

**/ Descriptions**

SOT23-3          P    MOS

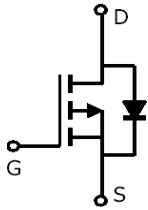
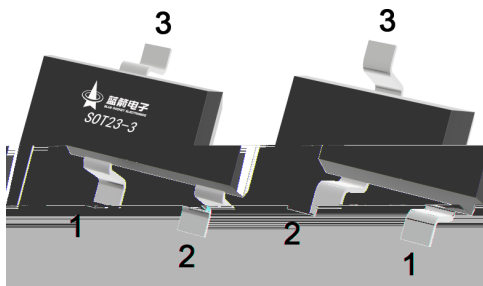
- CHANNEL MOSFET in a SOT23-3 Plastic Package.

**/ Features** $V_{DS} (V) = -12V$        $I_D = -8.0A$  $R_{DS(ON)} @ -10V \leq 20m\Omega$  (Type.18m $\Omega$ ) $R_{DS(ON)} @ -4.5V \leq 25m\Omega$  (Type.21m $\Omega$ ) $R_{DS(ON)} @ -2.5V \leq 30m\Omega$  (Type.27m $\Omega$ ) $R_{DS(ON)} @ -1.8V \leq 50m\Omega$  (Type.40m $\Omega$ )

HF Product.

**/ Applications**

PWM applications, Load switch, Power management.

