



Micro Commercial Components



Micro Commercial Components  
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**PXT2222A**

## Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- $I_{CM}$ : 0.6A
- Operating and Storage Junction Temperatures: -55°C to 150°C
- Marking: 1P

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|--------|-----------|-----|-----|-------|
|--------|-----------|-----|-----|-------|

#### OFF CHARACTERISTICS

|               |  |     |    |      |
|---------------|--|-----|----|------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage*<br>( $I_C=10mA$ , $I_B=0$ ) | 40  |    | Vdc  |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage<br>( $I_C=10\mu A$ , $I_E=0$ )  | 75  |    | Vdc  |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage<br>( $I_E=10\mu A$ , $I_C=0$ )    | 6.0 |    | Vdc  |
| $I_{BL}$      | Base Cutoff Current<br>( $V_{CE}=60Vdc$ , $V_{BE}=3.0Vdc$ )      |     | 20 | nAdc |
| $I_{CEX}$     | Collector Cutoff Current<br>( $V_{CE}=60Vdc$ , $V_{BE}=3.0Vdc$ ) |     | 10 | nAdc |

#### ON CHARACTERISTICS

|               |   |                                   |            |     |
|---------------|---|-----------------------------------|------------|-----|
| $h_{FE}$      | DC Current Gain<br>( $I_C=0.1mA$ , $V_{CE}=10Vdc$ )<br>( $I_C=1.0mA$ , $V_{CE}=10Vdc$ )<br>( $I_C=10mA$ , $V_{CE}=10Vdc$ )<br>( $I_C=150mA$ , $V_{CE}=10Vdc$ )<br>( $I_C=150mA$ , $V_{CE}=1.0Vdc$ )<br>( $I_C=500mA$ , $V_{CE}=10Vdc$ ) | 35<br>50<br>75<br>100<br>50<br>40 | 300        |     |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage<br>( $I_C=150mA$ , $I_B=15mA$ )<br>( $I_C=500mA$ , $I_B=50mA$ )  |                                   | 0.3<br>1.0 | Vdc |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage<br>( $I_C=150mA$ , $I_B=15mA$ )<br>( $I_C=500mA$ , $I_B=50mA$ )   | 0.6                               | 1.2<br>2.0 | Vdc |

#### SMALL-SIGNAL CHARACTERISTICS

|           |   |     |     |     |
|-----------|---|-----|-----|-----|
| $f_T$     | Current Gain-Bandwidth Product<br>( $I_C=20mA$ , $V_{CE}=20Vdc$ , $f=100MHz$ )      | 300 |     | MHz |
| $C_{obo}$ | Output Capacitance<br>( $V_{CB}=10Vdc$ , $I_E=0$ , $f=1.0MHz$ )                     |     | 8.0 | pF  |
| $C_{ibo}$ | Input Capacitance<br>( $V_{BE}=0.5Vdc$ , $I_C=0$ , $f=1.0MHz$ )                     |     | 25  | pF  |
| NF        | Noise Figure<br>( $I_C=100\mu A$ , $V_{CE}=10Vdc$ , $R_S=1.0k\Omega$ , $f=1.0kHz$ ) |     | 4.0 | dB  |

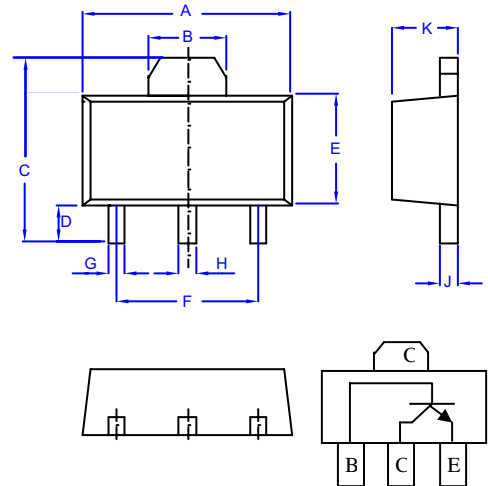
#### SWITCHING CHARACTERISTICS

|       |              |                                      |     |    |
|-------|--------------|--------------------------------------|-----|----|
| $t_d$ | Delay Time   | ( $V_{CC}=30Vdc$ , $V_{BE}=0.5Vdc$ ) | 10  | ns |
| $t_r$ | Rise Time    | ( $I_C=150mA$ , $I_{B1}=15mA$ )      | 25  | ns |
| $t_s$ | Storage Time | ( $V_{CC}=30Vdc$ , $I_C=150mA$ )     | 225 | ns |
| $t_f$ | Fall Time    | ( $I_{B1}=I_{B2}=15mA$ )             | 60  | ns |

\*Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2.0\%$

**0.5W**  
**NPN General**  
**Purpose Amplifier**

**SOT-89**



| DIMENSINS |        |       |      |       |       |
|-----------|--------|-------|------|-------|-------|
| DIM       | INCHES |       | MM   |       | NOTES |
|           | MIN    | MAX   | MIN  | MAX   |       |
| A         | .173   | .181  | 4.39 | 4.60  | REF.  |
| B         | .061   | ----- | 1.55 | ----- |       |
| C         | .154   | .165  | 3.91 | 4.25  |       |
| D         | .031   | .039  | 0.80 | 1.00  |       |
| E         | .092   | .100  | 2.34 | 2.54  |       |
| F         | .118   | ----- | 3.00 | ----- | TYP   |
| G         | .013   | .019  | 0.33 | 0.48  |       |
| H         | .015   | .021  | 0.38 | 0.53  |       |
| J         | .015   | .016  | 0.38 | 0.41  |       |
| K         | .055   | .063  | 1.40 | 1.60  |       |

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## Ordering Information :

| Device         | Packing                |
|----------------|------------------------|
| Part Number-TP | Tape&Reel; 1 Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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