

## TO-92 Plastic-Encapsulate Transistors

### 2N6727 TRANSISTOR (PNP)

#### FEATURES

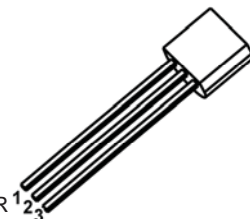
- General Purpose Switching Application

#### TO – 92

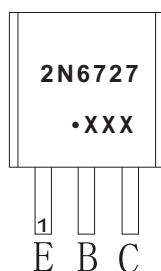
1. EMITTER

2. BASE

3. COLLECTOR



#### MARKING

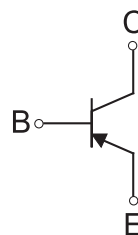


2N6727=Device code

Solid dot=Green molding compound device,  
if none, the normal device

XXX=Code

#### Equivalent Circuit



#### ORDERING INFORMATION

| Part Number | Package | Packing Method | Pack Quantity |
|-------------|---------|----------------|---------------|
| 2N6727      | TO-92   | Bulk           | 1000pcs/Bag   |
| 2N6727-TA   | TO-92   | Tape           | 2000pcs/Box   |

#### MAXIMUM RATINGS (T<sub>a</sub> =25 °C unless otherwise noted)

| Symbol           | Parameter                                   | Value    | Unit  |
|------------------|---------------------------------------------|----------|-------|
| V <sub>CBO</sub> | Collector-Base Voltage                      | -50      | V     |
| V <sub>CEO</sub> | Collector-Emitter Voltage                   | -40      | V     |
| V <sub>EBO</sub> | Emitter-Base Voltage                        | -5       | V     |
| I <sub>C</sub>   | Collector Current                           | -1.5     | A     |
| P <sub>C</sub>   | Collector Power Dissipation                 | 1        | W     |
| R <sub>θJA</sub> | Thermal Resistance From Junction To Ambient | 125      | °C /W |
| T <sub>J</sub>   | Junction Temperature                        | 150      | °C    |
| T <sub>stg</sub> | Storage Temperature                         | -55~+150 | °C    |