**/ Equivalent Circuit****/ Pinning**

PIN1 G

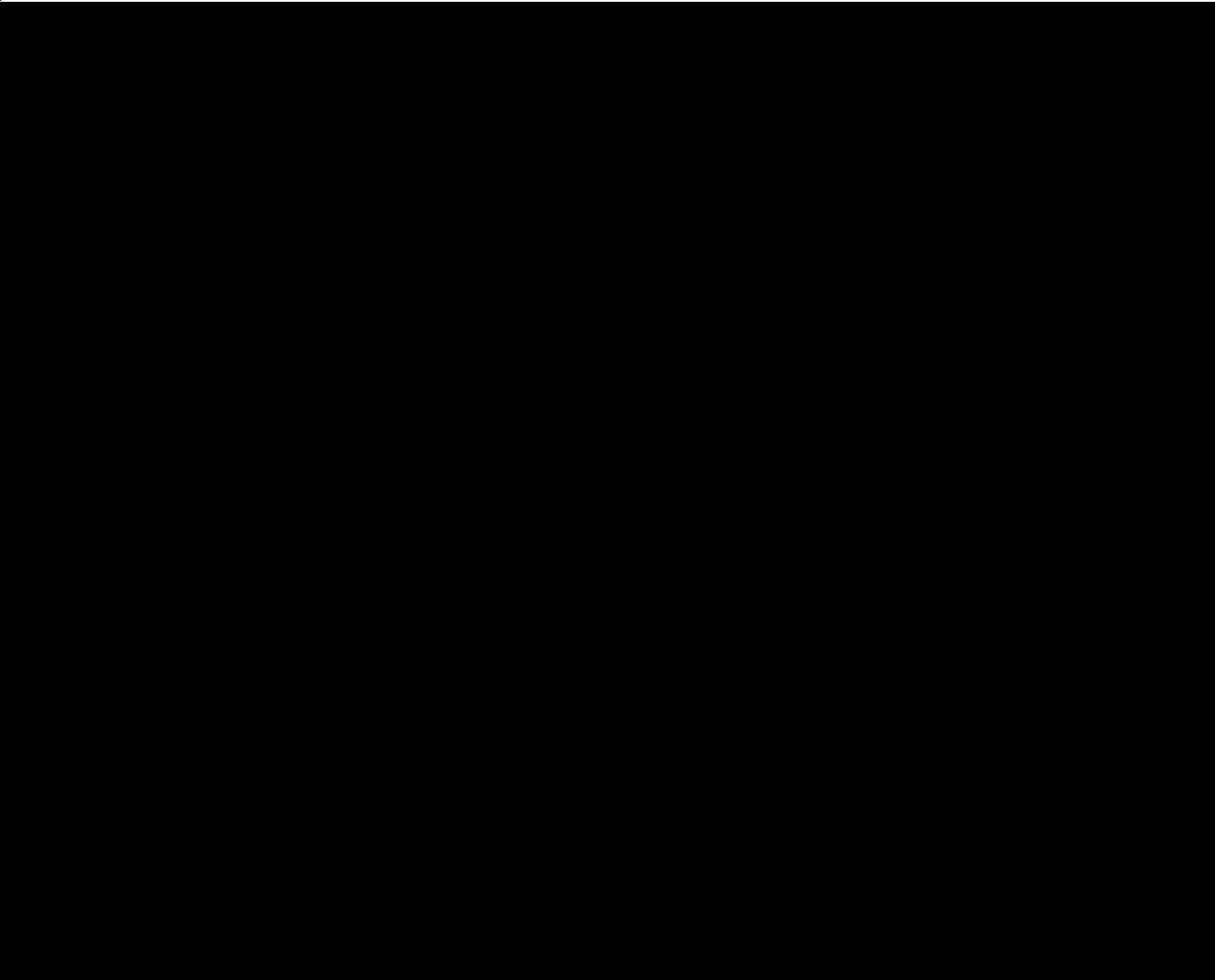
PIN 2 S

PIN 3 D

**/ Marking**

See Marking Instructions.

| Parameter                              | Symbol                                | Rating  | Unit |
|----------------------------------------|---------------------------------------|---------|------|
| Drain-Source Voltage                   | $V_{DSS}$                             | -12     | V    |
| Gate-Source Voltage                    | $V_{GSS}$                             | $\pm 8$ | V    |
| Continuous Drain Current               | $I_D(T_C=25\text{ }^{\circ}\text{C})$ | -8.0    | A    |
| Pulsed Drain Current                   | $I_{DM}$                              | -25     | A    |
