

# GR1A - GR1M

**PRV : 50 - 1000 Volts**

**Io : 1.0 Ampere**

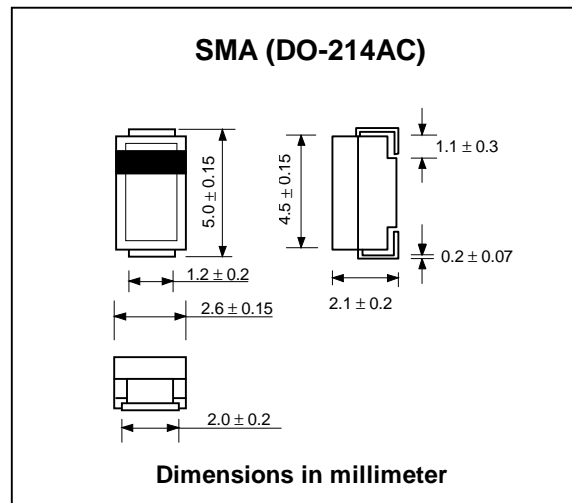
### FEATURES :

- \* Glass passivated chip
- \* High current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.067 gram

## GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIERS



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

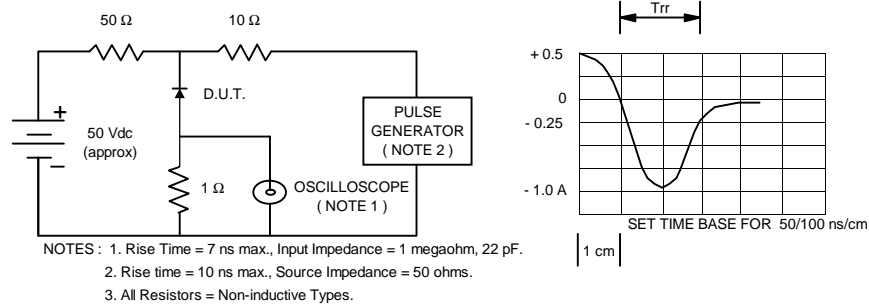
RATING	SYMBOL	GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Current Ta = 55 °C	IF(AV)	1.0							A
Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	IFSM	35							A
Maximum Peak Forward Voltage at IF = 1.0 A	VF	1.3							V
Maximum DC Reverse Current Ta = 25 °C	IR	5							µA
at Rated DC Blocking Voltage Ta = 125 °C	IR(H)	150							µA
Maximum Reverse Recovery Time ( Note 1 )	Trr	150			250	500		ns	
Typical Junction Capacitance ( Note 2 )	CJ	15							pf
Junction Temperature Range	TJ	- 65 to + 150							°C
Storage Temperature Range	TSTG	- 65 to + 150							°C

### Notes :

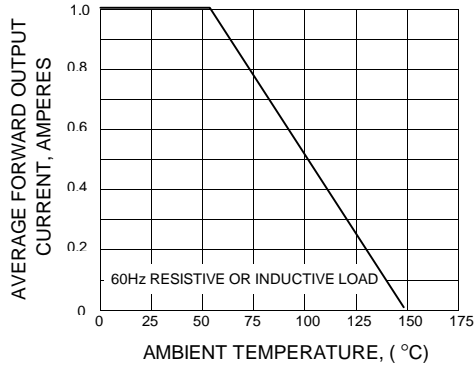
- ( 1 ) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

**RATING AND CHARACTERISTIC CURVES ( GR1A - GR1M )**

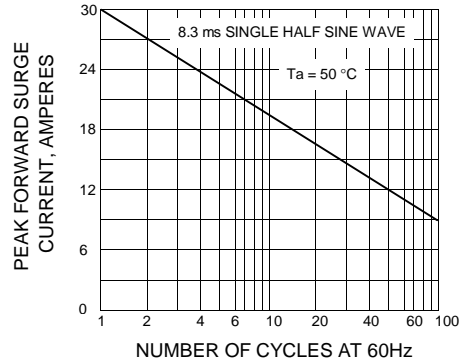
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



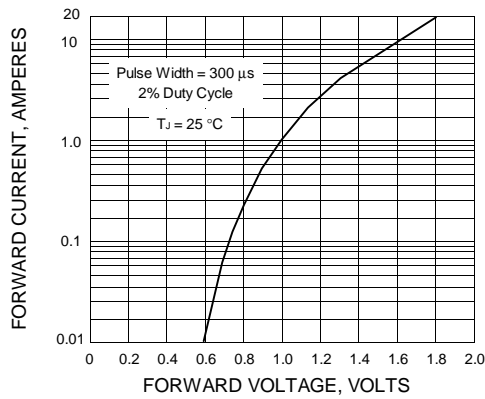
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