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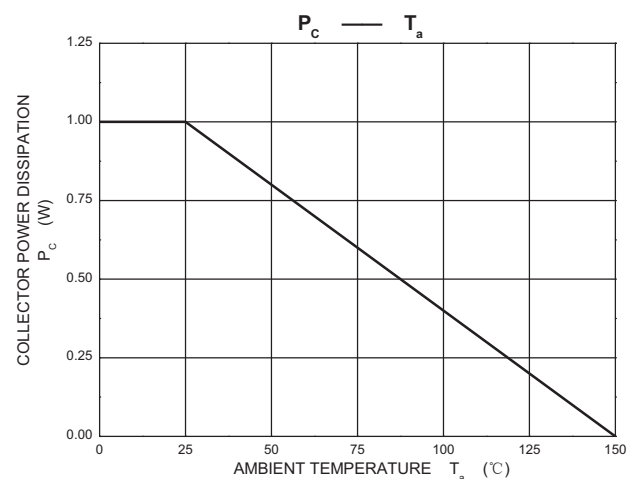
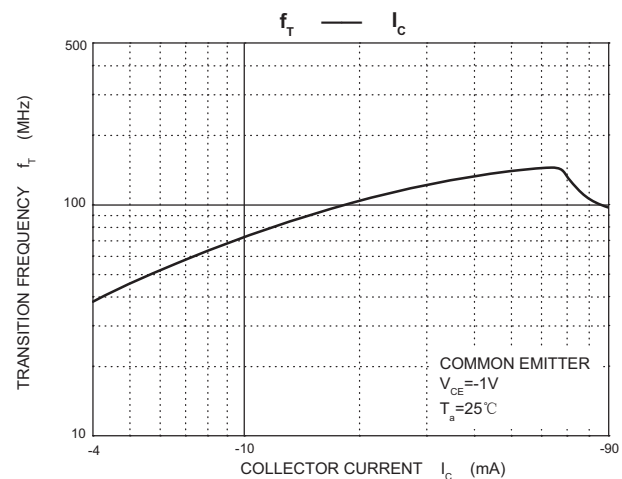
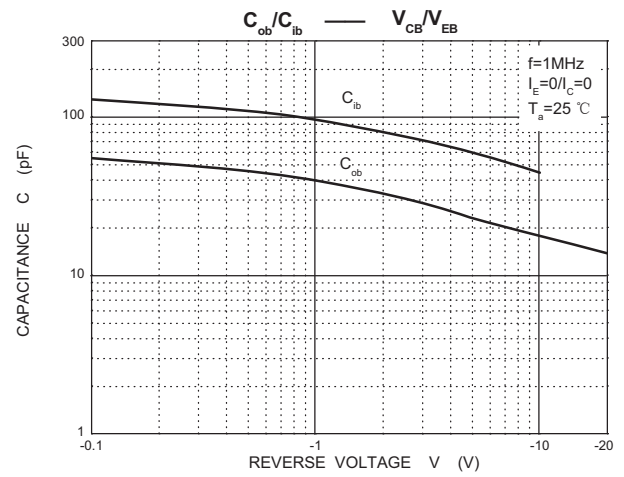
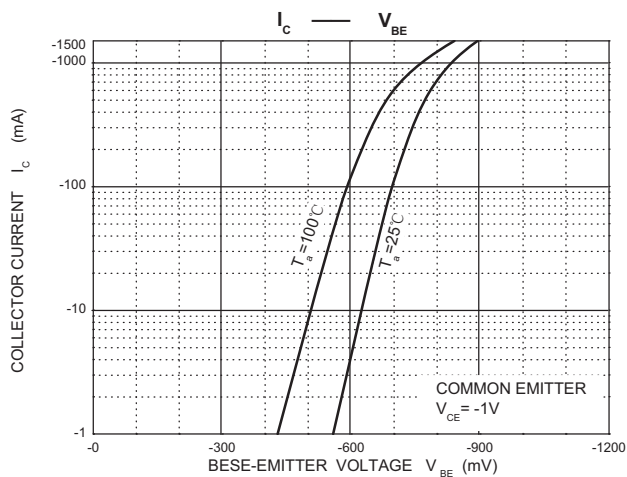
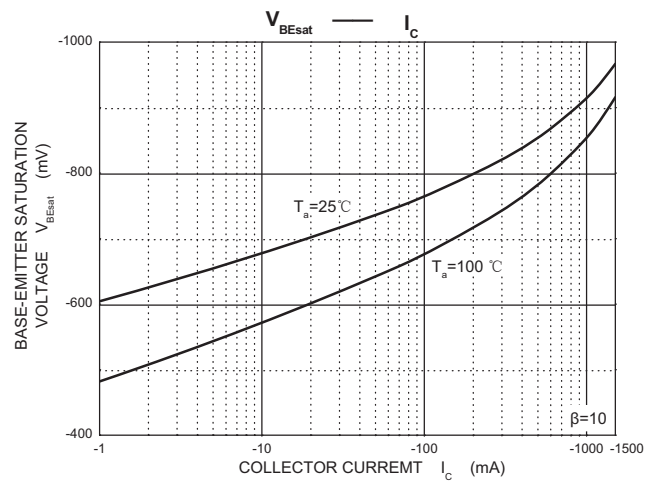
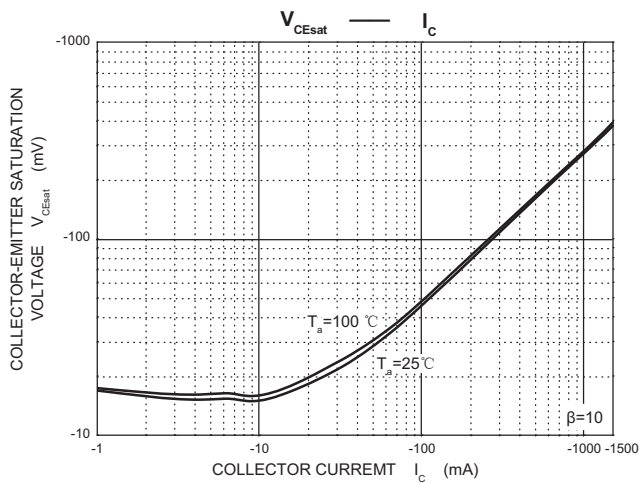
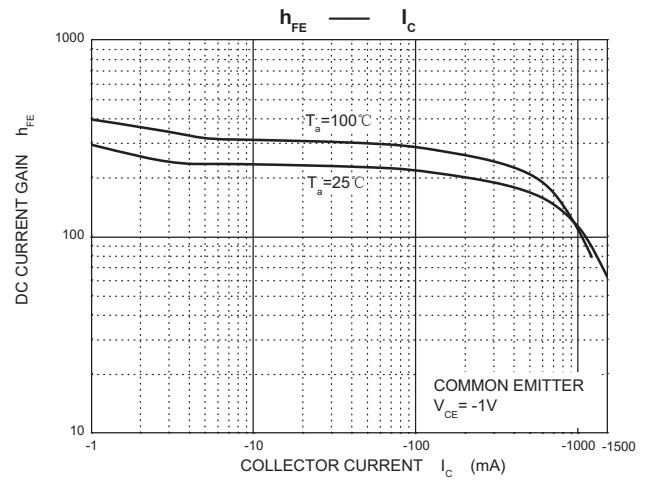
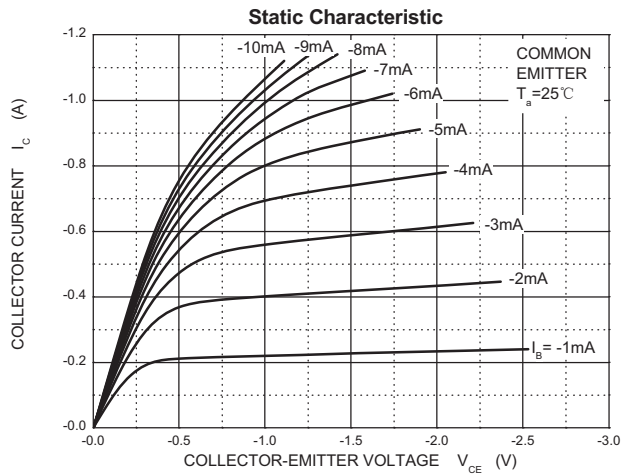
## ELECTRICAL CHARACTERISTICS

