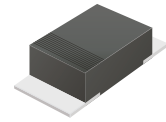


## CGRM4001-G Thru. CGRM4007-G

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

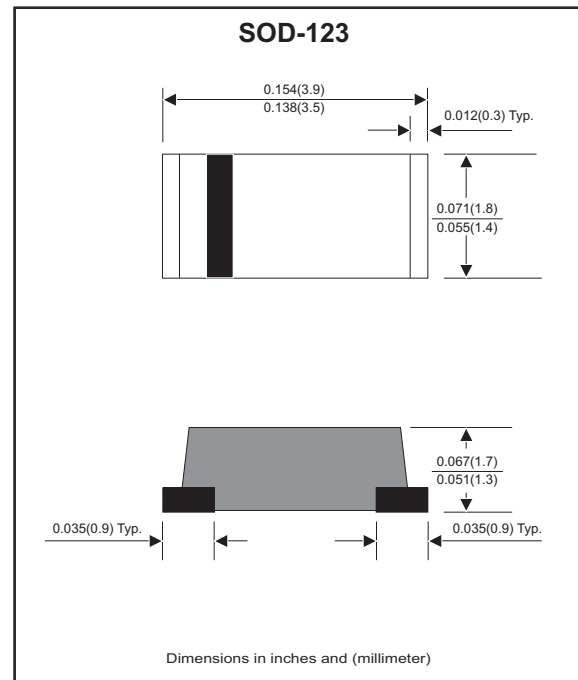


### Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Exceeds environmental standard MIL-S-19500/228.
- Low leakage current.

### Mechanical data

- Case: Molded plastic, JEDEC SOD-123/Mini SMA.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.027 grams approx.



### Maximum Ratings (at T<sub>A</sub>=25°C unless otherwise noted)

| Parameter                                                                                    | Symbol           | CGRM 4001-G | CGRM 4002-G | CGRM 4003-G | CGRM 4004-G | CGRM 4005-G | CGRM 4006-G | CGRM 4007-G | Unit |
|----------------------------------------------------------------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| Max. repetitive peak reverse voltage                                                         | V <sub>RRM</sub> | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | V    |
| Max. DC blocking voltage                                                                     | V <sub>DC</sub>  | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | V    |
| Max. RMS voltage                                                                             | V <sub>RMS</sub> | 35          | 70          | 140         | 280         | 420         | 560         | 700         | V    |
| Max. averaged forward current                                                                | I <sub>O</sub>   | 1.0         |             |             |             |             |             |             | A    |
| Maximum Instantaneous forward voltage at I <sub>F</sub> =1.0A                                | V <sub>F</sub>   | 1.1         |             |             |             |             |             |             | V    |
| Forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 30          |             |             |             |             |             |             | A    |
| Reverse current at rated @T <sub>A</sub> =25°C<br>DC blocking voltage @T <sub>A</sub> =100°C | I <sub>R</sub>   | 5<br>50     |             |             |             |             |             |             | μA   |
| Thermal resistance, junction to ambient air                                                  | R <sub>θJA</sub> | 60          |             |             |             |             |             |             | °C/W |
| Operating junction temperature                                                               | T <sub>J</sub>   | -55 to +150 |             |             |             |             |             |             | °C   |
| Storage temperature range                                                                    | T <sub>STG</sub> | -65 to +170 |             |             |             |             |             |             | °C   |
| Junction capacitance<br>f=1MHz and applied 4V DC reverse voltage                             | C <sub>J</sub>   | 15          |             |             |             |             |             |             | pF   |

