

1. Scope

The present specifications shall apply to Sanken silicon diode, FMN-G12S.

2. Outline

|              |                                                      |
|--------------|------------------------------------------------------|
| Type         | Silicon Diode                                        |
| Structure    | Resin Molded      Flammability: UL94V-0 (Equivalent) |
| Applications | Pulse Rectification, etc.                            |

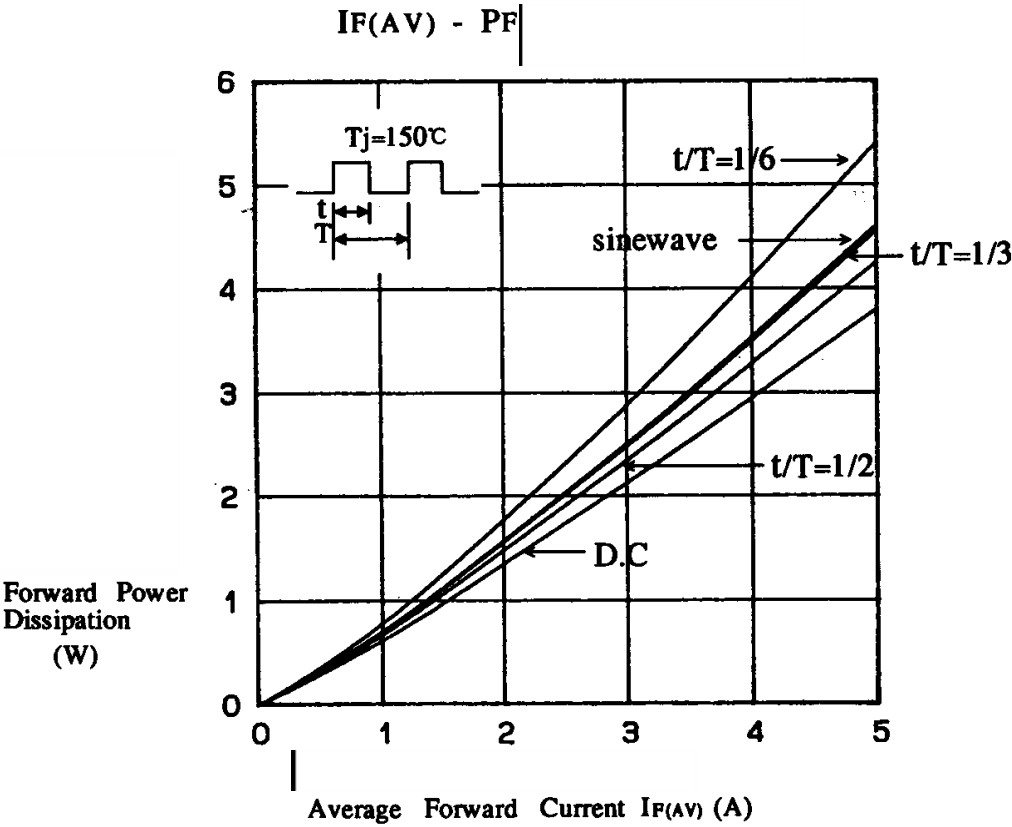
## 3. Absolute maximum ratings

| No. | Item                           | Symbol      | Unit        | Rating   | Conditions                                 |
|-----|--------------------------------|-------------|-------------|----------|--------------------------------------------|
| 1   | Transient Peak Reverse Voltage | $V_{RSM}$   | V           | 200      |                                            |
| 2   | Peak Reverse Voltage           | $V_{RM}$    | V           | 200      |                                            |
| 3   | Average Forward Current        | $I_{F(AV)}$ | A           | 5.0      |                                            |
| 4   | Peak Surge Forward Current     | $I_{FSM}$   | A           | 100      | 10msec.<br>10msec. half sinewave, one shot |
| 5   | $I^2t$ Limiting Value          | $I^2t$      | $A^2s$      | 50       |                                            |
| 6   | Junction Temperature           | $T_j$       | $^{\circ}C$ | -40~+150 |                                            |
| 7   | Storage Temperature            | $T_{stg}$   | $^{\circ}C$ | -40~+150 |                                            |
| 8   | Screwing Torque                |             | N·m         | 0.59     |                                            |
| 9   | Dielectric Strength            |             | kV          | A.C. 1.0 | Junction and case (1min.)                  |

