

## / Descriptions

Silicon PNP transistor in a TO-92 Plastic Package.

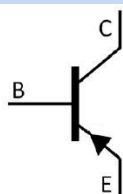
## / Features

Complementary pair with KSD471A.

## / Applications

Audio frequency power amplifier.

## / Equivalent Circuit



## / Pinning



PIN1 Collector      PIN 2 Base      PIN 3 Emitter

## / hFE Classifications & Marking

| h <sub>FE</sub> Classifications<br>Symbol | O      | Y       | G       |
|-------------------------------------------|--------|---------|---------|
| h <sub>FE</sub> Range                     | 70~140 | 120~240 | 200~400 |

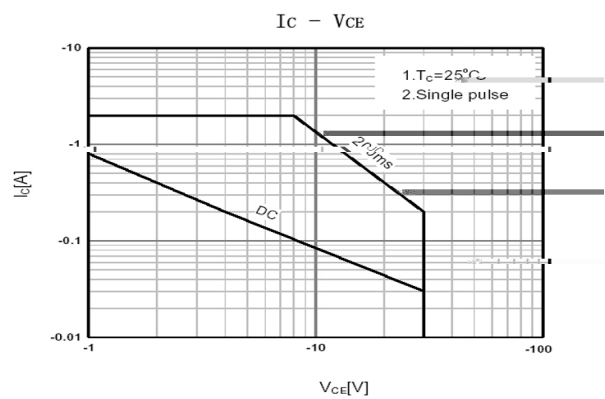
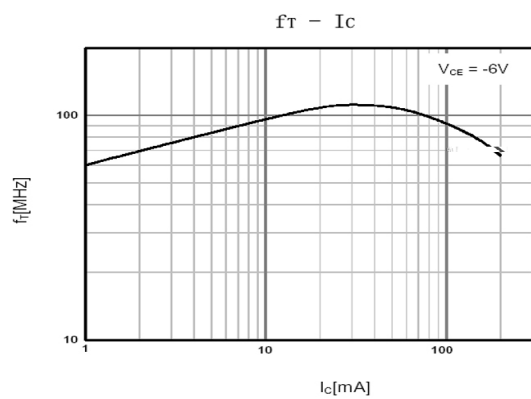
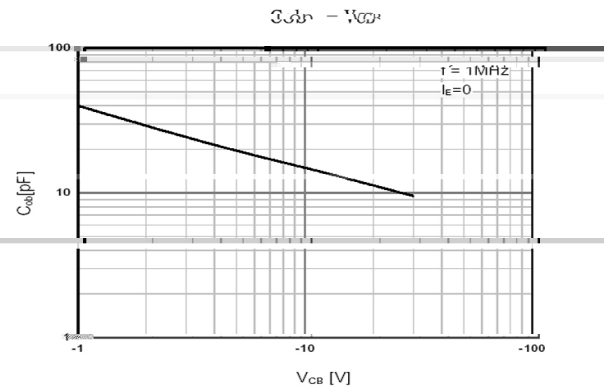
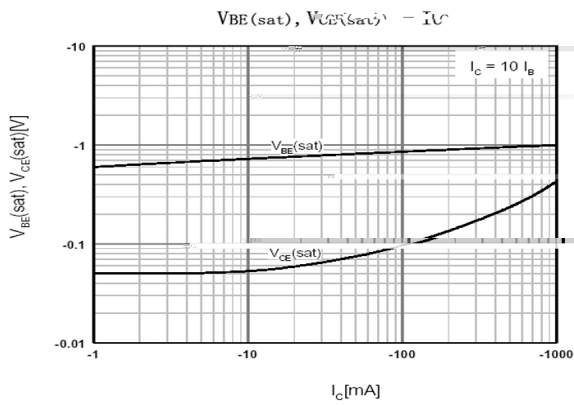
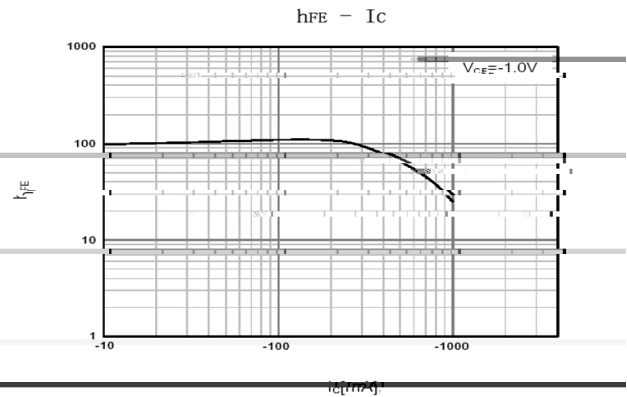
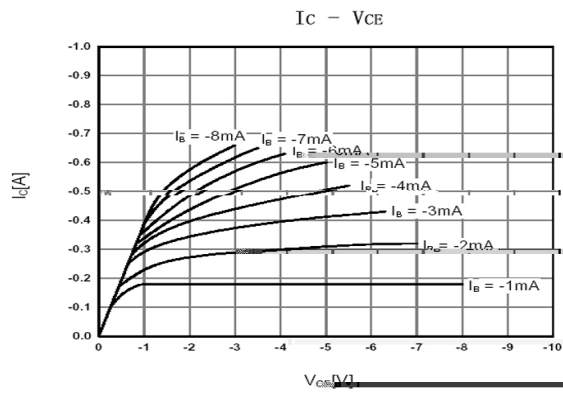
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                      | Symbol    | Rating  | Unit |
|--------------------------------|-----------|---------|------|
| Collector to Base Voltage      | $V_{CBO}$ | -30     | V    |
| Collector to Emitter Voltage   | $V_{CEO}$ | -25     | V    |
| Emitter to Base Voltage        | $V_{EBO}$ | -5.0    | V    |
| Collector Current - Continuous | $I_C$     | -1.0    | A    |
| Collector Power Dissipation    | $P_C$     | 800     | mW   |
| Junction Temperature           | $T_J$     | 150     |      |
| Storage Temperature Range      | $T_{stg}$ | -55~150 |      |

