

# GR1A - GR1M

**PRV : 50 - 1000 Volts**  
**Io : 1.0 Ampere**

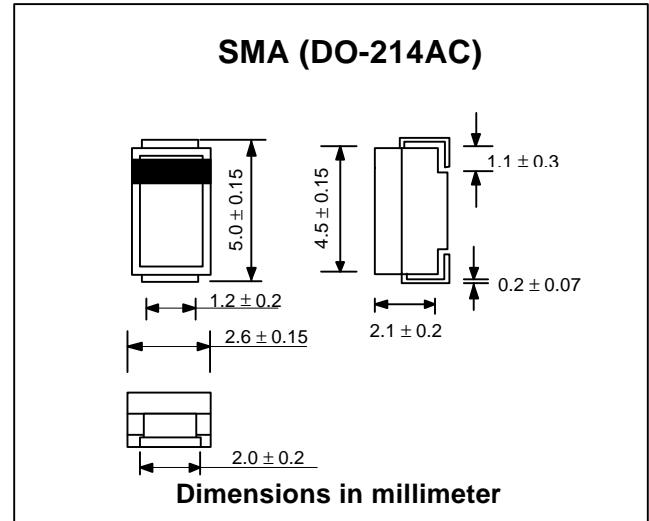
## FEATURES :

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

## 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%.

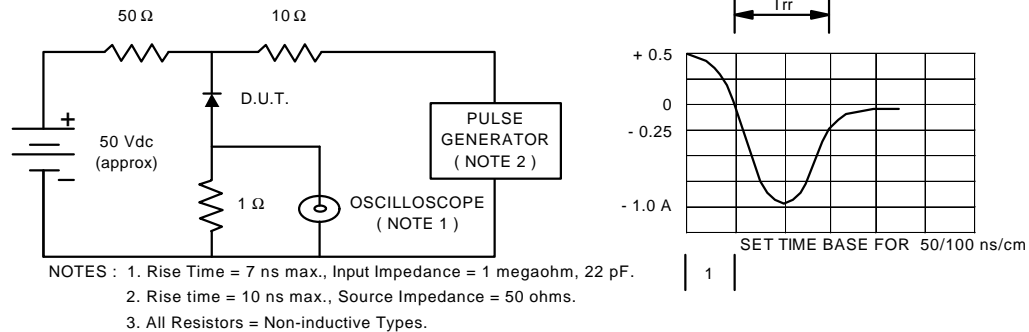
RATING	SYMBOL	GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Current Ta = 55 °C	I <sub>F(AV)</sub>	1.0							A
Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	35							A
Maximum Peak Forward Voltage at I <sub>F</sub> = 1.0 A	V <sub>F</sub>	1.3							V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 125 °C	I <sub>R</sub>	5							μA
	I <sub>R(H)</sub>	150							μA
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>	150				250	500		ns
Typical Junction Capacitance ( Note 2 )	C <sub>J</sub>	15							pf
Junction Temperature Range	T <sub>J</sub>	- 65 to + 150							°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 150							°C

## Notes :

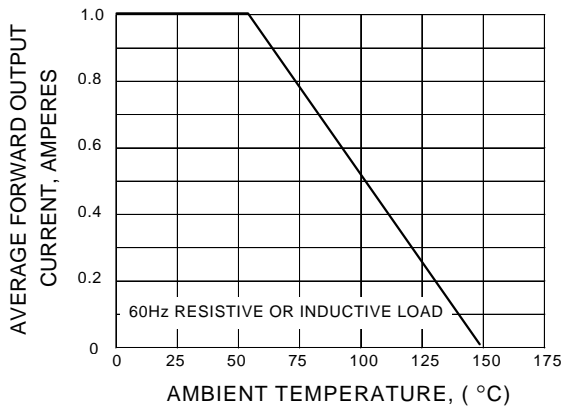
- ( 1 ) Reverse Recovery Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1.0 A, I<sub>rr</sub> = 0.25 A.
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 V<sub>DC</sub>

## RATING AND CHARACTERISTIC CURVES ( GR1A - GR1M )

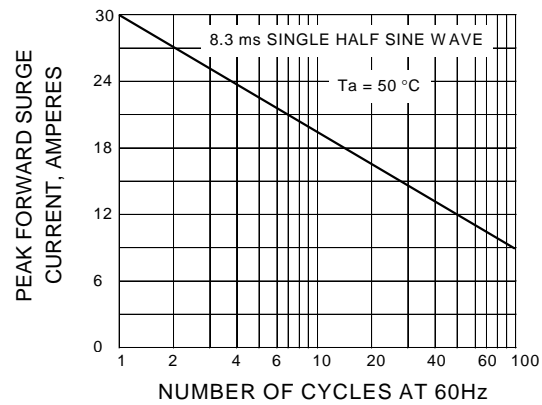
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



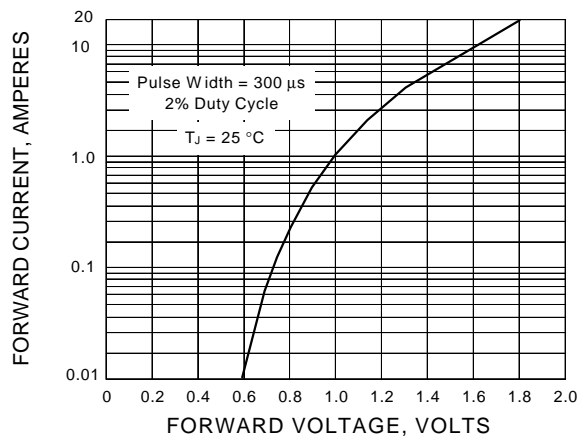
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

