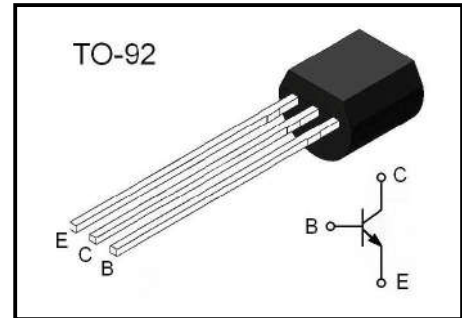


NPN Plastic-Encapsulate Transistors

Audio Frequency Amplifier & High Frequency OSC.

- ◆Complement to 2SA733
- ◆Collector-Base Voltage : $V_{CBO}=60V$
- ◆High Current Gain Bandwidth Product : $f = 300MHz$ (TYP)



Absolute Maximum Rating (Ta=25°C)

| Parameter | Symbol | Value | Unit |
|-----------------------------|------------|----------|------|
| Collector-Base Voltage | BV_{CBO} | 60 | V |
| Collector-Emitter Voltage | BV_{CEO} | 50 | V |
| Emitter-Base Voltage | BV_{EBO} | 5 | V |
| Collector Current | I_C | 150 | mA |
| Collector Power Dissipation | P_C | 250 | mW |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{stg} | -55~+150 | °C |

Electrical Characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | Value | | | Unit |
|--------------------------------------|-------------|---------------------------|-------|-----|-----|---------|
| | | | Min | Typ | Max | |
| Collector-base breakdown voltage | BV_{CBO} | $I_C = 100\mu A, I_E = 0$ | 60 | | | V |
| Collector-emitter breakdown voltage | BV_{CEO} | $I_C = 1mA, I_B = 0$ | 50 | | | V |
| Emitter-base breakdown voltage | BV_{EBO} | $I_E = 100\mu A, I_C = 0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = 40V, I_E = 0$ | | | 0.1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CE} = 40V, I_B = 0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 5V, I_C = 0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE} = 6V, I_B = 1mA$ | 90 | | 600 | |
| Collector-emitter saturation voltage | V_{CESAT} | $I_C = 100mA, I_B = 10mA$ | | | 0.3 | V |
| base -emitter saturation voltage | V_{BESAT} | $I_C = 100mA, I_B = 10mA$ | | | 1.0 | V |
| Transition frequency | f_T | $V_{CE} = 6V, I_B = 10mA$ | | 300 | | MHz |

hFE Classification

| Classification | R | Q | P | K |
|----------------|--------|---------|---------|---------|
| hFE | 90-180 | 135-270 | 200-400 | 300-600 |

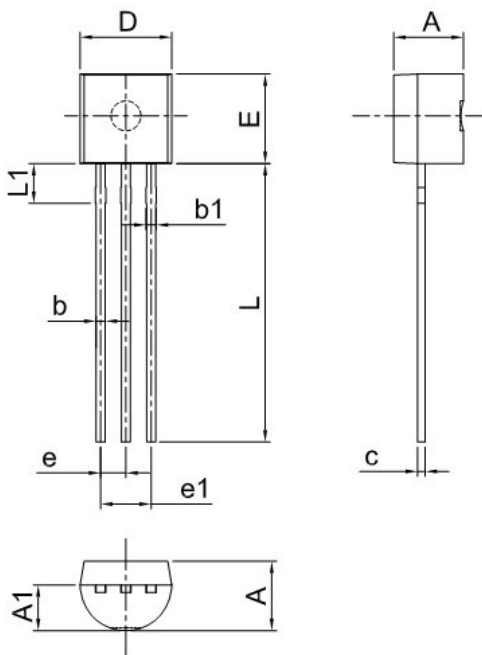
Ordering information

| Package | Packing Description | Base Quantity |
|---------|---------------------|---------------|
| TO-92 | Bulk | 1000pcs/Bag |
| | Tape | 2000pcs/Box |

