



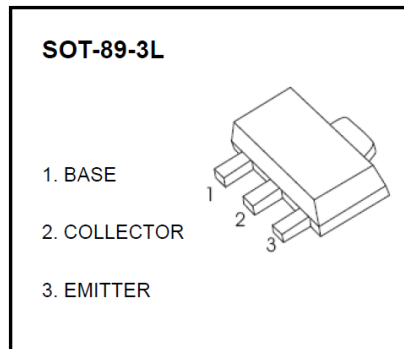
AD-PXT8050* series Plastic-Encapsulated Transistor

AD- PXT8050* series Transistor (NPN)

FEATURES

- Compliment to AD-PXT8550
- AEC-Q101 qualified

MARKING: $\bar{Y}1$



MAXIMUM RATINGS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|-----------------------|-----------|---------------------------|
| Collector-base voltage | V_{CBO} | 40 | V |
| Collector-emitter voltage | V_{CEO} | 25 | V |
| Emitter-base voltage | V_{EBO} | 5 | V |
| Collector current | I_{C} | 1.5 | A |
| Collector power dissipation | P_{C} | 500 | mW |
| Thermal resistance from junction to ambient | $R_{\theta\text{JA}}$ | 250 | $^\circ\text{C}/\text{W}$ |
| Operating junction and storage temperature range | T_j, T_{stg} | -55 ~ 150 | $^\circ\text{C}$ |