| Power Dissipation for Single Operation | $P_D(T_C=25\text{ }^{\circ}\text{C})$ | 1.8     | W    |
| Maximum Junction Temperature           | $T_j$                                 | 150     |      |
| Storage Temperature Range              | $T_{stg}$                             | -55 150 |      |
| Thermal Resistance-Junction to Ambient | $R_{\theta JA}$                       | 125     | /W   |
| Thermal Resistance-Junction to Case    | $R_{\theta JC}$                       | 69      | /W   |



|               |
|---------------|
| Unit          |
| V             |
| $\mu\text{A}$ |
| nA            |
| V             |



# / Electrical Characteristic Curve

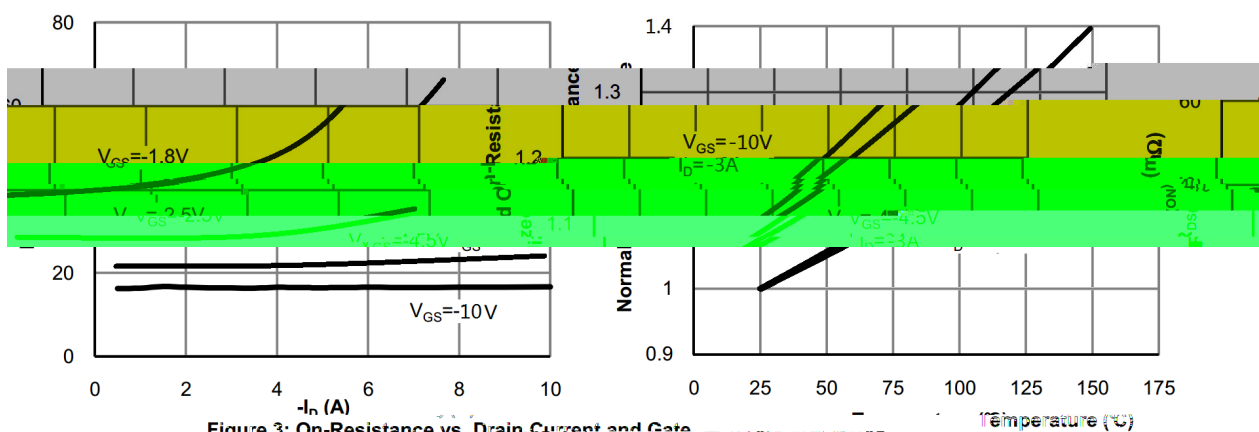
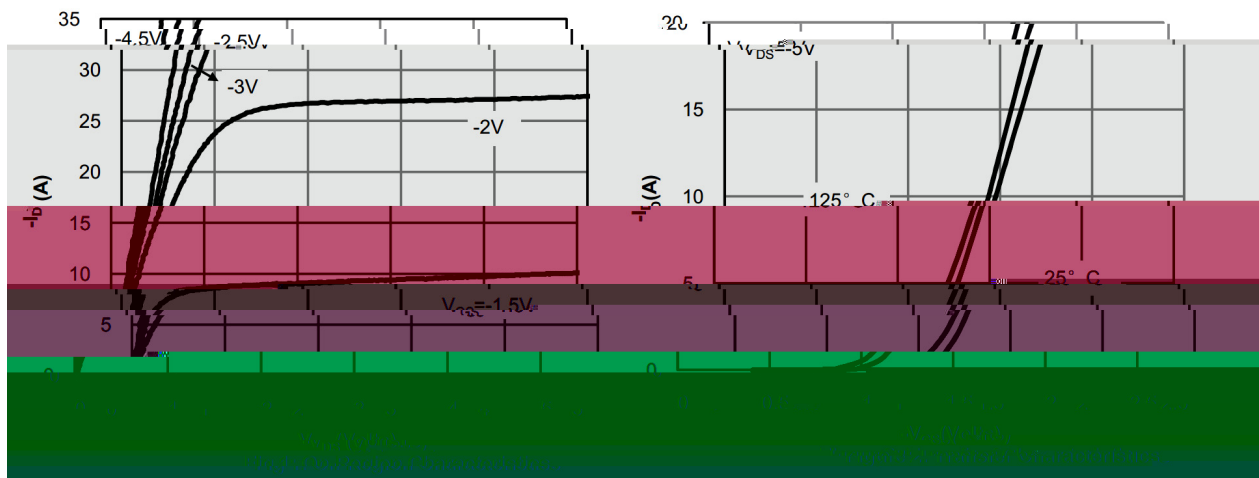


