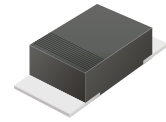


## CSFM101-G Thru. CSFM105-G

Reverse Voltage: 50 to 600 Volts

Forward Current: 1.0 Amp

RoHS Device

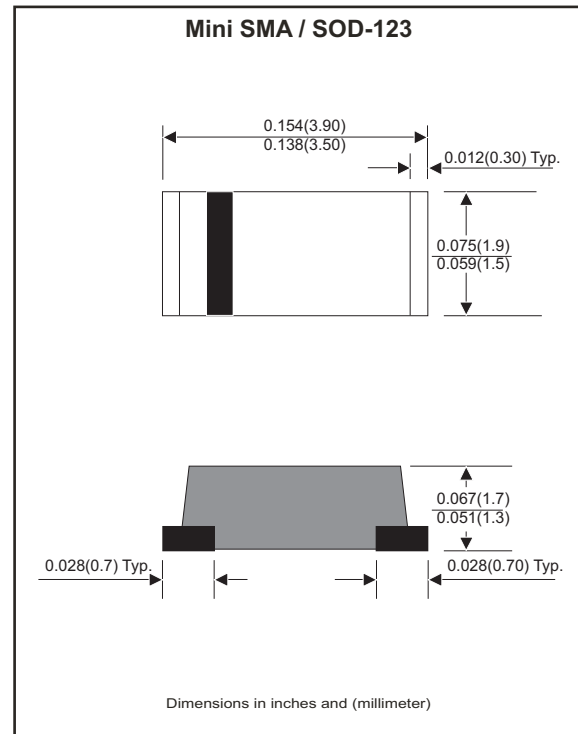


### Features

- Batch process design,excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Tiny plastic SMD package.
- Super fast recovery time for switching mode application.
- High current capability.
- High surge current capability.
- Glass passivated chip junction.

### Mechanical data

- Epoxy: UL 94-V0 rated flame retardant.
- Case: Molded plastic, JEDEC SOD-123/Mini SMA.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.018 grams approx.



### Maximum Ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Maximum Ratings (at TA = 25 °C unless otherwise noted)

| Parameter                                                     | Conditions                                                                                                        | Symbol           | CSFM 101-G  | CSFM 102-G | CSFM 103-G | CSFM 104-G | CSFM 105-G | Unit |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------|-------------|------------|------------|------------|------------|------|
| Repetitive peak reverse voltage                               |                                                                                                                   | V <sub>RRM</sub> | 50          | 100        | 200        | 400        | 600        | V    |
| Continuous reverse voltage                                    |                                                                                                                   | V <sub>DC</sub>  | 50          | 100        | 200        | 400        | 600        | V    |
| RMS voltage                                                   |                                                                                                                   | V <sub>RMS</sub> | 35          | 70         | 140        | 280        | 420        | V    |
| Max. forward rectified current                                | Ambient temperature=50°C                                                                                          | I <sub>O</sub>   | 1.0         |            |            |            |            | A    |
| Maximum Instantaneous forward voltage at I <sub>F</sub> =1.0A |                                                                                                                   | V <sub>F</sub>   | 0.95        |            |            | 1.25       | 1.70       | V    |
| Forward surge current                                         | 8.3ms single half sine-wave superimposed on rated load (JEDEC method)                                             | I <sub>FSM</sub> | 25          |            |            |            |            | A    |
| Max. Reverse recovery time                                    | I <sub>F</sub> =0.5A , I <sub>R</sub> =1.0A<br>I <sub>RR</sub> =0.25A                                             | T <sub>rr</sub>  | 35          |            |            |            |            | nS   |
| Max.Reverse current                                           | V <sub>R</sub> =V <sub>RRM</sub> T <sub>J</sub> =@25°C<br>V <sub>R</sub> =V <sub>RRM</sub> T <sub>J</sub> =@100°C | I <sub>R</sub>   | 5.0<br>100  |            |            |            |            | μA   |
| Typ. Thermal resistance                                       | Junction to ambient                                                                                               | R <sub>θJA</sub> | 42          |            |            |            |            | °C/W |
| Diode junction capacitance                                    | f=1MHz and applied 4V DC reverse voltage                                                                          | C <sub>J</sub>   | 10          |            |            |            |            | pF   |
| Operating junction temperature                                |                                                                                                                   | T <sub>J</sub>   | -55 to +150 |            |            |            |            | °C   |
| Storage temperature range                                     |                                                                                                                   | T <sub>STG</sub> | -65 to +175 |            |            |            |            | °C   |

