

/ Descriptions

TO-92LM NPN Silicon NPN transistor in a TO-92LM Plastic Package.

/ Features

KTA1274
Complementary to KTA1274.

/ Applications

General purpose amplifier application.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

| | | |
|------------------------------------|--------|---------|
| h_{FE} Classifications Symbol | O | Y |
| h_{FE} Range | 70~140 | 120~240 |

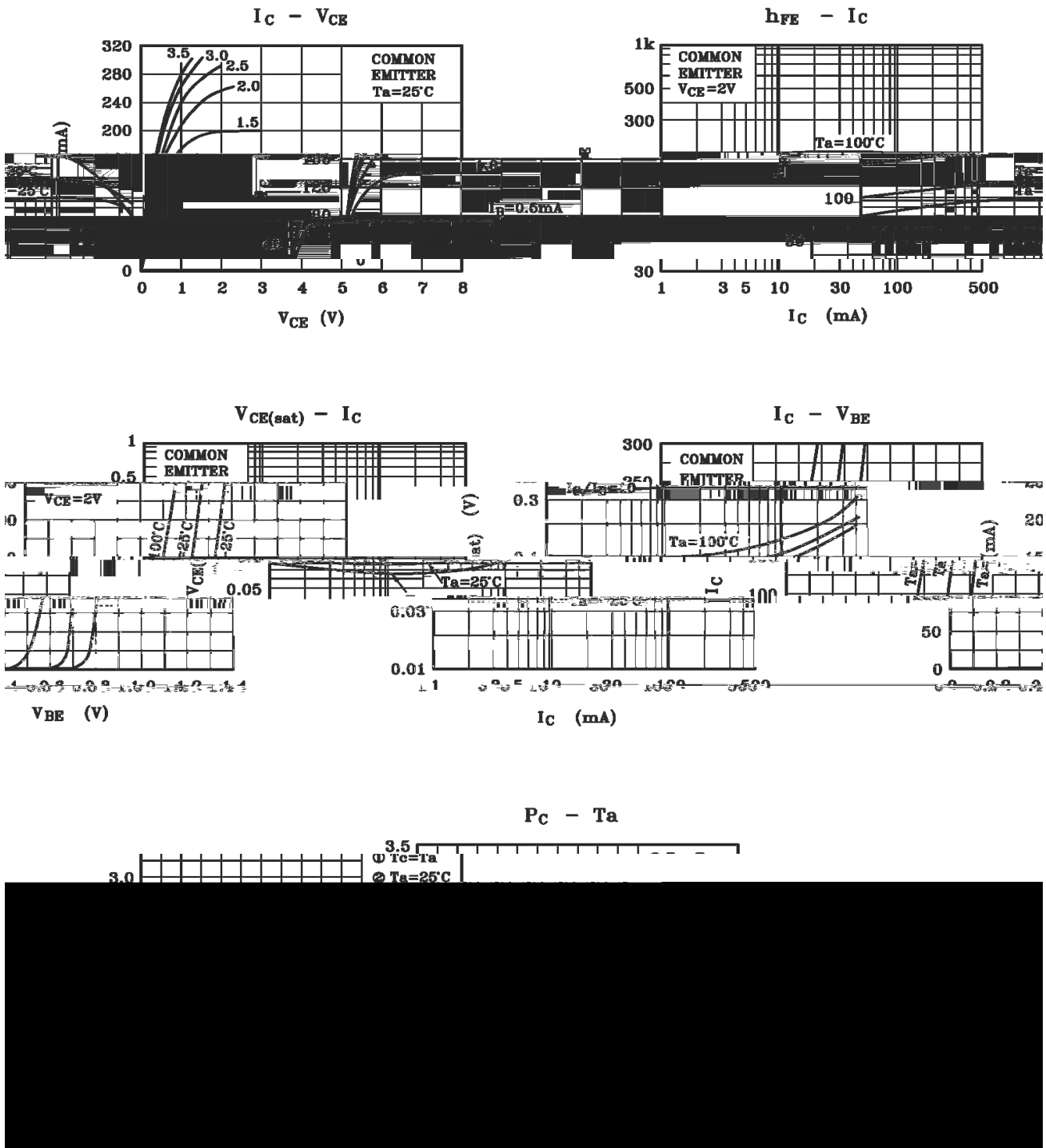
/ Absolute Maximum Ratings(Ta=25)

| Parameter | Symbol | Rating | Unit |
|--------------------------------|-----------|---------|------|
| Collector to Base Voltage | V_{CBO} | 80 | V |
| Collector to Emitter Voltage | V_{CEO} | 80 | V |
| Emitter to Base Voltage | V_{EBO} | 5.0 | V |
| Collector Current - Continuous | I_C | 400 | mA |
| Base Current - Continuous | I_E | -400 | mA |
| Collector Power Dissipation | P_C | 1.0 | W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_{stg} | -55 150 | °C |

