

# GR1A THRU GR1M (RS1A THRU RS1M) Fast Recovery Rectifier

## Features

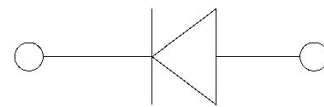
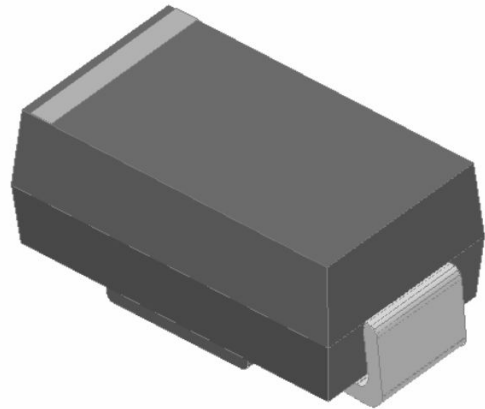
- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 265 °C max. 10 s, per JESD 22-B106

## Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

## Mechanical Data

- Package:SMA
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity:Color band denotes cathode end



## ■ Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	Unit	GR1/RS1						
			A	B	D	G	J	K	M
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V <sub>RMS</sub>	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V <sub>DC</sub>	V	50	100	200	400	600	800	1000
Average Forward Current @Half-sine wave, Resistance load, Tc(Fig.1)	I <sub>o</sub>	A	1.0						
Forward Surge Current (Non-repetitive) @60HZ sine wave, 1 cycle, Ta=25°C	I <sub>FSM</sub>	A	30						
Current squared time @1ms≤t.3≤ms Ta=25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	3.7						
Thermal Resistance(Typical) @Between junction and ambient	R <sub>θJ-A</sub>	°C/W	105						
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +150						
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +150						

## ■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	Unit	Conditions	GR1/RS1					
				A	B	D	G	J	K
Peak Forward Voltage	V <sub>FM</sub>	V	I <sub>F</sub> =1.0A	1.3					
Peak Reverse Current	I <sub>RRM</sub>	μA	VR =V <sub>DC</sub> @Ta=25°C	5					
			VR =V <sub>DC</sub> @Ta=125°C	50					
Maximum reverse recovery time	T <sub>rr</sub>	ns	I <sub>F</sub> =0.5A,I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	150			250		500