## Rating and Characteristic Curves (CGRM4001-G Thru. CGRM4007-G)

Fig.1 Reverse Characteristics

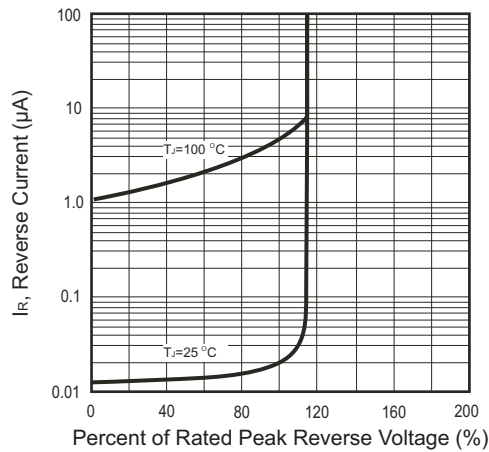


Fig.2 Forward Characteristics

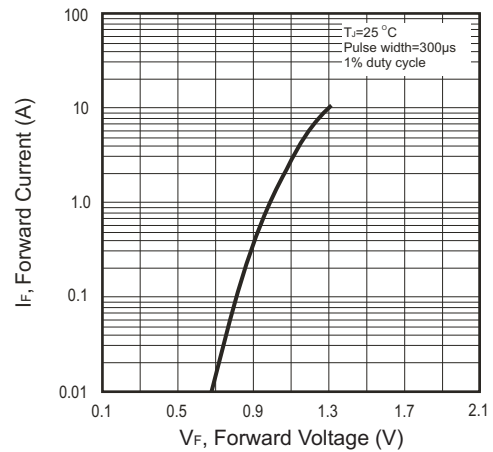


Fig.3 Junction Capacitance

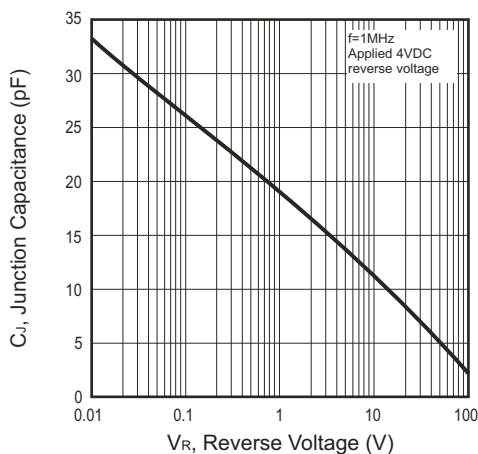


Fig.4 Current Derating Curve

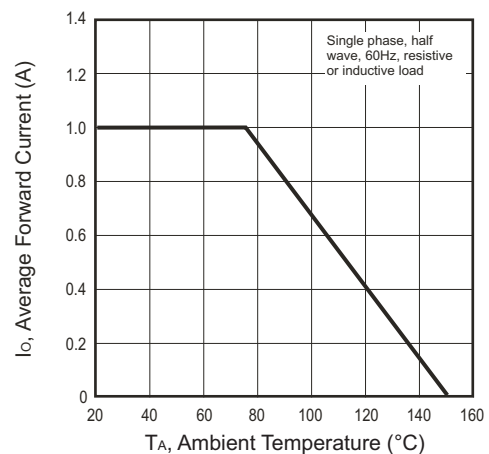
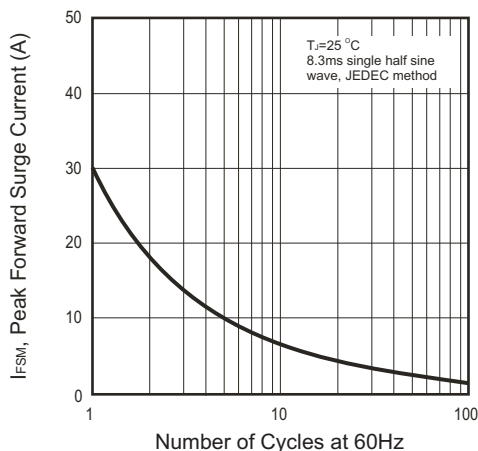
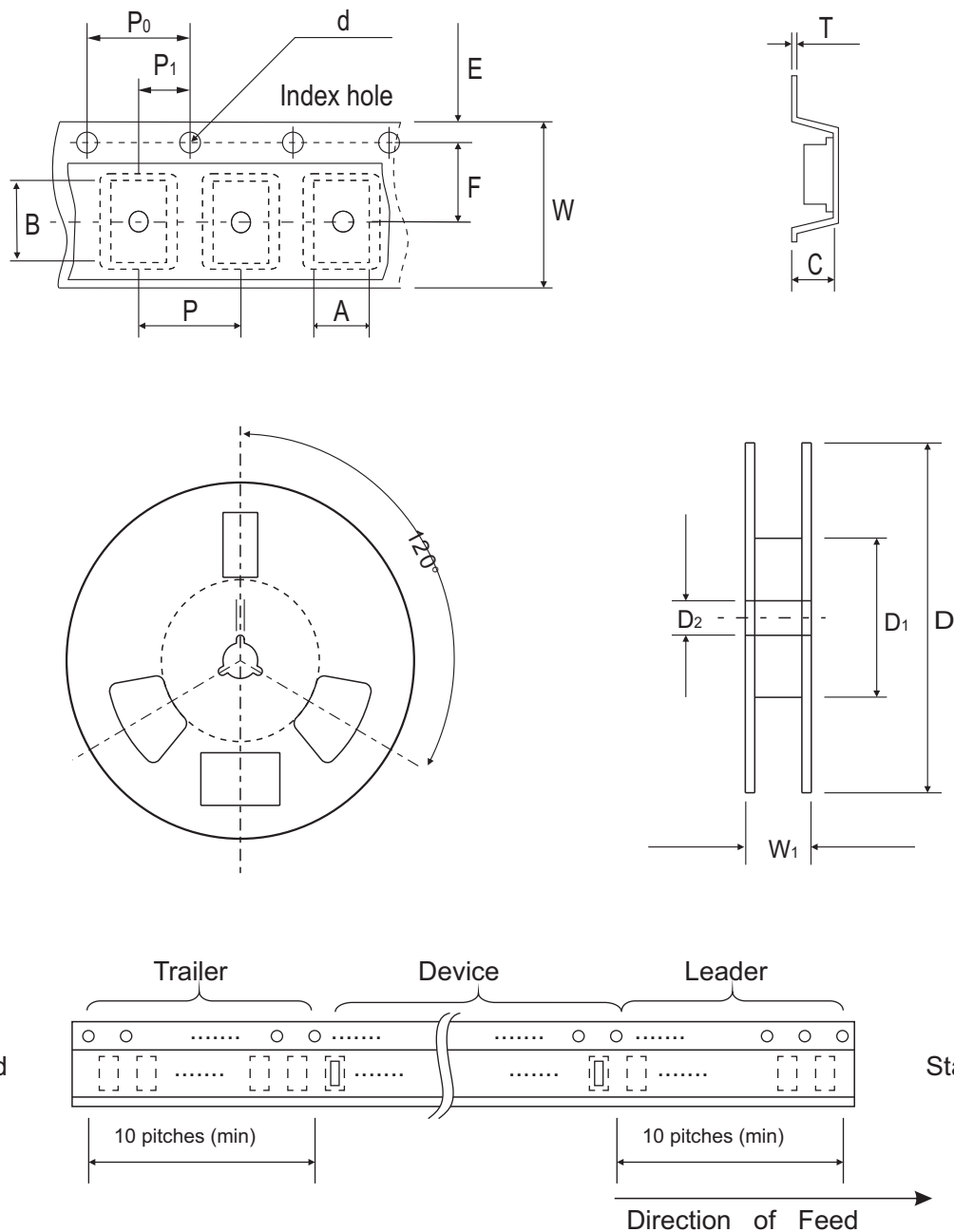