Package Dimensions

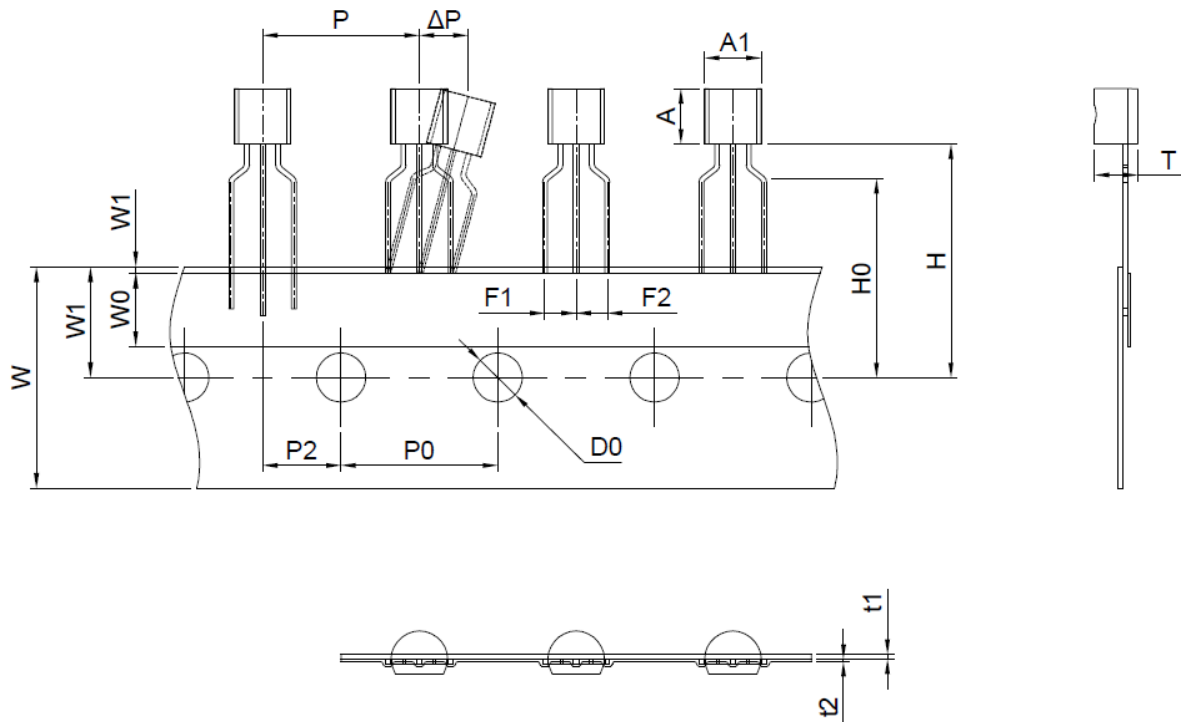
TO-92

| Dim | Millimeter | | Inches | |
|-----|------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 3.30 | 3.70 | 0.130 | 0.146 |
| A1 | 2.30 | 2.70 | 0.091 | 0.106 |
| b | 0.40 | 0.50 | 0.016 | 0.020 |
| b1 | 0.50 | 0.70 | 0.020 | 0.028 |
| c | 0.35 | 0.45 | 0.014 | 0.018 |
| D | 4.45 | 4.70 | 0.175 | 0.185 |
| E | 4.40 | 4.65 | 0.173 | 0.183 |
| e | 1.17 | 1.37 | 0.046 | 0.054 |
| e1 | 2.34 | 2.64 | 0.092 | 0.104 |
| L | 13.50 | 14.50 | 0.531 | 0.571 |
| L1 | 1.80 | 2.20 | 0.071 | 0.087 |

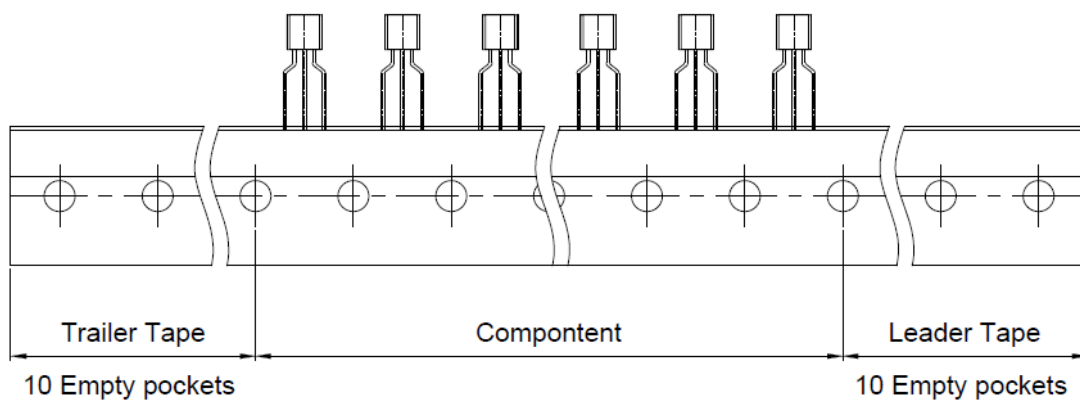


Taping Dimensions

TO-92



| Dimensions are in millimeter | | | | | | | | |
|------------------------------|-----|--------|------|------|------|------|------|------------|
| A | A1 | T | P | P0 | P2 | F1 | F2 | W |
| 4.6 | 4.6 | 3.5 | 12.7 | 12.7 | 6.35 | 2.54 | 2.54 | 18.0 |
| W0 | W1 | W2 | H | H0 | D0 | t1 | T2 | ΔP |
| 6.0 | 9.0 | 1.0Max | 19.0 | 18.0 | 4.0 | 0.4 | 0.2 | 0 |



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