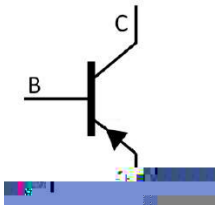
## / Descriptions

TO-92 PNP Silicon PNP transistor in a TO-92 Plastic Package.

$h_{FE}$

High $h_{FE}$.

General amplifier application.






PIN1 Base PIN 2 Collector PIN 3 Emitter

## / hFE Classifications & Marking

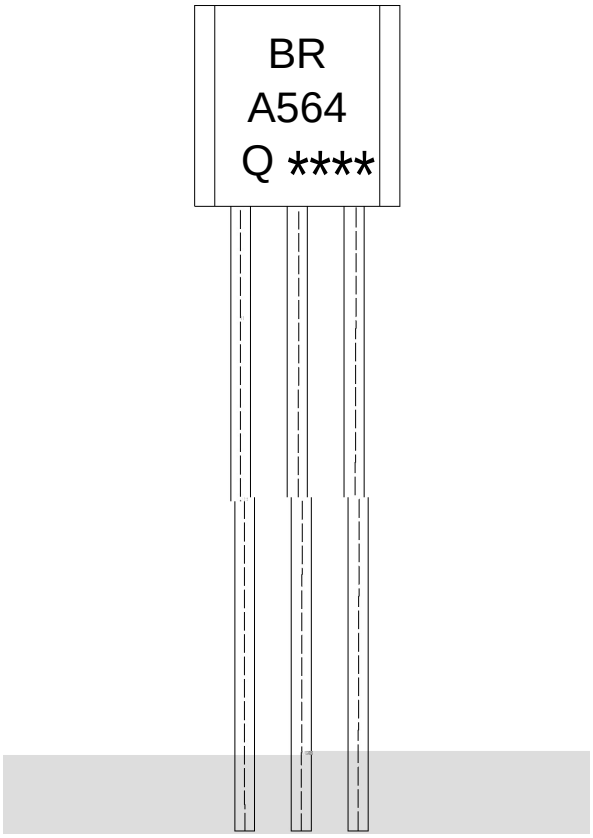
## / Absolute Maximum Ratings(Ta=25 )

| Parameter | Symbol | | Rating | Unit |
|---|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 2SA564 | -25 | V |
| | | 2SA564A | -45 | |
| Collector to Emitter Voltage | $V_{CEO}$ | 2SA564 | -25 | V |
| | | 2SA564A | -45 | |
| Emitter to Base Voltage | $V_{EBO}$ | | -7.0 | V |
| Collector Current - Continuous | $I_C$ | | -100 | mA |
| Collector Current – Continuous(Pulse) | $I_{CP}$ | | -200 | mA |
| Collector Power Dissipation | $P_C$ | | 400 | 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 Cut-Off Current | $I_{CBO}$ | | $V_{CB}$=-10V $I_E$=0 | | -0.001 | -1.0 | A |
| Collector Cut-Off Current | $I_{CEO}$ | | $V_{CE}$=-10V $I_B$=0 | | | -10 | A |
| Collector to Base Breakdown Voltage | $V_{CBO}$ | 2SA564 | $I_C$=-10uA $I_E$=0 | -25 | | | V |
| | | 2SA564A | | -45 | | | |
| Collector to Emitter Breakdown Voltage | $V_{CEO}$ | 2SA564 | $I_C$=-10uA $I_E$=0 | -25 | | | V |
| | | 2SA564A | | -45 | | | |
| Emitter to Base Breakdown Voltage | $V_{EBO}$ | | $I_E$=-10 A $I_C$=0 | -5.0 | | | V |
| DC Current Gain | $h_{FE}$ | | $V_{CE}$=-10V $I_C$=-2.0mA | 130 | 250 | 520 | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | | $I_C$=-100mA $I_B$=-10mA | | -0.3 | | V |
| Output capacitance | $C_{ob}$ | | $V_{CB}$=-10V $I_E$=0 f=1.0MHz | | 3.5 | | pF |

## / Marking Instructions




BR:

A564

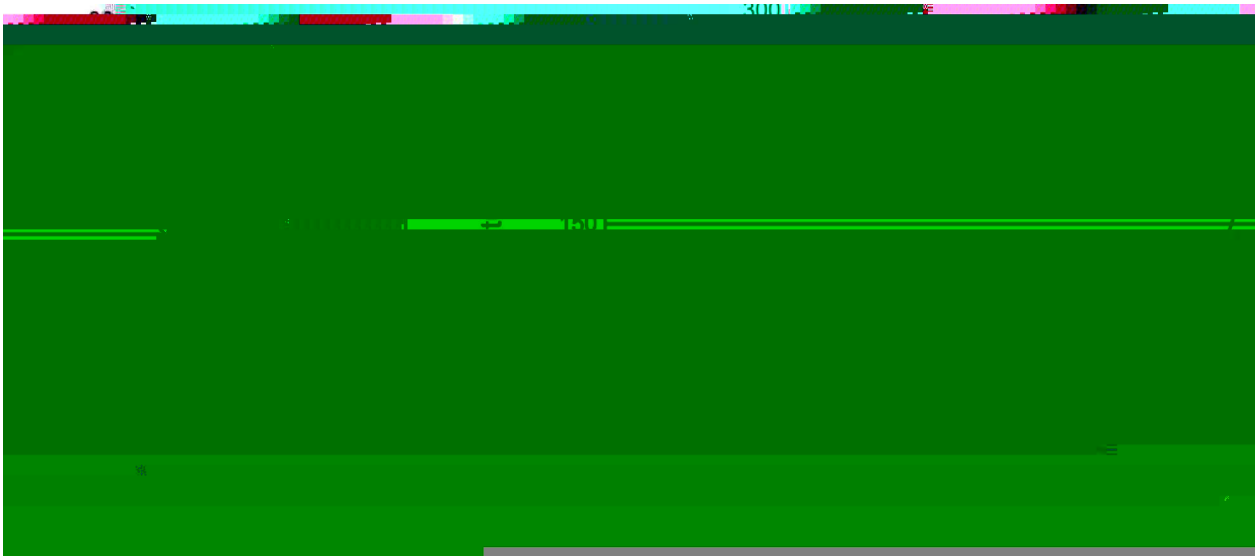
Q: $h_{FE}$

****

Note:

| | |
|---|---|
| BR: | Company Code. |
| A564: | Product Type. |
| Q: | $h_{FE}$ 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 / | Bags/Inner Box / | Units/Inner Box / | Inner Boxes/Outer Box / | Units/Outer Box / | 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 / | Tape/Inner Box / | Rows/Inner Box / | Inner Boxes/Outer Box / | Units/Outer Box / | Inner Box | Outer Box |
| TO-92 | 3,000 | 1 | 120 | 10 | 30,000 | 328×230×42 | 480×346×235<br>547×407×268 |

## / Notices