## Rating and Characteristic Curves (CSFM101-G Thru. CSFM105-G)

Fig.1- Typical Forward Characteristics

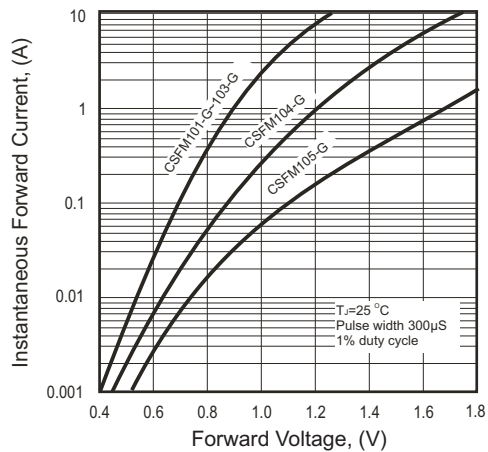


Fig.2-Typical Forward Current Derating Curve

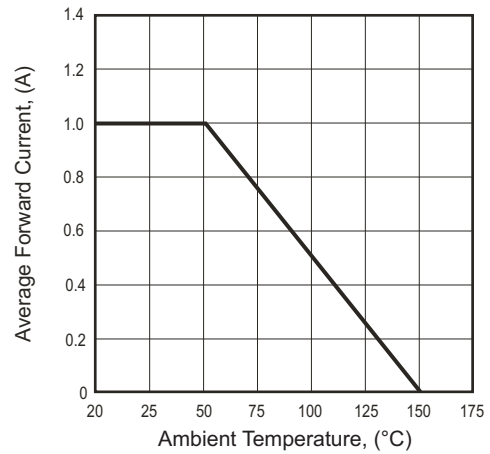
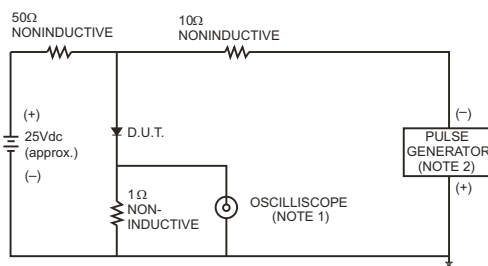


