Kingtronics®

# GS3A THRU GS3M

## SURFACE MOUNT GENERAL RECTIFIER

**VOLTAGE RANGE** 50 to 1000 Volts **CURRENT** 3.0 Ampere

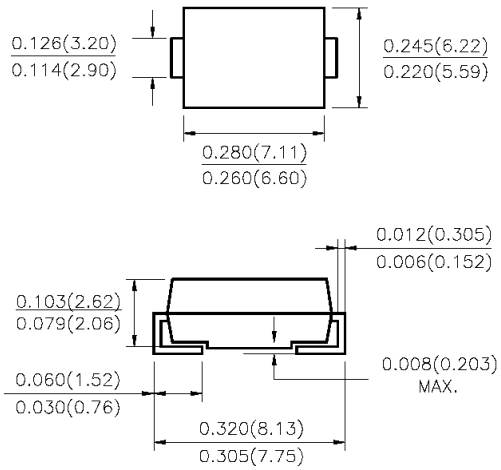
## FEATURES

- Plastic package has underwrites laboratory flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief, ideal for automated placement
- Glass Passivated chip junction
- High temperature soldering: 250℃/10 second at terminals

## MECHANICAL DATA

- **Case:** JEDED DO-214AB molded plastic over glass passivated chip
- **Terminals:** Solder plated, Solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end

## DO-214AB (SMC)




## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

**Ratings at 25℃ ambient temperature unless otherwise specified**

**Dimensions in inches and (millimeters)**

| PARAMETER | | SYMBOLS | GS3A | GS3B | GS3D | GS3G | GS3J | GS3K | GS3M | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive 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℃ (NOTE 3) | | $I_{(AV)}$ | 3.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method) TL=100℃ | | $I_{FSM}$ | 100 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 3.0A | | $V_F$ | 1.10 | | | | | | | Volts |
| Maximum DC Reverse Current at rated DC Blocking Voltage | $T_A$ = 25℃ | $I_R$ | 10.0 | | | | | | | μA |
| | $T_A$ = 125℃ | | 25 | | | | | | | |
| Typical Reverse Recovery Time (NOTE 1) | | Trr | 2.5 | | | | | | | μs |
| Typical junction capacitance (NOTE 2) | | $C_J$ | 60 | | | | | | | pF |
| Typical Thermal Resistance (NOTE 3) | | $R_{\theta JL}$ | 47 | | | | | | | ℃/W |
| | | $R_{\theta JA}$ | 13 | | | | | | | |
| Operating and Storage Temperature Range | | $T_J$,$T_{STG}$ | -55 to +150 | | | | | | | ℃ |

Notes:

1. Reverse recovery test conditions: IF =0.5A, IR =1.0A, Irr =0.25A
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts
3. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B.with 0.3×0.3″ (8.0 × 8.0mm) copper pad areas.

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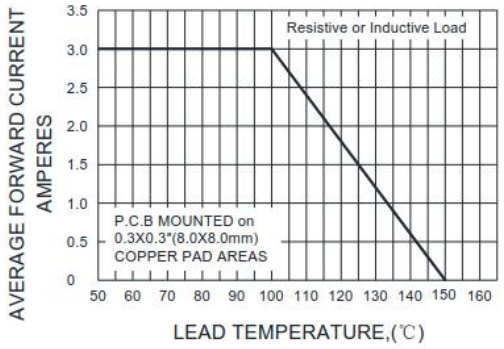
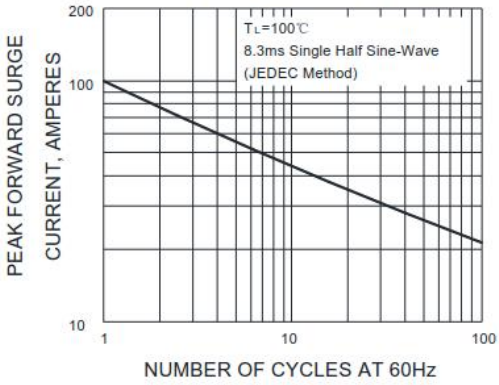
## RATINGS AND CHARACTERISTIC CURVES

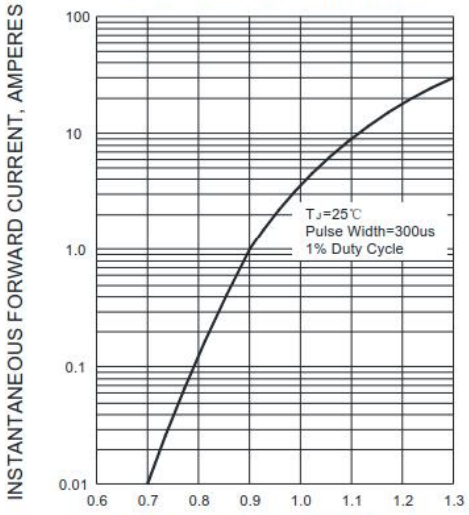
F1G.1-FORWARD CURRENT DERATING CURVE



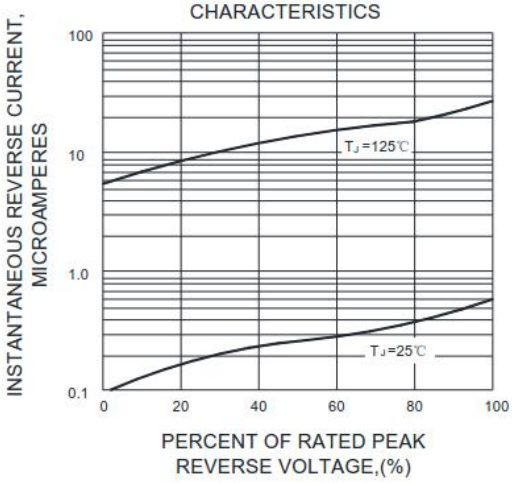

F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



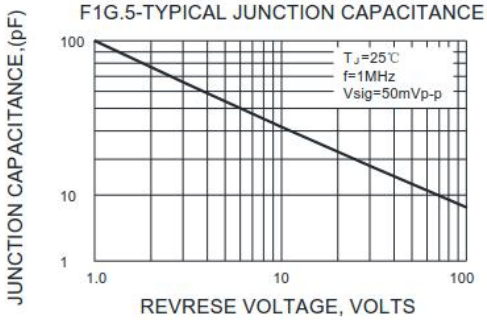

F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



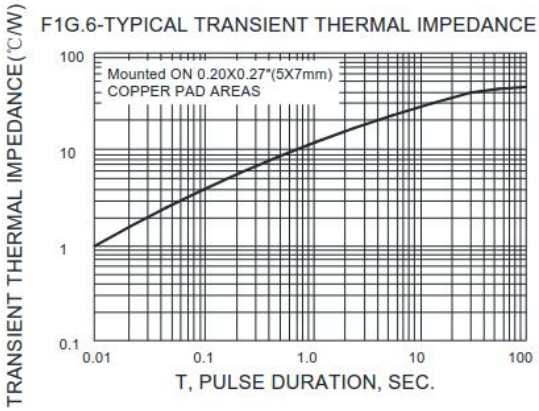

F1G.4-TYPICAL REVERSE CHARACTERISTICS




F1G.5-TYPICAL JUNCTION CAPACITANCE




F1G.6-TYPICAL TRANSIENT THERMAL IMPEDANCE




Note: Specifications are subject to change without notice.