**/ Electrical Characteristics(Ta=25 )**

| Parameter                               | Symbol        | Test Conditions                      | Min  | Typ | Max  | Unit    |
|-----------------------------------------|---------------|--------------------------------------|------|-----|------|---------|
| Collector to Base Breakdown Voltage     | $V_{CBO}$     | $I_C=-100\mu A$ $I_E=0$              | -30  |     |      | V       |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=-10mA$ $I_B=0$                  | -25  |     |      | V       |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$     | $I_E=-100\mu A$ $I_C=0$              | -5.0 |     |      | V       |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=-30V$ $I_E=0$                |      |     | -0.1 | $\mu A$ |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=-1.0V$ $I_C=-100mA$          | 70   |     | 400  |         |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-1.0A$ $I_B=-0.1A$              |      |     | -0.5 | V       |
| Base to Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=-1.0A$ $I_B=-0.1A$              |      |     | -1.2 | V       |
| Transition Frequency                    | $f_T$         | $V_{CE}=-6.0V$ $I_C=-10mA$           |      | 110 |      | MHz     |
| Collector Output Capacitance            | $C_{ob}$      | $V_{CB}=-6.0V$ $I_E=0$<br>$f=1.0MHz$ |      | 18  |      | pF      |

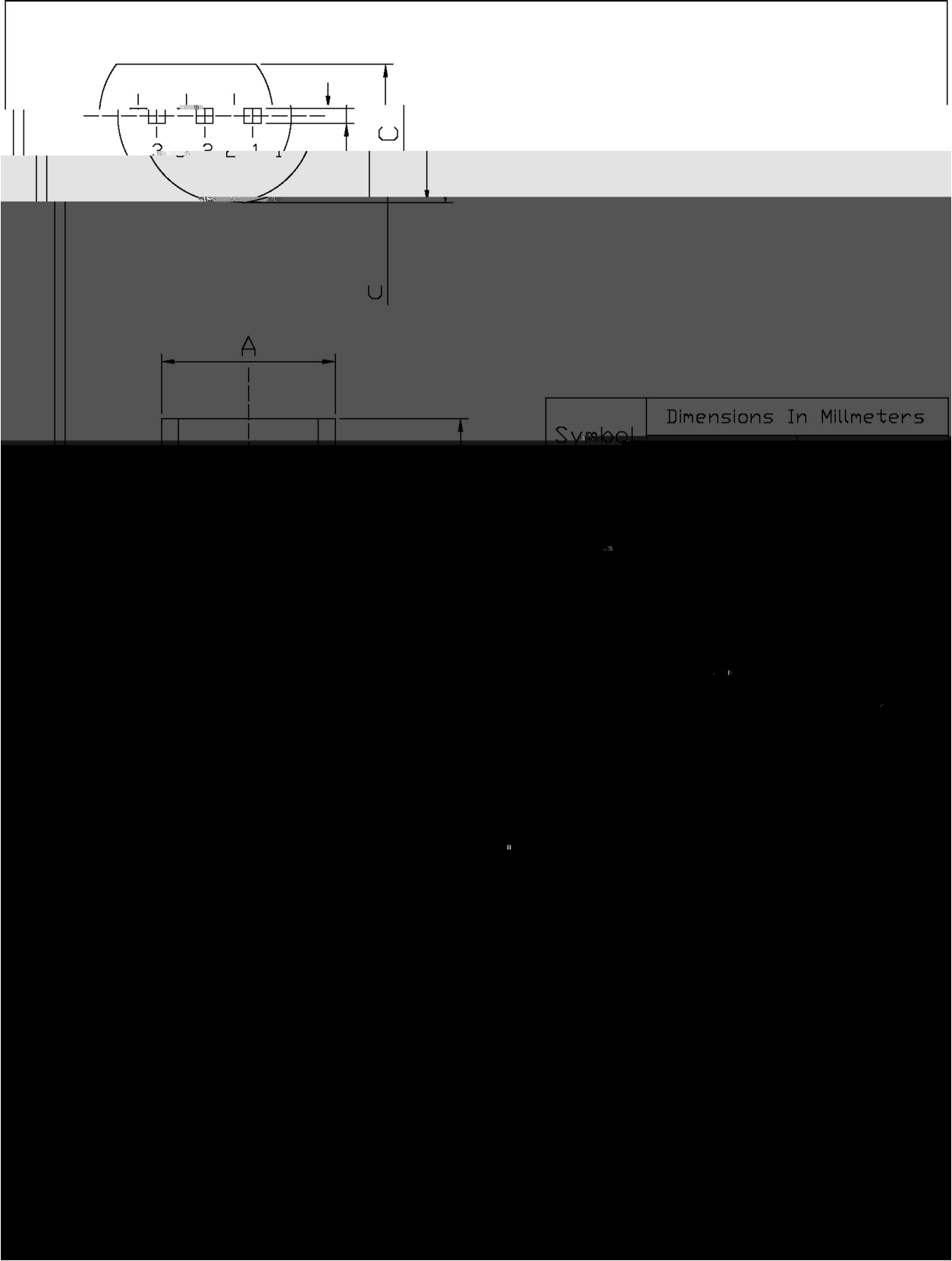
/ **Electrical Characteristic Curve**