Fig.3- Test Circuit Diagram and Reverse Recovery Time Characteristics



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

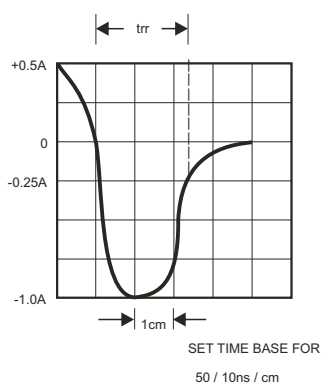


Fig.4- Non-repetitive Forward Surge Current

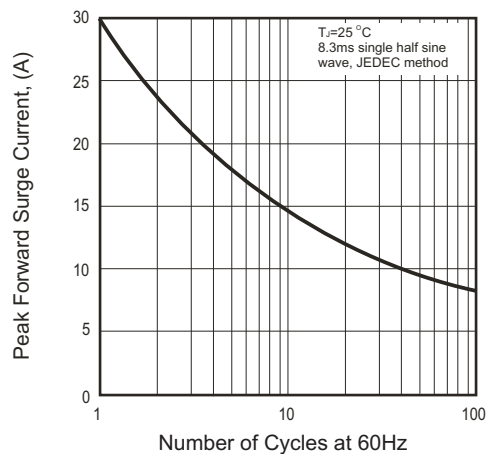
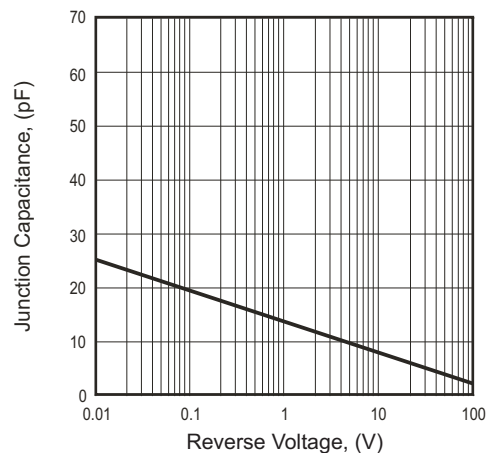
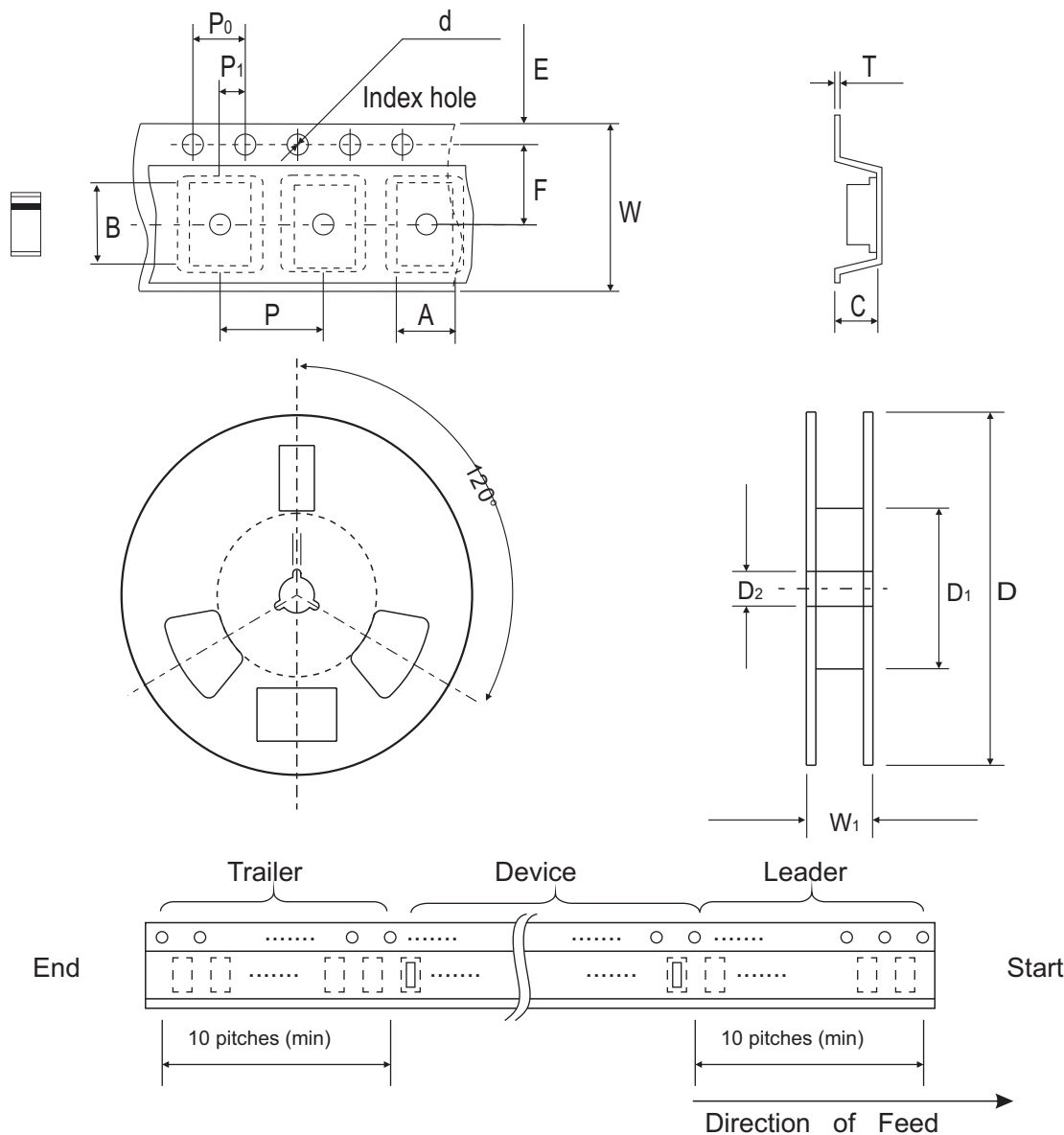