## GR1A THRU GR1M (RS1A THRU RS1M)

### ■ Characteristics (Typical)

FIG.1: Io-TL Curve

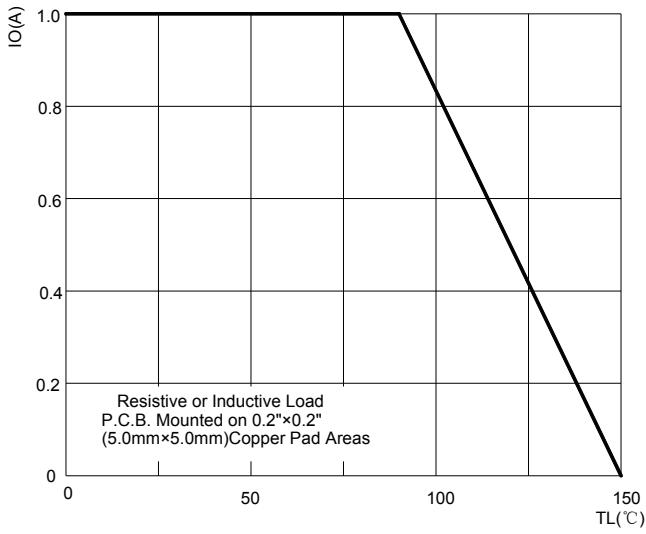


FIG.2: Forward Surge Current Capability

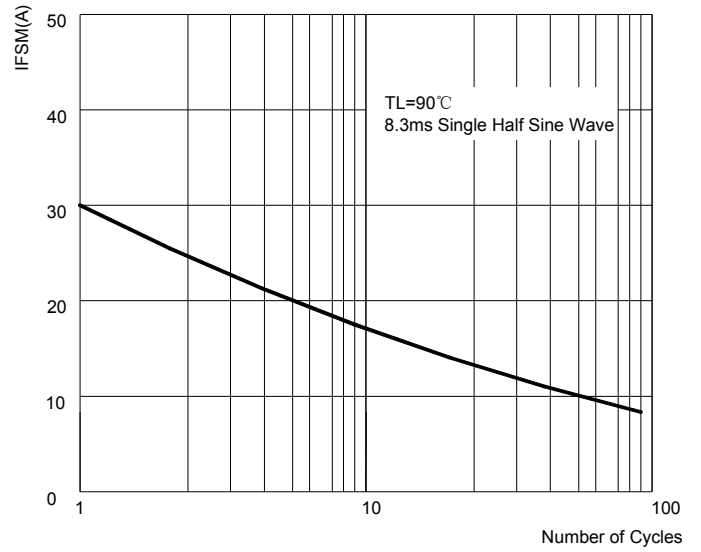


FIG.3: Forward Voltage

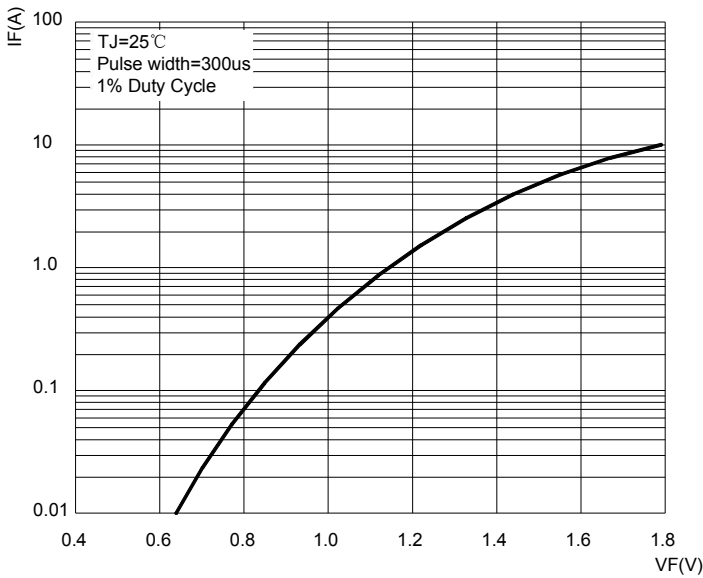


FIG.4: Typical Reverse Characteristics

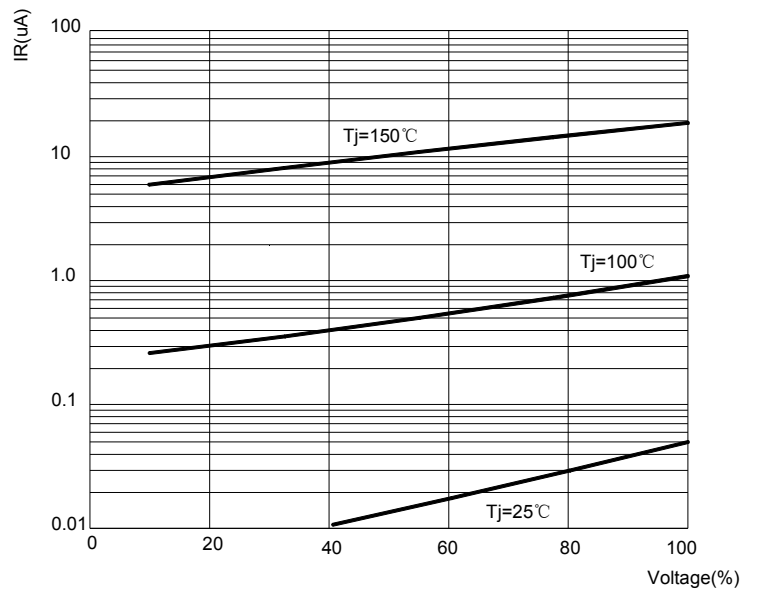
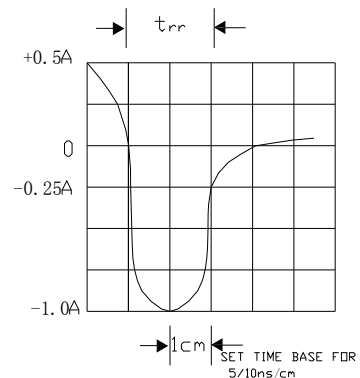
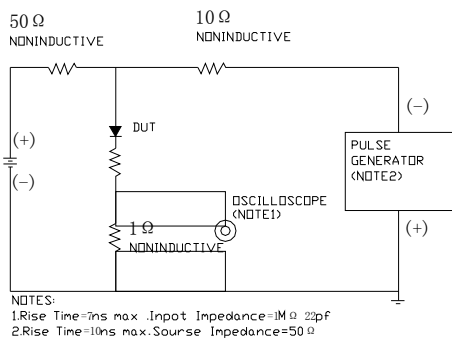


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

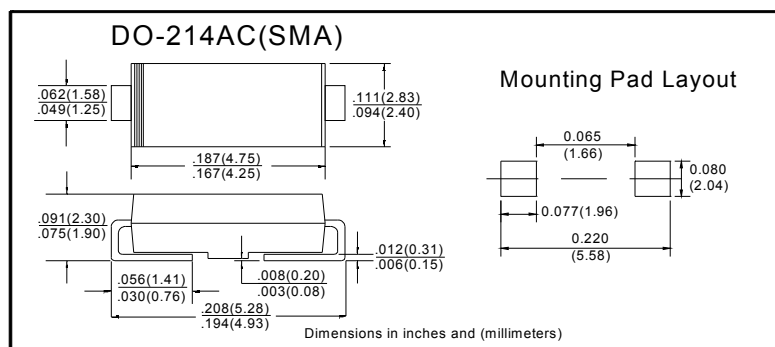


## GR1A THRU GR1M (RS1A THRU RS1M)

### ■ Ordering Information (Example)

PREFERED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GR1A THRU GR1M (RS1A THRU RS1M)	SMA	5000	10000	80000	13"reel
		7500	15000	120000	13"reel

### ■ Outline Dimensions



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