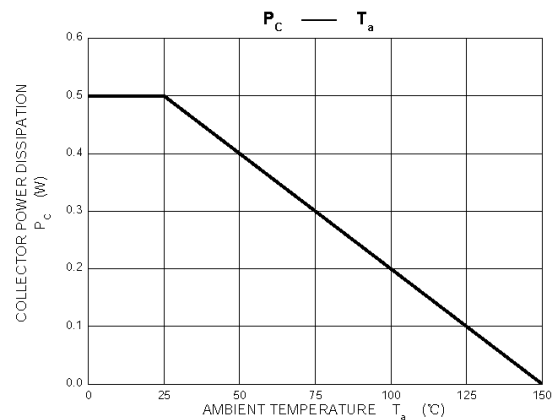
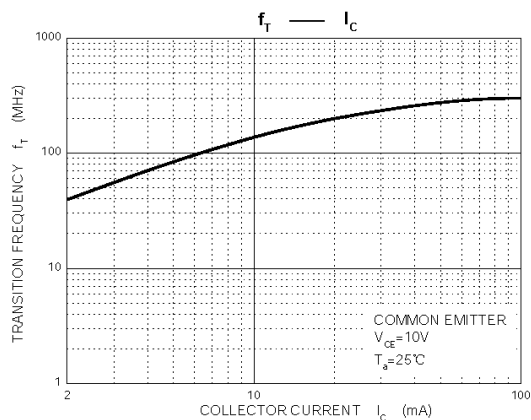
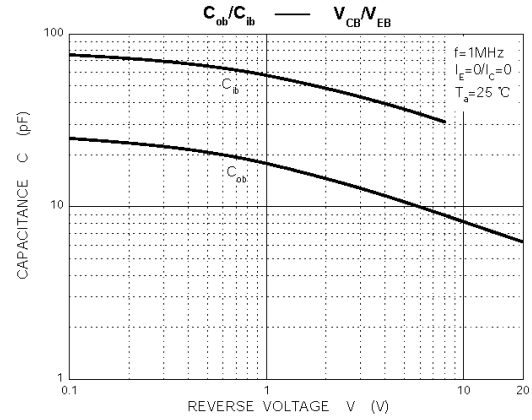
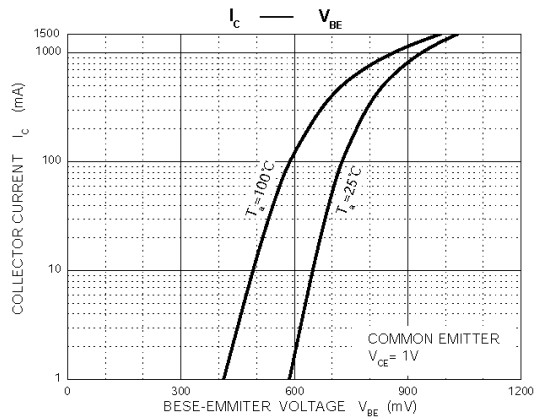
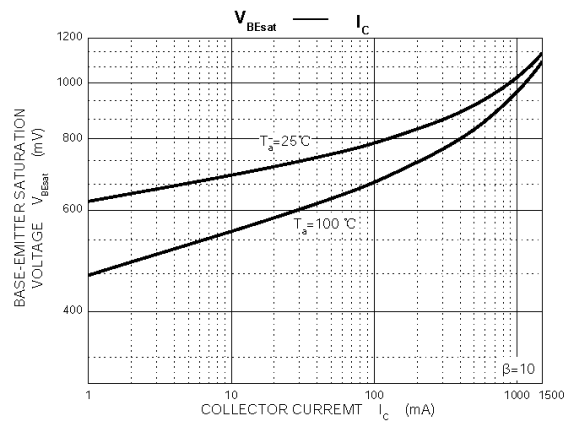
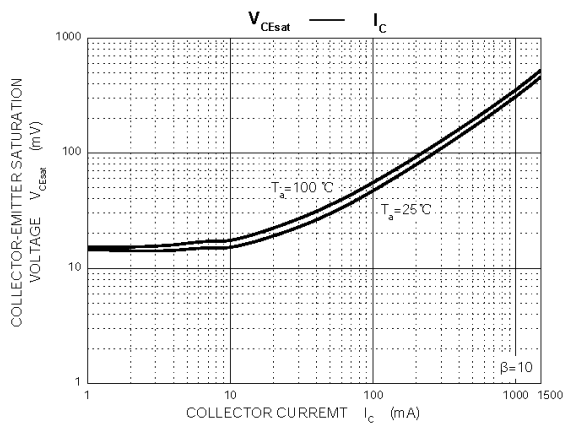
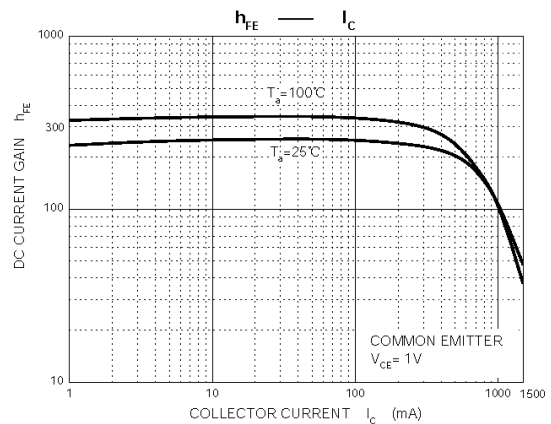
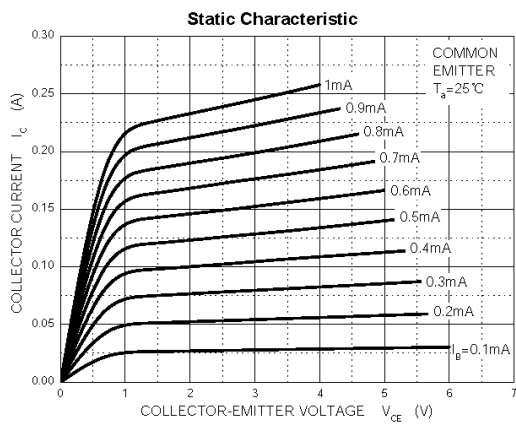
ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test condition | Min | Typ | Max | Unit |
|--------------------------------------|-----------------------------|--|-----|-----|------|---------------|
| Collector-base breakdown voltage | $V_{(\text{BR})\text{CBO}}$ | $I_{\text{C}} = 100\mu\text{A}, I_{\text{E}} = 0\text{A}$ | 40 | - | - | V |
| Collector-emitter breakdown voltage | $V_{(\text{BR})\text{CEO}}$ | $I_{\text{C}} = 0.1\text{mA}, I_{\text{B}} = 0\text{A}$ | 25 | - | - | V |
| Emitter-base breakdown voltage | $V_{(\text{BR})\text{EBO}}$ | $I_{\text{E}} = 100\mu\text{A}, I_{\text{C}} = 0\text{A}$ | 5 | - | - | V |
| Collector-base cut-off current | I_{CBO} | $V_{\text{CE}} = 40\text{V}, I_{\text{E}} = 0\text{A}$ | - | - | 0.1 | μA |
| Emitter-base cut-off current | I_{CEO} | $V_{\text{CE}} = 20\text{V}, I_{\text{B}} = 0\text{A}$ | - | - | 0.1 | μA |
| Collector cut-off current | I_{EBO} | $V_{\text{EB}} = 5\text{V}, I_{\text{C}} = 0$ | - | - | 0.1 | μA |
| DC current gain | $h_{\text{FE}(1)}$ | $V_{\text{CE}} = 1\text{V}, I_{\text{C}} = 100\text{mA}$ | 85 | - | 400 | - |
| | $h_{\text{FE}(2)}$ | $V_{\text{CE}} = 1\text{V}, I_{\text{C}} = 800\text{mA}$ | 40 | - | - | - |
| Collector-emitter saturation voltage | $V_{\text{CE}(\text{sat})}$ | $I_{\text{C}} = 800\text{mA}, I_{\text{B}} = 80\text{mA}$ | - | - | 0.5 | V |
| Base-emitter saturation voltage | $V_{\text{BE}(\text{sat})}$ | $I_{\text{C}} = 800\text{mA}, I_{\text{B}} = 80\text{mA}$ | - | - | 1.2 | |
| Base-emitter on voltage | $V_{\text{BE}(\text{on})}$ | $I_{\text{C}} = 1\text{V}, V_{\text{CE}} = 10\text{mA}$ | - | - | 1 | V |
| Base-emitter positive favor voltage | V_{BEF} | $I_{\text{B}} = 1\text{A}$ | - | - | 1.55 | V |
| Transition frequency | f_{T} | $V_{\text{CE}} = 10\text{V}, I_{\text{C}} = 50\text{Ma}, f = 30\text{MHz}$ | - | 100 | - | MHz |
| Collector output capacitance | C_{ob} | $V_{\text{CB}} = 10\text{V}, I_{\text{E}} = 0\text{A}, f = 1\text{MHz}$ | - | - | 15 | pF |

