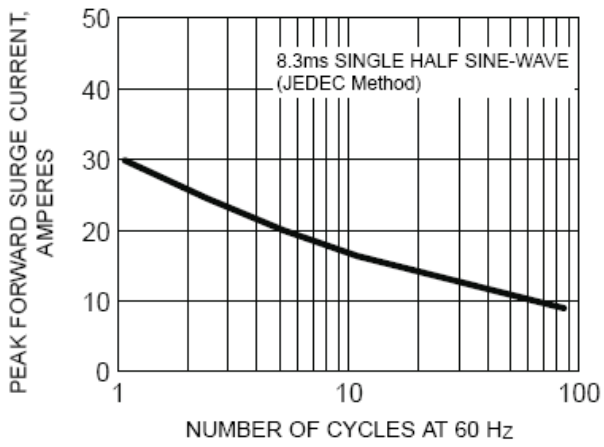


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

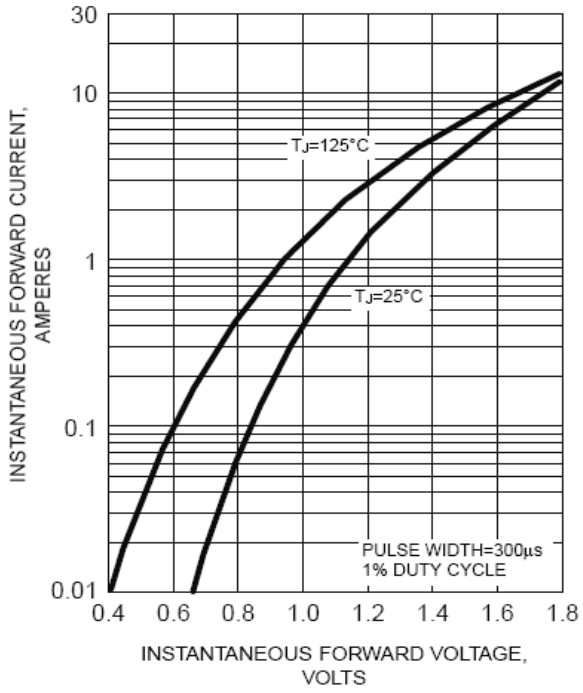


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

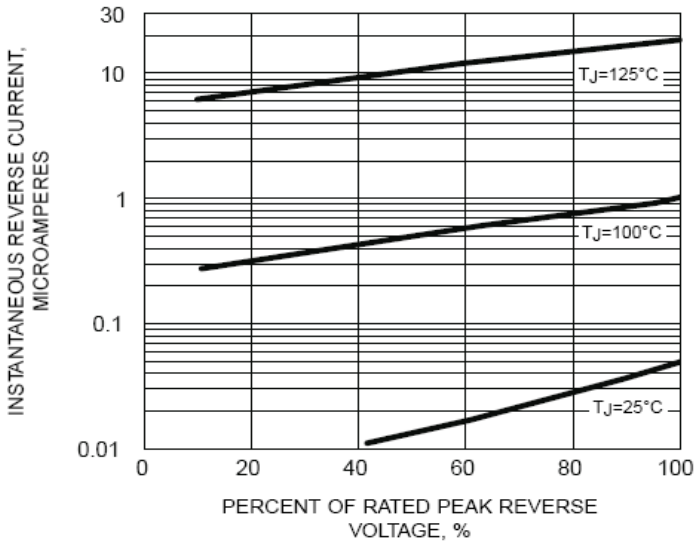


FIG. 5 - TYPICAL JUNCTION CAPACITANCE