/ Electrical Characteristics(Ta=25)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---------------|---------------------------|------|-----|-----|---------|
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=50V$ $I_E=0$ | | | 0.1 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=5.0V$ $I_C=0$ | | | 0.1 | μA |
| Collector to Emitter Breakdown Voltage | V_{CEO} | $I_C=5mA$ $I_B=0mA$ | 80 | | | V |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=2.0V$ $I_C=50mA$ | 70 | | 240 | |
| | $h_{FE(2)}$ | $V_{CE}=2.0V$ $I_C=200mA$ | 40 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=200mA$ $I_B=20mA$ | | | 0.4 | V |
| Base to Emitter Voltage | V_{BE} | $V_{CE}=2.0V$ $I_C=5mA$ | 0.55 | | 0.8 | V |
| Transition Frequency | f_T | $V_{CE}=10V$ $I_C=10mA$ | | 100 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10V$ $f=1MHz$ | | 10 | | pF |

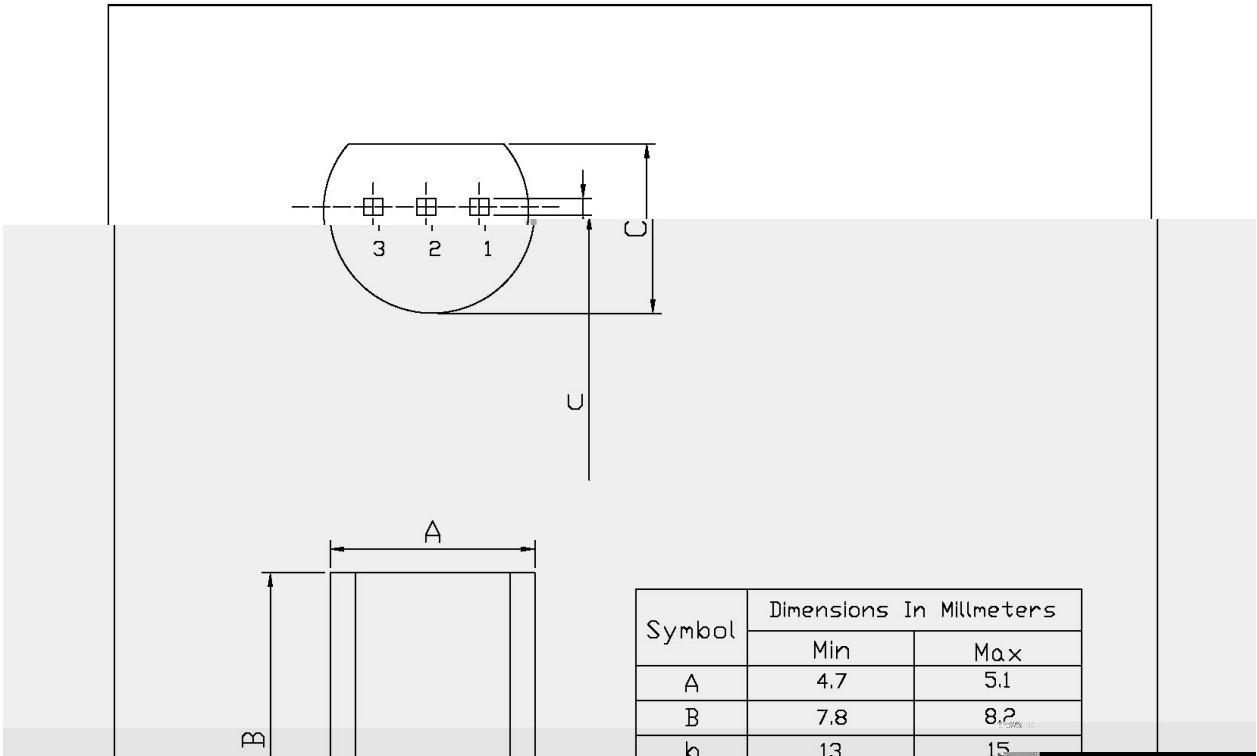
/ Electrical Characteristic Curve



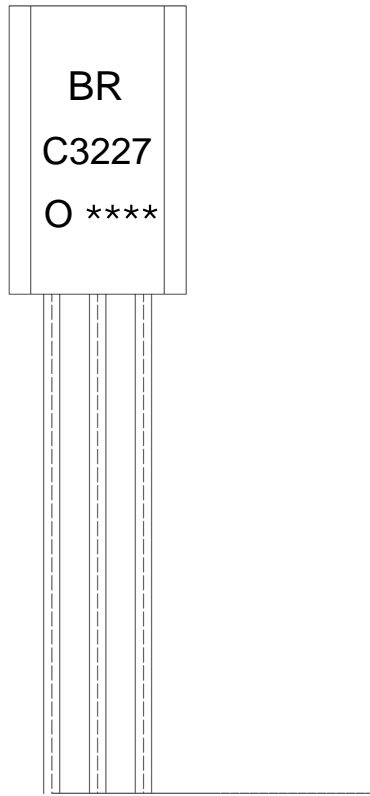
/ Package Dimensions

T0-92LM

Unit: mm



/ Marking Instructions



BR:

C3227

O: h_{FE}

Note:

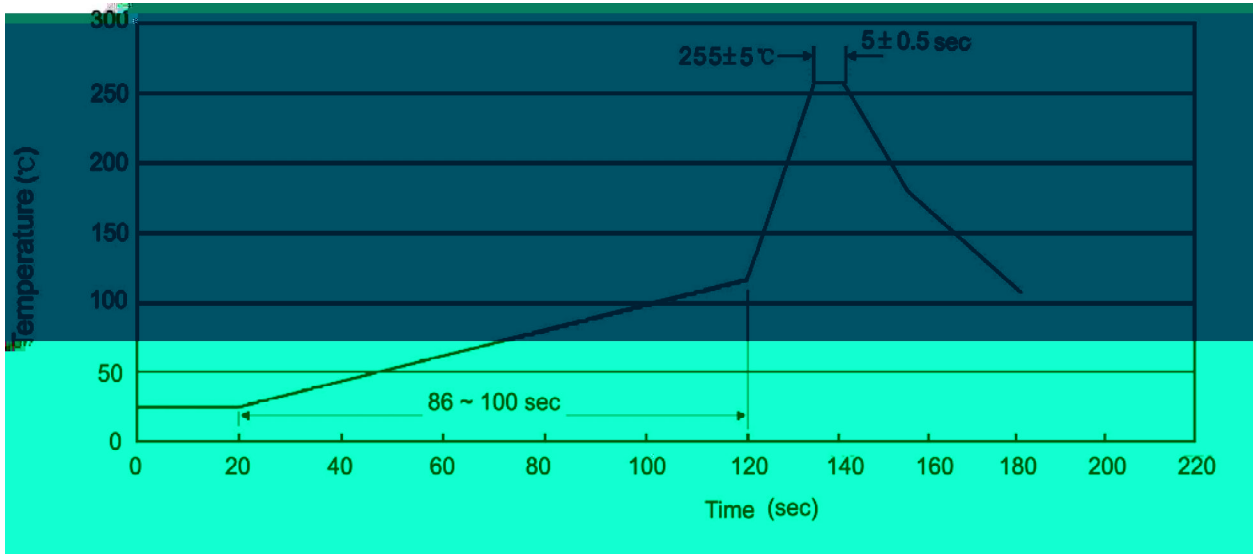
BR: Company Code.

C3227: Product Type.

O: h_{FE} Classifications Symbol

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm3) | | |
|----------------------|------------------|-----------------------|------------------------|------------------------------|------------------------|----------------------------|-------------|-------------|
| | Units/Bag 只/袋 | Bags/Inner Box 袋/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Bag 袋 | Inner Box 盒 | Outer Box 箱 |
| TO-92LM | 1,000 | 8 | 8,000 | 5 | 40,000 | 135×190 | 237×172×102 | 560×245×195 |

/ AMMO

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm3) | |
|----------------------|--------------------|------------------------|-------------------------|------------------------------|------------------------|----------------------------|----------------------------------|
| | Units/tape 只/纸带 | Tape/Inner Box 纸带/盒 | Rows/Inner Box 纸带层/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Inner Box 盒 | Outer Box 箱 |
| TO-92LM | 2,500 | 1 | 100 | 10 | 25,000 | 328×230×42 | 小箱 480×346×235 大箱 547×407×268 |

/ Notices