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

Figure 4: On-Resistance vs. Temperature

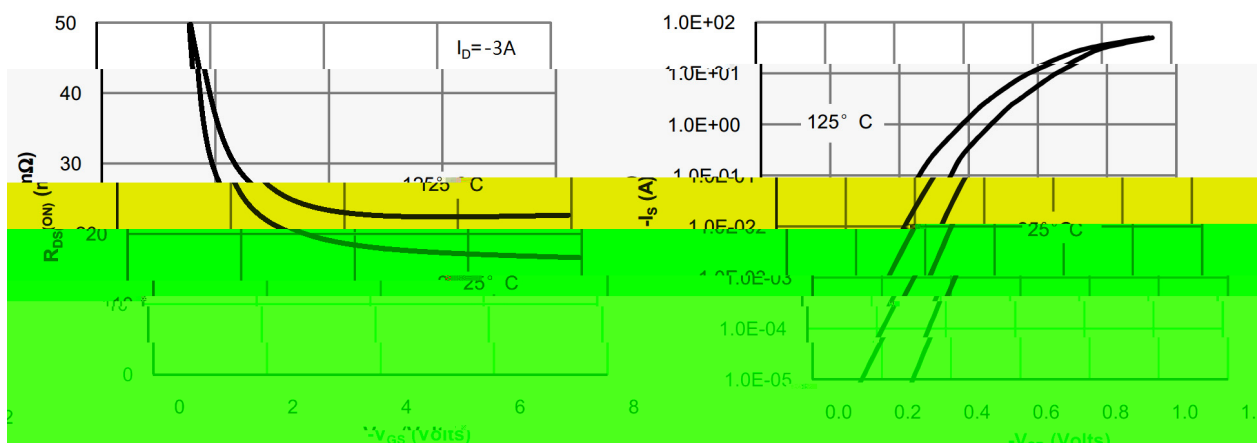


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

## / Electrical Characteristic Curve

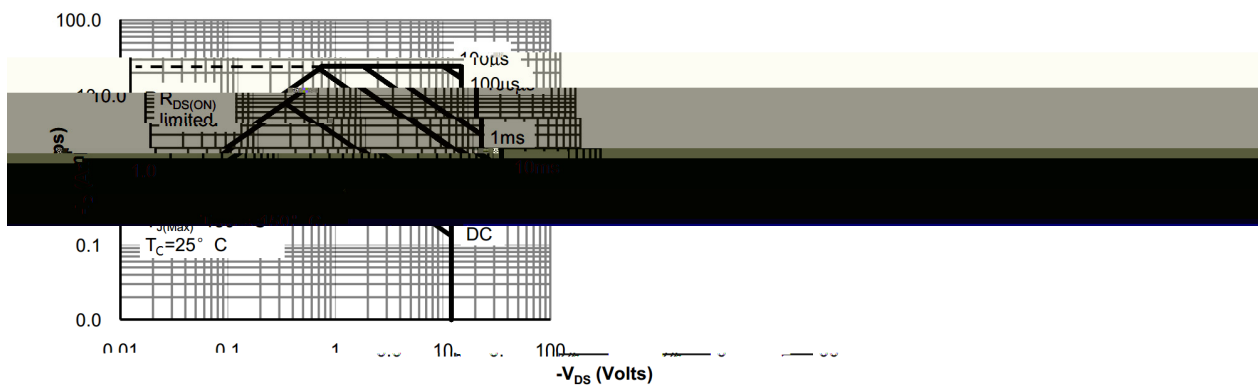
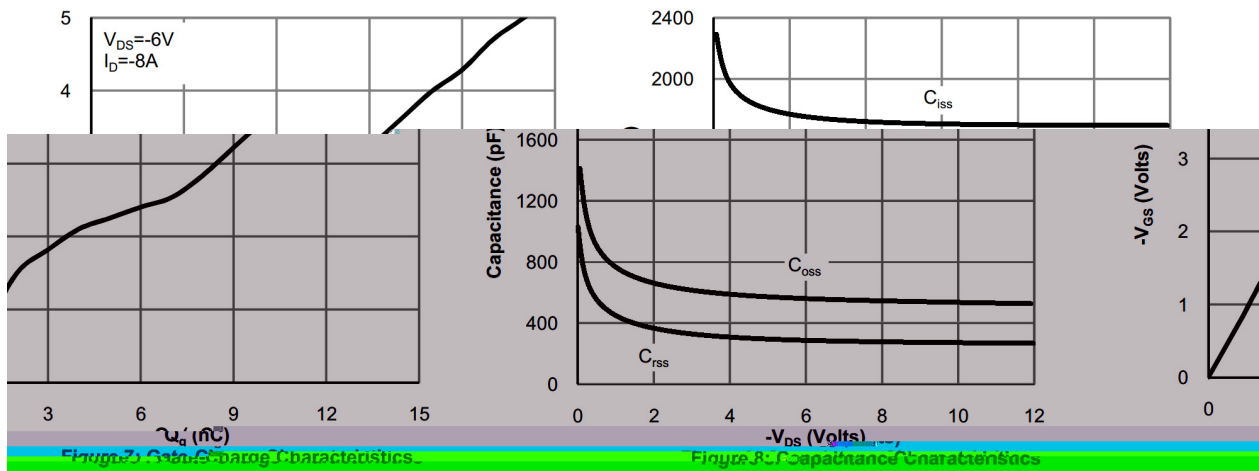


