GAIA TECH

# RS1A THRU RS1M

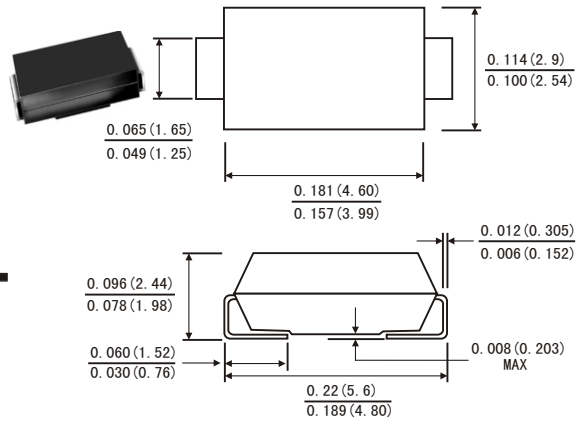
Reverse Voltage: 50 to 1000 Volts
Forward Current:1.0Ampere

## GLASS PASSIVATED FAST RECOVERY RECTIFIER

## FEATURES

- Glass passivated junction
- For Surface Mount Applications, Easy to pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering guaranteed:260°C/10 seconds at terminals,
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

## SMA(DO-214AC)




Dimensions in inches and (millimeters)

## MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic over glass passivated chip
- Terminals: Solder plated
- Polarity: Color band denotes cathode end
- Weight: 0.002 ounce, 0.064 g

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| | Symbols | RS1A | RS1B | RS1D | RS1G | RS1J | RS1K | RS1M | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at $T_L$=100°C | $I_{(AV)}$ | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 30.0 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 1.0 A | $V_F$ | 1.3 | | | | | | | Volts |
| Maximum DC Reverse Current at rated DC blocking voltage $T_A$=25°C | $I_R$ | 5.0 | | | | | | | μA |
| Maximum DC Reverse Current at rated DC blocking voltage $T_A$=125°C | $I_R$ | 150 | | | | | | | μA |
| Maximum reverse recovery time(Note1) | $t_{rr}$ | 150 | | | | 250 | 500 | | ns |
| Typical junction capacitance(Note2) | $C_J$ | 15.0 | | | | | | | pF |
| Operating junction and storage temperature range | $T_J$ $T_{STG}$ | -55 to+175 | | | | | | | ℃ |

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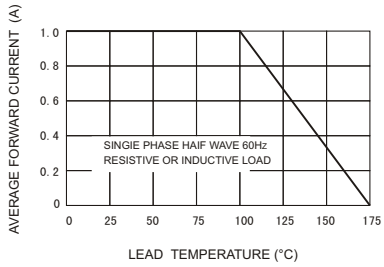
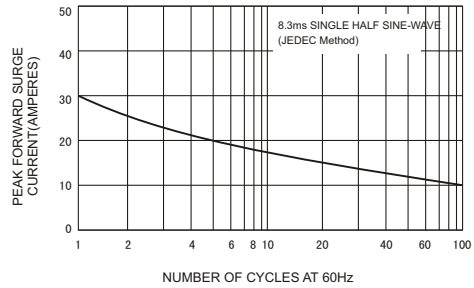
# RATINGS AND CHARACTERISTIC CURVES RS1A THRU RS1M

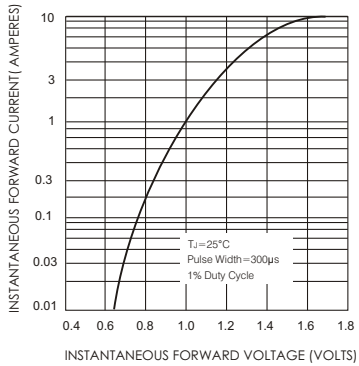
## FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE



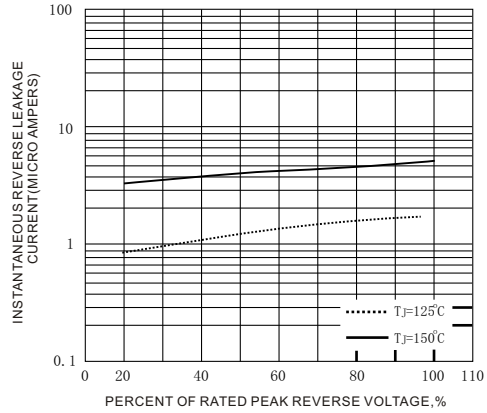

## FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



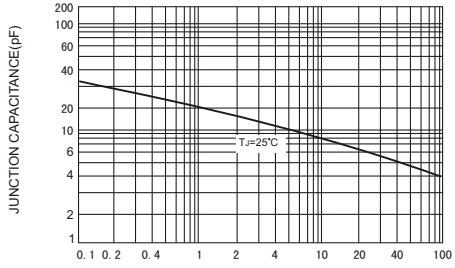

## FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



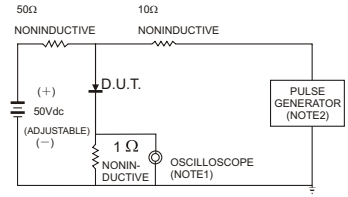

## FIG.4-TYPICAL REVERSE CHARACTERISTICS



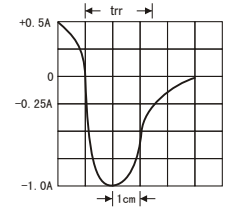

## FIG.5-TYPICAL JUNCTION CAPACITANCE




## FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC




NOTES:1.Rise Time=7ns max. input Impedance=1 megohm 22pF
2.Rise Time=10ns max. source Impedance =50 ohms




SET TIME BASE FOR 50/100 ns/cm