/ Package Dimensions

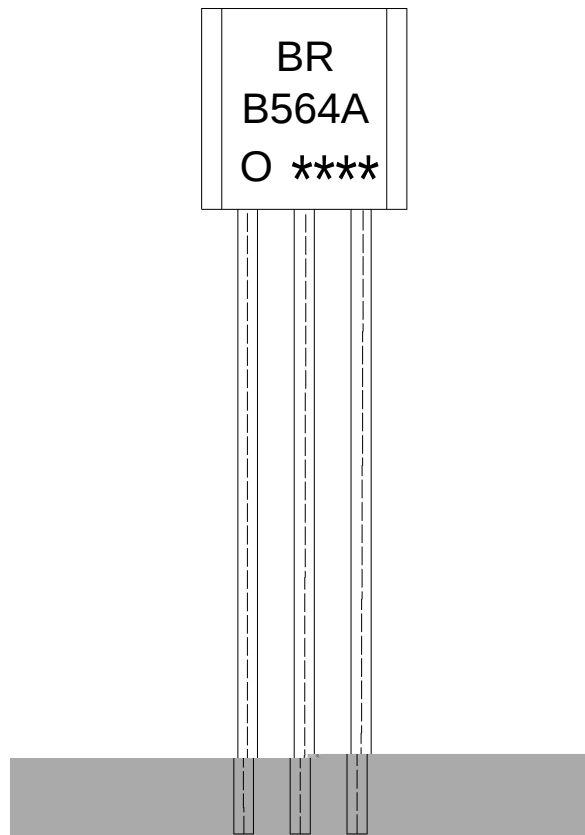
TO-92

Unit: mm



| Symbol | Dimensions In Millimeters |
|--------|---------------------------|
|--------|---------------------------|

/ Marking Instructions



Note:

BR: Company Code.

B564A: 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 | Units          |                     |                      |                            |                      | Dimension (unit mm3) |             |             |
|--------------|----------------|---------------------|----------------------|----------------------------|----------------------|----------------------|-------------|-------------|
|              | Units/Bag<br>/ | Bags/Inner Box<br>/ | Units/Inner Box<br>/ | Inner Boxes/Outer Box<br>/ | Units/Outer Box<br>/ | Bag                  | Inner Box   | Outer Box   |
| TO-92        | 1,000          | 10                  | 10,000               | 5                          | 50,000               | 135×190              | 237×172×102 | 560×245×195 |
|              | 1,000          | 10                  | 10,000               | 10                         | 100,000              | 135×190              | 237×172×102 | 560×245×375 |

/ AMMO

| Package Type | Units           |                     |                | Dimension (unit mm3) |
|--------------|-----------------|---------------------|----------------|----------------------|
|              | Units/tape<br>/ | Tape/Inner Box<br>/ | Rows/Inner Box |                      |