Figure 9: Maximum Forward Biased Safe Operating Area

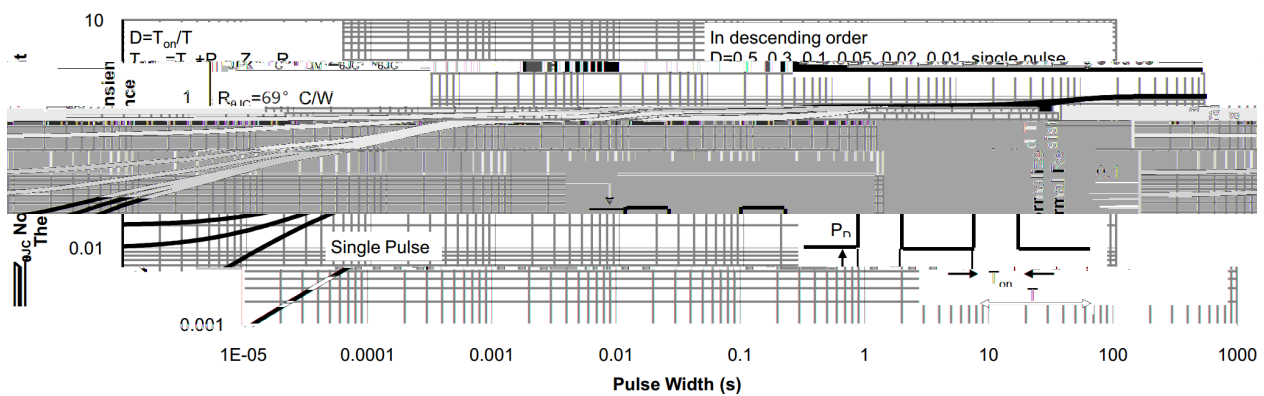
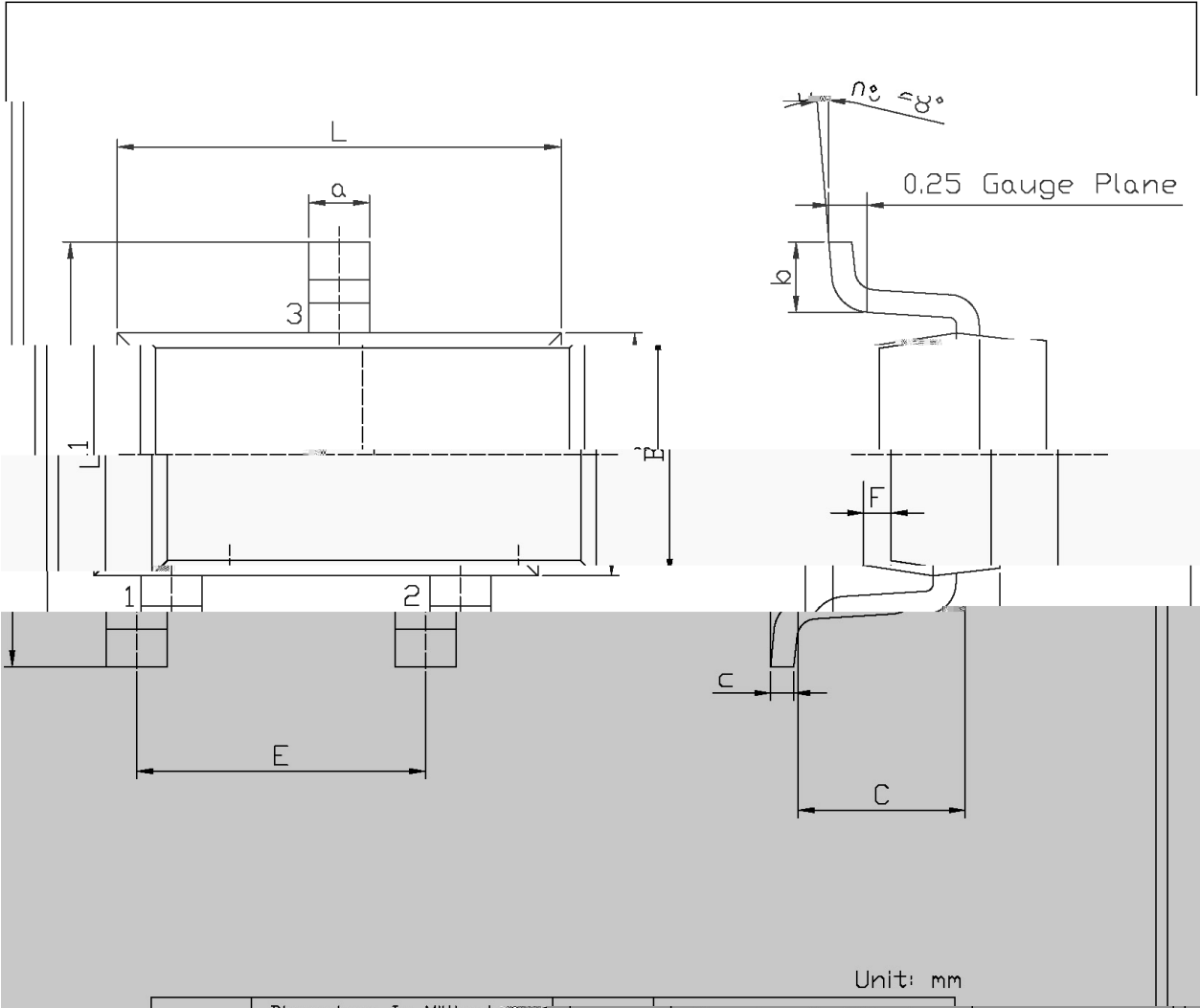