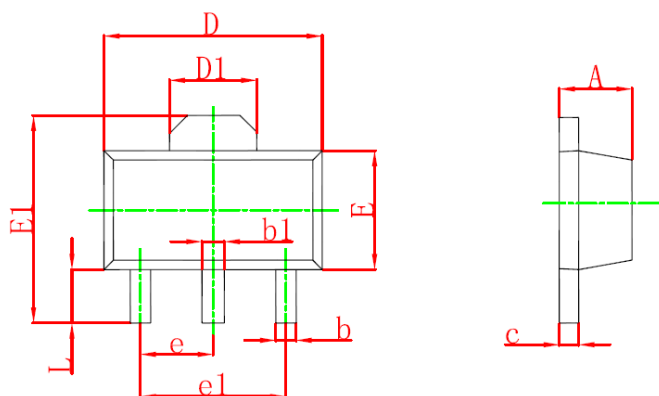
CLASSIFICATION OF h_{FE}

| RANK | AD-PXT8050-B | AD-PXT8050-C | AD-PXT8050-D | AD-PXT8050-D3 |
|-------|--------------|--------------|--------------|---------------|
| RANGE | 85-160 | 120-200 | 160-300 | 300-400 |

TYPICAL CHARACTERISTICS

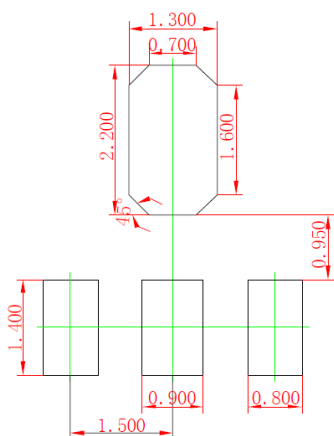


SOT-89-3L PACKAGE OUTLINE DIMENSIONS



| 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 |

SOT-89-3L SUGGESTED PAD LAYOUT

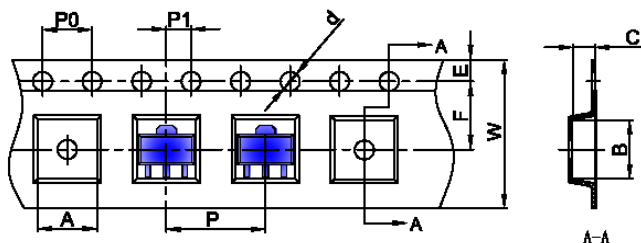


Note:

1. Controlling dimension in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purpose only.

SOT-89-3L TAPE AND REEL

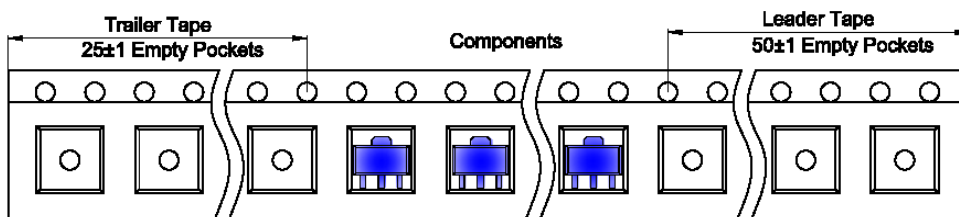
SOT-89-3L Embossed Carrier Tape



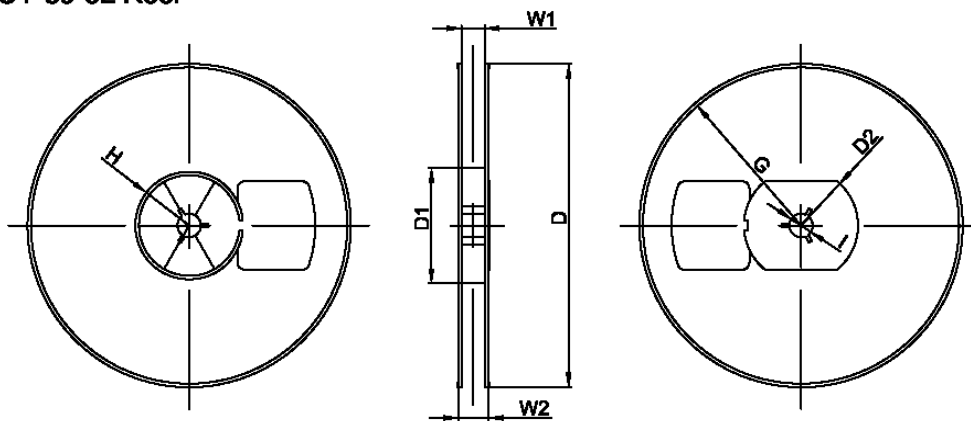
Packaging Description:
 SOT-89-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 1,000 units per 7" or 18.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|-------|
| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
| SOT-89-3L | 4.85 | 4.45 | 1.85 | Ø1.50 | 1.75 | 5.50 | 4.00 | 8.00 | 2.00 | 12.00 |

SOT-89-3L Tape Leader and Trailer



SOT-89-3L Reel



| Dimensions are in millimeter | | | | | | | | |
|------------------------------|---------|-------|--------|--------|--------|--------|-------|-------|
| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
| 7" Dia | Ø180.00 | 80.00 | R32.00 | R86.50 | R30.00 | Ø13.00 | 13.20 | 16.50 |

| REEL | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|------------|-----------------|----------|
| 1000 pcs | 7 inch | 10,000 pcs | 203×203×195 | 40,000 pcs | 438×438×220 | |

PUBLISHED BY**JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.**

13th Floor, C Block, Tengfei Building, Yan Chuang Yuan, Nanjing Jiangbei New Area, China

LEGAL DISCLAIMER

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples, hints or typical values stated herein and/or any information regarding the application of the device, JSCJ hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer's compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer's products and any use of the product of JSCJ in customer's applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer's technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

INFORMATION

For further information on technology, delivery terms and conditions as well as prices, please contact your nearest JSCJ office (www.jscj-elec.com).

WARNINGS

Due to technical requirements, products may contain dangerous substances. For information on the types in question, please contact your nearest JSCJ office.

Except as otherwise explicitly approved by JSCJ in a written document signed by authorized representatives of JSCJ, JSCJ's products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.