Fig.5- Typical Junction Capacitance



Reel Taping Specification



| Mini-SMA/SOD-123 | SYMBOL | A                | B                | C                | d                 | D                | D1         | D2                |
|------------------|--------|------------------|------------------|------------------|-------------------|------------------|------------|-------------------|
|                  | (mm)   | $1.90 \pm 0.10$  | $3.90 \pm 0.10$  | $1.68 \pm 0.10$  | $1.50 \pm 0.10$   | $178 \pm 2.00$   | 62.0 MIN.  | $13.0 \pm 0.50$   |
|                  | (inch) | $0.075 \pm 0.04$ | $0.154 \pm 0.04$ | $0.066 \pm 0.04$ | $0.059 \pm 0.004$ | $7.00 \pm 0.079$ | 2.440 MIN. | $0.512 \pm 0.020$ |

| Mini-SMA/SOD-123 | SYMBOL | E                 | F                 | P                 | P0                | P1                | T                 | W                 | W1                |
|------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                  | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.10$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $0.23 \pm 0.10$   | $8.00 \pm 0.30$   | $11.40 \pm 1.0$   |
|                  | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.009 \pm 0.004$ | $0.315 \pm 0.012$ | $0.449 \pm 0.004$ |

## Marking Code

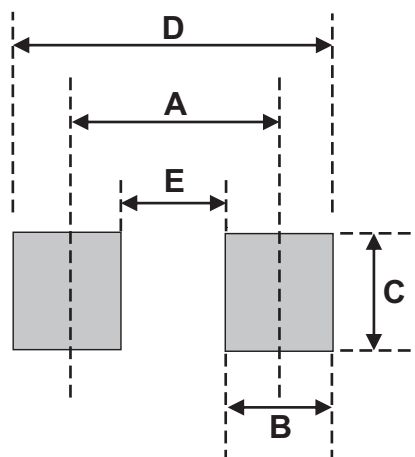
| Part Number | Marking Code |
|-------------|--------------|
| CSFM101-G   | S1           |
| CSFM102-G   | S2           |
| CSFM103-G   | S3           |
| CSFM104-G   | S6           |
| CSFM105-G   | S8           |



XX = Product type marking code

## Suggested PAD Layout

| SIZE | Mini-SMA/SOD-123 |        |
|------|------------------|--------|
|      | (mm)             | (inch) |
| A    | 3.30             | 0.130  |
| B    | 1.40             | 0.055  |
| C    | 1.90             | 0.075  |
| D    | 4.70             | 0.185  |
| E    | 1.90             | 0.075  |



## Standard Package

| Case Type        | Qty per Reel | Reel Size |
|------------------|--------------|-----------|
|                  | (Pcs)        | (inch)    |
| Mini-SMA/SOD-123 | 2500         | 7         |

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