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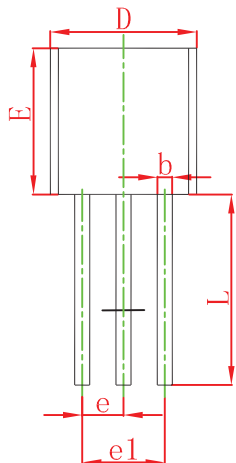
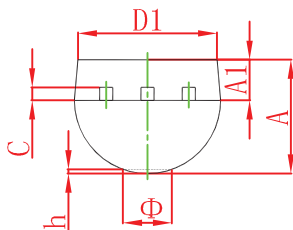
$T_a=25^{\circ}\text{C}$  unless otherwise specified

| Parameter                            | Symbol        | Test conditions                                  | Min | Typ | Max  | Unit          |
|--------------------------------------|---------------|--------------------------------------------------|-----|-----|------|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -1\text{mA}, I_E = 0$                     | -50 |     |      | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -10\text{mA}, I_B = 0$                    | -40 |     |      | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -1\text{mA}, I_C = 0$                     | -5  |     |      | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -50\text{V}, I_E = 0$                  |     |     | -0.1 | $\mu\text{A}$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = -40\text{V}, I_E = 0$                  |     |     | -1   | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5\text{V}, I_C = 0$                   |     |     | -0.1 | $\mu\text{A}$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = -1\text{V}, I_C = -1\text{A}$          | 50  |     | 250  |               |
|                                      | $h_{FE(2)}$   | $V_{CE} = -1\text{V}, I_C = -10\text{mA}$        | 55  |     |      |               |
|                                      | $h_{FE(3)}$   | $V_{CE} = -1\text{V}, I_C = -100\text{mA}$       | 60  |     |      |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -1\text{A}, I_B = -100\text{mA}$          |     |     | -0.5 | V             |
| Base-emitter voltage                 | $V_{BE}$      | $V_{CE} = -1\text{V}, I_C = -1\text{A}$          |     |     | -1.2 | V             |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$ |     |     | 30   | pF            |

# Typical Characteristics

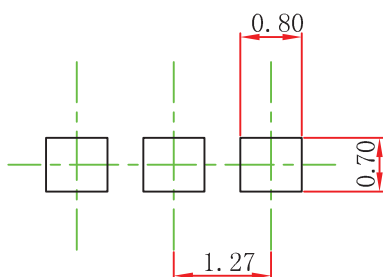


## TO-92 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |        | Dimensions In Inches |       |
|--------|---------------------------|--------|----------------------|-------|
|        | Min                       | Max    | Min                  | Max   |
| A      | 3.300                     | 3.700  | 0.130                | 0.146 |
| A1     | 1.100                     | 1.400  | 0.043                | 0.055 |
| b      | 0.380                     | 0.550  | 0.015                | 0.022 |
| c      | 0.360                     | 0.510  | 0.014                | 0.020 |
| D      | 4.300                     | 4.700  | 0.169                | 0.185 |
| D1     | 3.430                     |        | 0.135                |       |
| E      | 4.300                     | 4.700  | 0.169                | 0.185 |
| e      | 1.270 TYP                 |        | 0.050 TYP            |       |
| e1     | 2.440                     | 2.640  | 0.096                | 0.104 |
| L      | 14.100                    | 14.500 | 0.555                | 0.571 |
| Φ      |                           | 1.600  |                      | 0.063 |
| h      | 0.000                     | 0.380  | 0.000                | 0.015 |

