

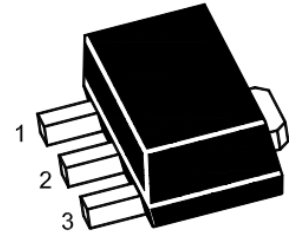


### PXT2222A TRANSISTOR (NPN)

#### FEATURES

- Epitaxial planar die construction
- Complementary PNP Type available(PXT2907A)

MARKING : 1P



1.Base 2.Collector 3.Emitter

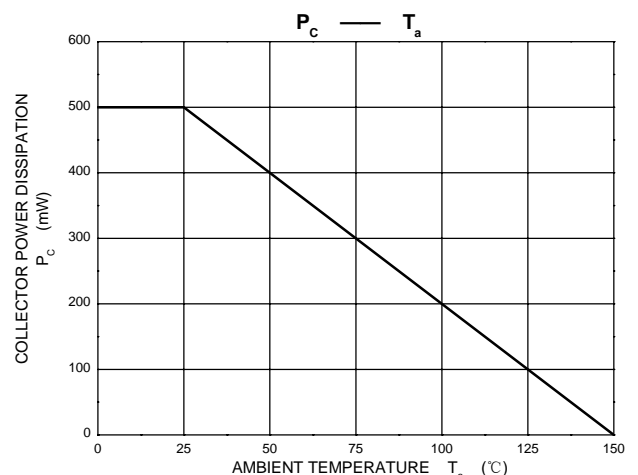