Fig.5 Non-repetitive Forward Surge Current



## Reel Taping Specification



| SOD-123 | SYMBOL | A                | B                | C                | d                 | D                 | D1         | D2                |
|---------|--------|------------------|------------------|------------------|-------------------|-------------------|------------|-------------------|
|         | (mm)   | $1.90 \pm 0.10$  | $3.90 \pm 0.10$  | $1.68 \pm 0.10$  | $1.50 \pm 0.05$   | $178 \pm 1.00$    | 62.0 MIN.  | $13.0 \pm 0.50$   |
|         | (inch) | $0.075 \pm 0.04$ | $0.154 \pm 0.04$ | $0.066 \pm 0.04$ | $0.059 \pm 0.002$ | $7.008 \pm 0.039$ | 2.441 MIN. | $0.512 \pm 0.020$ |

| SOD-123 | SYMBOL | E                 | F                 | P                 | P0                | P1                | W                 | W1                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.05$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $8.00 \pm 0.30$   | $11.4 \pm 1.00$   |
|         | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.002$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 \pm 0.012$ | $0.449 \pm 0.039$ |

## Marking Code

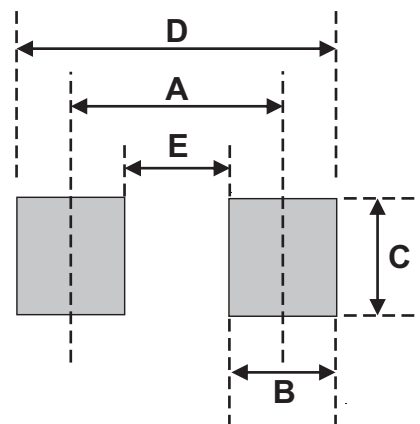
| Part Number | Marking Code |
|-------------|--------------|
| CGRM4001-G  | A1           |
| CGRM4002-G  | A2           |
| CGRM4003-G  | A3           |
| CGRM4004-G  | A4           |
| CGRM4005-G  | A5           |
| CGRM4006-G  | A6           |
| CGRM4007-G  | A7           |



**xx = Product type marking code**

## Suggested PAD Layout

| SIZE | SOD-123 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 3.80    | 0.150  |
| B    | 1.40    | 0.055  |
| C    | 1.90    | 0.075  |
| D    | 5.70    | 0.225  |
| E    | 1.90    | 0.075  |



## Standard Packaging

| Case Type | Qty per Reel | Reel Size |
|-----------|--------------|-----------|
|           | (Pcs)        | (inch)    |
| SOD-123   | 2,500        | 7         |