## TO-92 Suggested Pad Layout



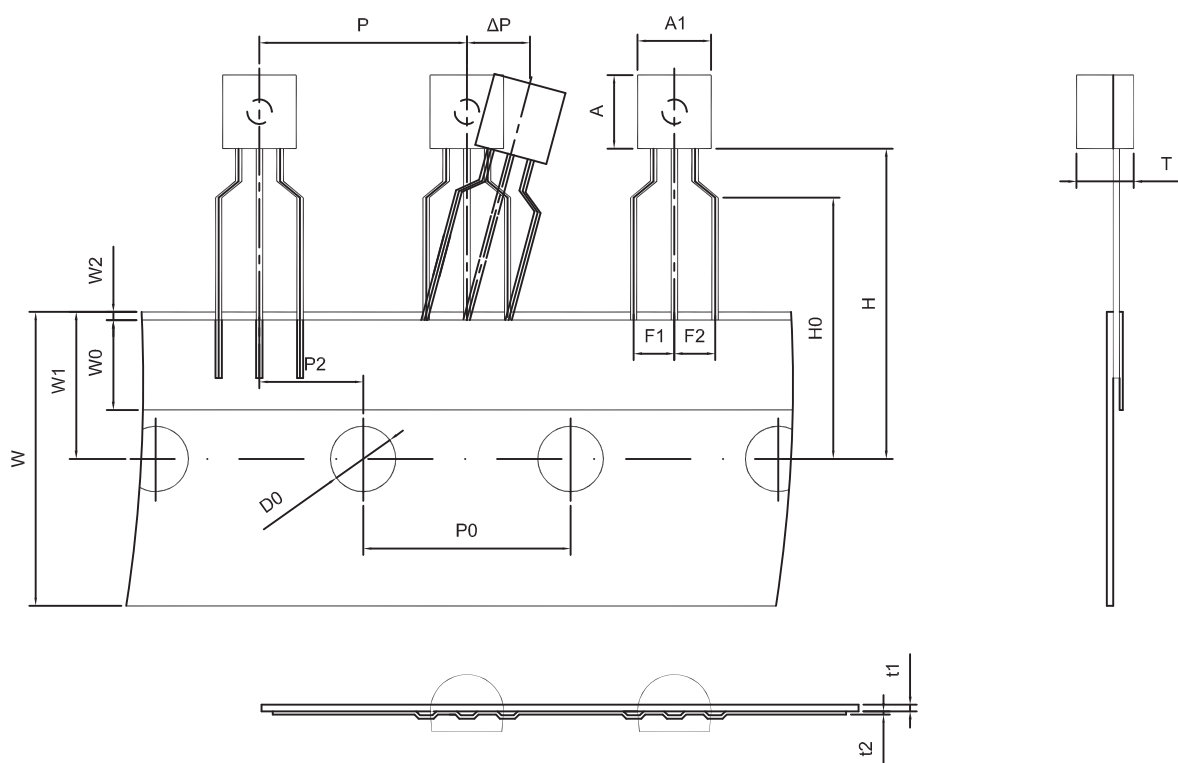
### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

### NOTICE

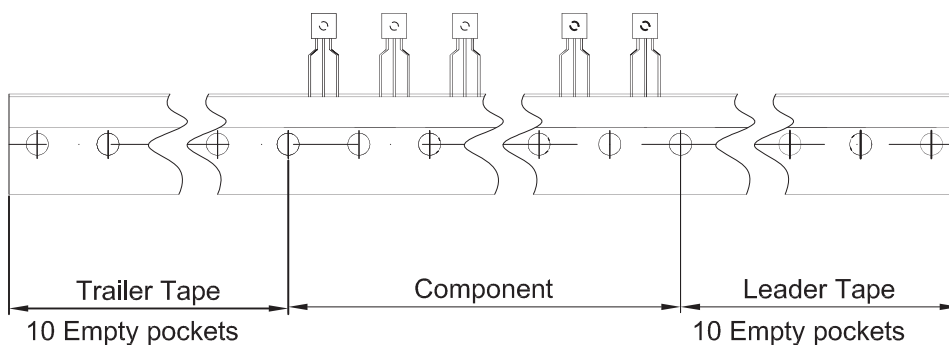
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# TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter

| A1  | A   | T        | P    | P0   | P2   | F1  | F2  | W    |
|-----|-----|----------|------|------|------|-----|-----|------|
| 4.5 | 4.5 | 3.5      | 12.7 | 12.7 | 6.35 | 2.5 | 2.5 | 18.0 |
| W0  | W1  | W2       | H    | H0   | D0   | t1  | t2  | ΔP   |
| 6.0 | 9.0 | 1.0 MAX. | 19.0 | 16.0 | 4.0  | 0.4 | 0.2 | 0    |



| Package | Box      | Box Size(mm) | Carton     | Carton Size(mm) |
|---------|----------|--------------|------------|-----------------|
| TO-92   | 2000 pcs | 333×162×43   | 20,000 pcs | 350×340×250     |