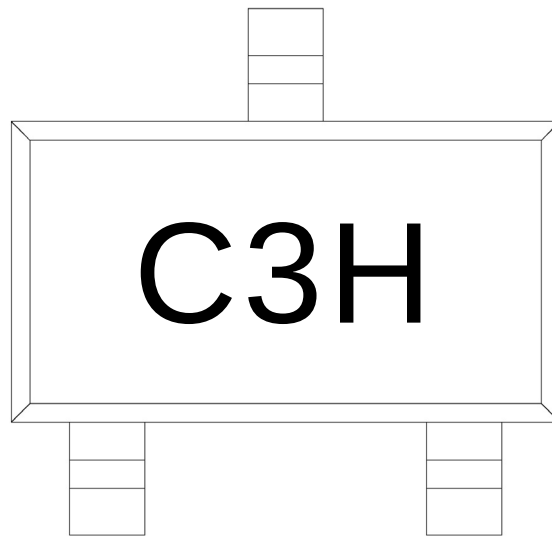
Figure 10: Normalized Maximum Transient Thermal Impedance

/ Package Dimensions



| Dimensions in Millimeters |      | Dimensions in Inches |        |
|---------------------------|------|----------------------|--------|
| L                         | 2.92 | 2.00                 | 0.0787 |
| a                         | 0.25 | 0.01                 | 0.0039 |
| 3                         | 0.25 | 0.01                 | 0.0039 |
| 1                         | 0.25 | 0.01                 | 0.0039 |
| 2                         | 0.25 | 0.01                 | 0.0039 |
| E                         | 0.25 | 0.01                 | 0.0039 |
| C                         | 0.25 | 0.01                 | 0.0039 |
| F                         | 0.25 | 0.01                 | 0.0039 |
| b                         | 0.25 | 0.01                 | 0.0039 |

**/ Marking Instructions**



C3

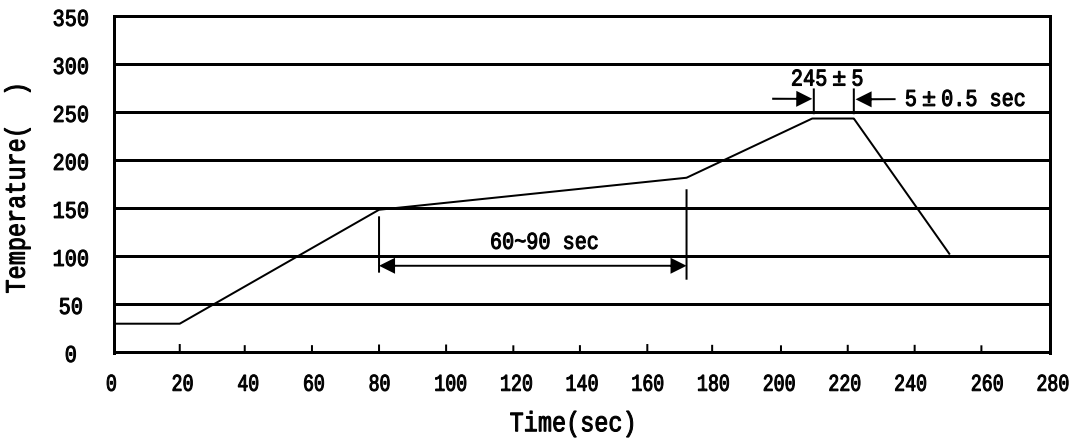
H

Note:

C3: Product Type Code

H: Company Code

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245 5

5 0.5sec;

2.Peak Temp.:245 5 , Duration:5 0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260 5 Time:10 1 sec

/ Packaging SPEC.

/ REEL

| Package Type | Units      |                 |                 |                       |                 | Dimension (unit mm <sup>3</sup> ) |             |             |
|--------------|------------|-----------------|-----------------|-----------------------|-----------------|-----------------------------------|-------------|-------------|
|              | Units/Reel | Reels/Inner Box | Units/Inner Box | Inner Boxes/Outer Box | Units/Outer Box | Reel                              | Inner Box   | Outer Box   |
| SOT23-3      | 3,000      | 10              | 30,000          | 4                     | 120,000         | 7 ×8                              | 210×205×205 | 445×435×230 |

/ Notices