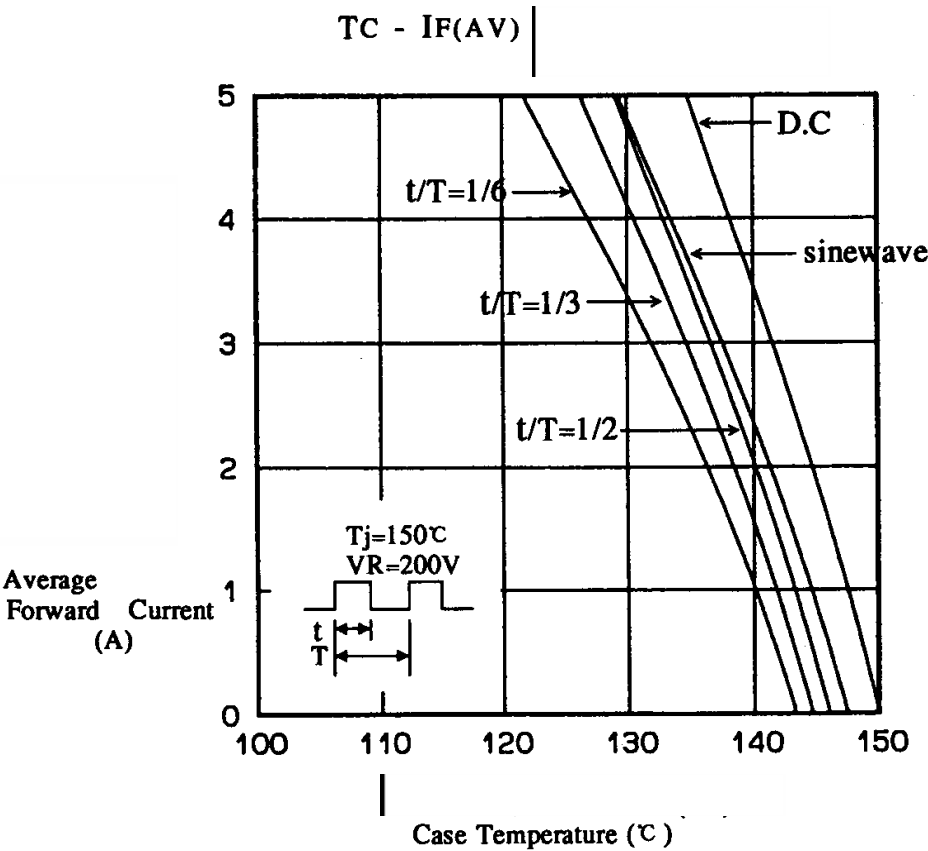
4. Electrical characteristics ( $T_a=25^{\circ}C$ , unless otherwise specified)

| No. | Item                                           | Symbol        | Unit          | Value     | Conditions                                         |
|-----|------------------------------------------------|---------------|---------------|-----------|----------------------------------------------------|
| 1   | Forward Voltage Drop                           | $V_F$         | V             | 0.92 max. | $I_F=5.0A$                                         |
| 2   | Reverse Leakage Current                        | $I_R$         | $\mu A$       | 100 max.  | $V_R=V_{RM}$                                       |
| 3   | Reverse Leakage Current Under High Temperature | $H \cdot I_R$ | mA            | 10 max.   | $V_R=V_{RM}$ , $T_a=150^{\circ}C$                  |
| 4   | Reverse Recovery Time                          | trr1          | ns            | 100 max.  | $I_F=I_{RP}=100mA$<br>90% Recovery point           |
|     |                                                | trr2          | ns            | 50 max.   | $I_F=100mA$ , $I_{RP}=200mA$<br>75% Recovery point |
| 5   | Thermal Resistance                             | $R_{th(j-c)}$ | $^{\circ}C/W$ | 4.0 max.  | Between Junction and case.                         |

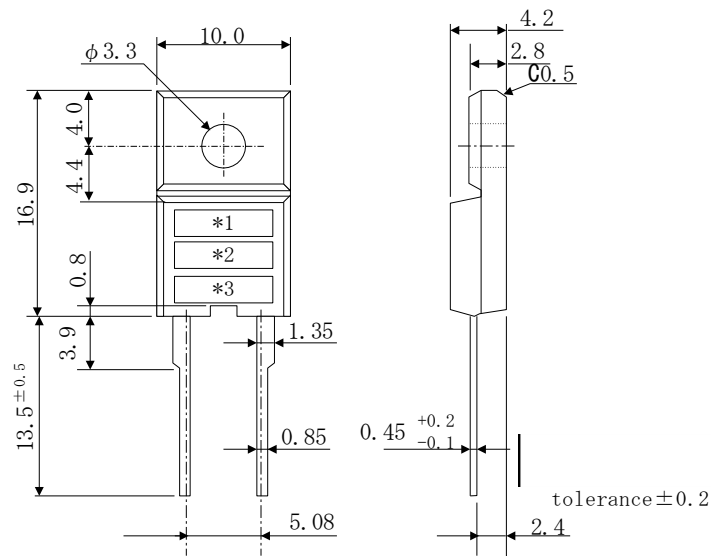
5. Characteristics



6. Derating



7. Dimensions, Inner Structure and Marking  
7-1 Dimensions Refer



Dimensions in mm

7-2 Appearance  
The body shall be clean and shall not bear any stain, rust or flaw.

7-3 Marking

| Type Name | Marking         |                |                                                                                                                                                                           |
|-----------|-----------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | *1<br>Type Name | *2<br>Polarity | *3<br>Lot number                                                                                                                                                          |
| FMN-G12S  | FMNG12          | S              | 1st letter : Last digit of Year.<br>2nd letter : Month from 1 to 9 for Jan. to Sep., O for Oct. N for Nov. D for Dec.<br>3rd&4th letter: Day.<br>Ex. : 3225 (Feb.25.2003) |