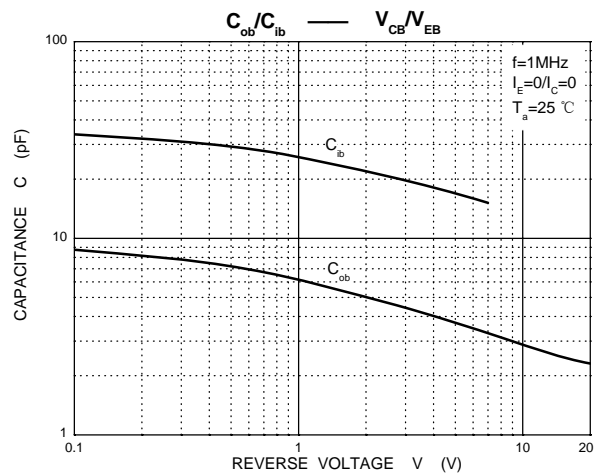
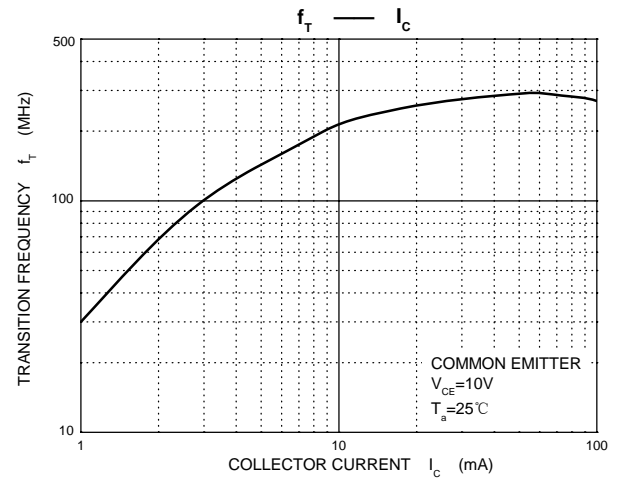
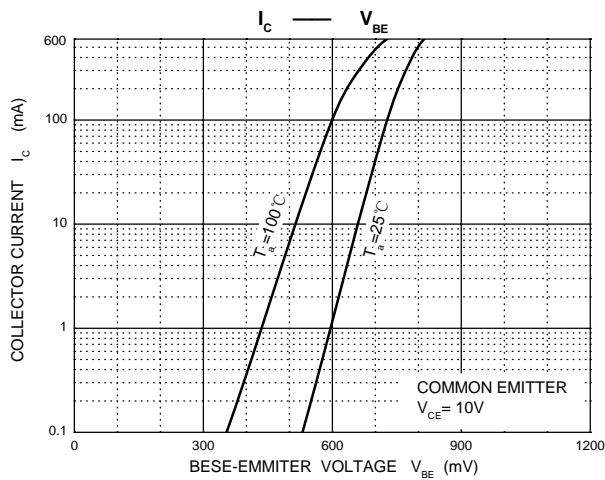
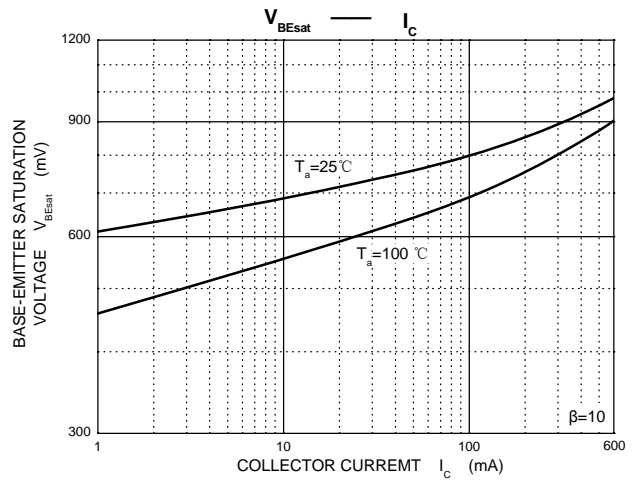
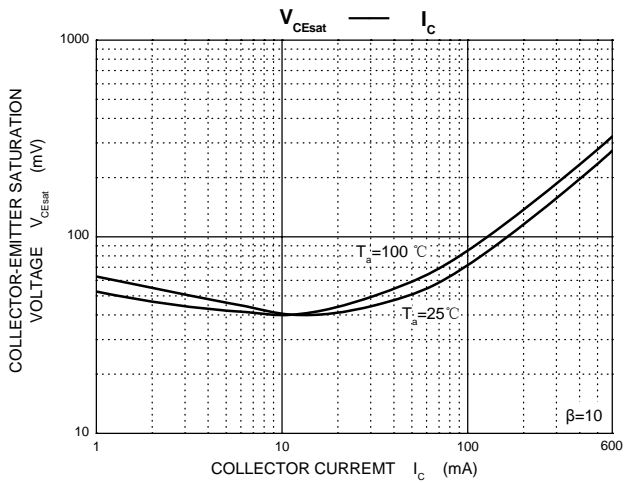
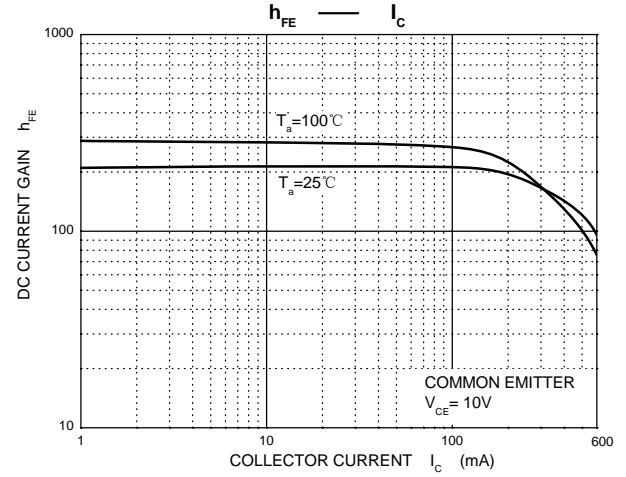
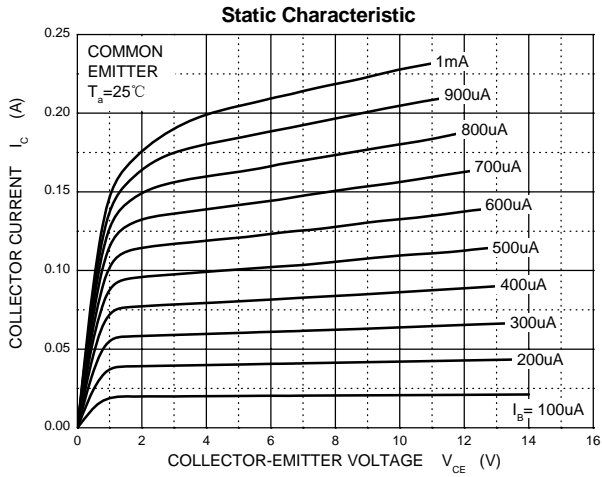
SOT-89-3L

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

| Symbol                            | Parameter  | Value    | Unit |
|-----------------------------------|--|----------|------|
| V <sub>CB0</sub>                  | Collector-Base Voltage                           | 75       | V    |
| V <sub>CEO</sub>                  | Collector-Emitter Voltage                        | 40       | V    |
| V <sub>EBO</sub>                  | Emitter-Base Voltage                             | 6        | V    |
| I <sub>C</sub>                    | Collector Current -Continuous                    | 600      | mA   |
| P <sub>C</sub>                    | Collector Power Dissipation                      | 0.5      | W    |
| T <sub>J</sub> , T <sub>stg</sub> | Operation Junction and Storage Temperature Range | -55 ~150 | °C   |

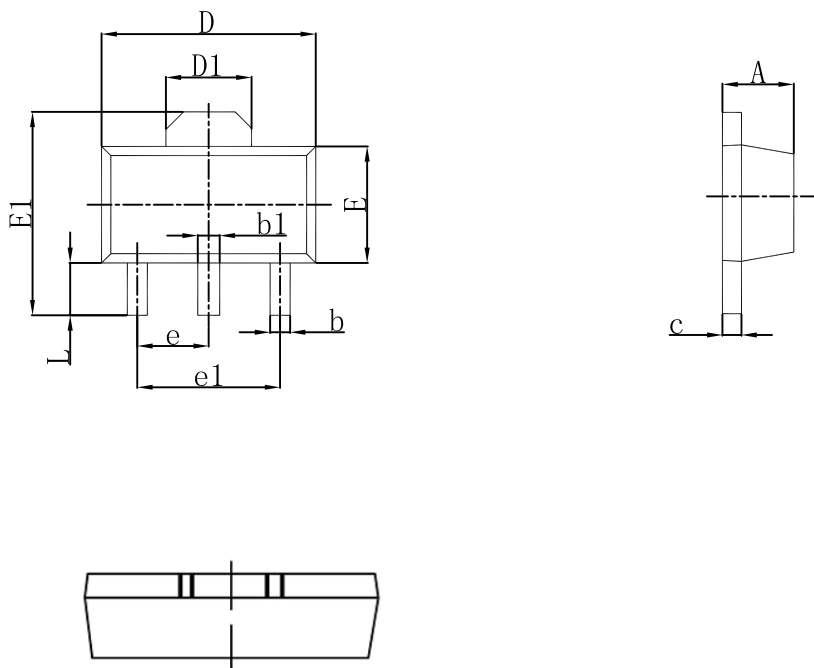
#### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

| Parameter                            | Symbol               | Test conditions  | Min | Max  | Unit |
|--------------------------------------|----------------------|--|-----|------|------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub> | I <sub>C</sub> = 10μ A, I <sub>E</sub> =0              | 75  |      | V    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> = 10mA, I <sub>B</sub> =0               | 40  |      | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> =10μA, I <sub>C</sub> =0                | 6   |      | V    |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> =60V, I <sub>E</sub> =0                |     | 0.01 | μA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> = 5V, I <sub>C</sub> =0                |     | 0.01 | μA   |
| DC current gain                      | h <sub>FE(1)</sub>   | V <sub>CE</sub> =10V, I <sub>C</sub> = 0.1mA           | 35  |      |      |
|                                      | h <sub>FE(2)</sub>   | V <sub>CE</sub> =10V, I <sub>C</sub> = 1mA             | 50  |      |      |
|                                      | h <sub>FE(3)</sub>   | V <sub>CE</sub> =10V, I <sub>C</sub> = 10mA            | 75  |      |      |
|                                      | h <sub>FE(4)</sub>   | V <sub>CE</sub> =10V, I <sub>C</sub> = 150mA           | 100 | 300  |      |
|                                      | h <sub>FE(5)</sub>   | V <sub>CE</sub> =1V, I <sub>C</sub> = 150mA            | 50  |      |      |
|                                      | h <sub>FE(6)</sub>   | V <sub>CE</sub> =10V, I <sub>C</sub> = 500mA           | 40  |      |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =500mA, I <sub>B</sub> = 50mA           |     | 1    | V    |
|                                      | V <sub>CE(sat)</sub> | I <sub>C</sub> =150mA, I <sub>B</sub> =15mA            |     | 0.3  | V    |
| Base-emitter saturation voltage      | V <sub>BE(sat)</sub> | I <sub>C</sub> =500mA, I <sub>B</sub> =50mA            |     | 2.0  | V    |
|                                      | V <sub>BE(sat)</sub> | I <sub>C</sub> =150mA, I <sub>B</sub> =15mA            | 0.6 | 1.2  | V    |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> =10V, I <sub>C</sub> =20mA<br>f=100MHz | 300 |      | MHz  |
| Output Capacitance                   | C <sub>ob</sub>      | V <sub>CB</sub> =10V, I <sub>E</sub> = 0, f=1MHz       |     | 8    | pF   |
| Delay time                           | t <sub>d</sub>       | V <sub>CC</sub> =30V, I <sub>C</sub> =150mA            |     | 10   | ns   |
| Rise time                            | t <sub>r</sub>       | V <sub>BE(off)</sub> =0.5V, I <sub>B1</sub> =15mA      |     | 25   | ns   |
| Storage time                         | t <sub>s</sub>       | V <sub>CC</sub> =30V, I <sub>C</sub> =150mA            |     | 225  | ns   |
| Fall time                            | t <sub>f</sub>       | I <sub>B1</sub> =- I <sub>B2</sub> = 15mA              |     | 60   | ns   |





### SOT-89-3L Outlines Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 1.400                     | 1.600 | 0.055                | 0.063 |
| b      | 0.320                     | 0.520 | 0.013                | 0.020 |
| b1     | 0.400                     | 0.580 | 0.016                | 0.023 |
| c      | 0.350                     | 0.440 | 0.014                | 0.017 |
| D      | 4.400                     | 4.600 | 0.173                | 0.181 |
| D1     | 1.550 REF.                |       | 0.061 REF.           |       |
| E      | 2.300                     | 2.600 | 0.091                | 0.102 |
| E1     | 3.940                     | 4.250 | 0.155                | 0.167 |
| e      | 1.500 TYP.                |       | 0.060 TYP.           |       |
| e1     | 3.000 TYP.                |       | 0.118 TYP.           |       |
| L      | 0.900                     | 1.200 | 0.035                | 0.047 |