

PZT2907A-TP Datasheet

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| | |
|------------------------------|---|
| DiGi Electronics Part Number | PZT2907A-TP-DG |
| Manufacturer | Micro Commercial Co |
| Manufacturer Product Number | PZT2907A-TP |
| Description | TRANS PNP 60V 0.6A SOT223 |
| Detailed Description | Bipolar (BJT) Transistor PNP 60 V 600 mA 200MHz 1 W Surface Mount SOT-223 |

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Purchase and inquiry

Manufacturer Product Number:

PZT2907A-TP

Series:

-

Transistor Type:

PNP

Voltage - Collector Emitter Breakdown (Max):

60 V

Current - Collector Cutoff (Max):

10nA (ICBO)

Power - Max:

1 W

Operating Temperature:

-55°C ~ 150°C (TJ)

Package / Case:

TO-261-4, TO-261AA

Base Product Number:

PZT2907

Manufacturer:

Micro Commercial Co

Product Status:

Active

Current - Collector (Ic) (Max):

600 mA

Vce Saturation (Max) @ Ib, Ic:

1.6V @ 50mA, 500mA

DC Current Gain (hFE) (Min) @ Ic, Vce:

100 @ 150mA, 10V

Frequency - Transition:

200MHz

Mounting Type:

Surface Mount

Supplier Device Package:

SOT-223

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.29.0075

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Features

- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

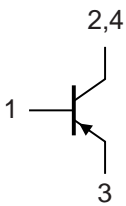
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 125°C/W Junction to Ambient

| Parameter | Symbol | Rating | Unit |
|---------------------------|-----------|--------|------|
| Collector-Base Voltage | V_{CBO} | -60 | V |
| Collector-Emitter Voltage | V_{CEO} | -60 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -600 | mA |
| Power Dissipation | P_D | 1 | W |

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Marking: ZT2907A

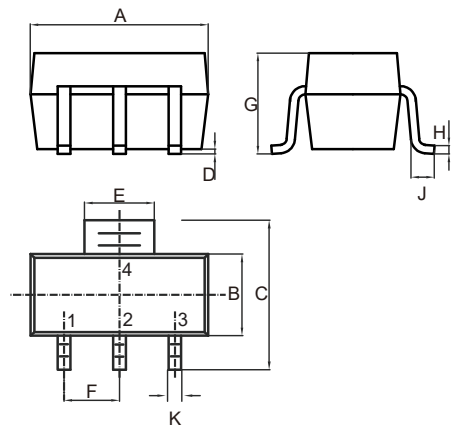
Internal Structure



1.BASE
2,4.COLLECTOR
3.EMITTER

PNP Plastic Encapsulate Transistors

SOT-223



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.248 | 0.264 | 6.30 | 6.70 | |
| B | 0.130 | 0.146 | 3.30 | 3.70 | |
| C | 0.264 | 0.287 | 6.70 | 7.30 | |
| D | 0.001 | 0.004 | 0.02 | 0.10 | |
| E | 0.114 | 0.122 | 2.90 | 3.10 | |
| F | 0.091 | | 2.30 | | TYP. |
| G | --- | 0.071 | --- | 1.80 | |
| H | 0.009 | 0.014 | 0.23 | 0.35 | |
| J | 0.030 | --- | 0.75 | --- | |
| K | 0.026 | 0.033 | 0.66 | 0.84 | |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Parameter | Symbol | Min | Typ | Max | Units | Conditions |
|--------------------------------------|---------------|-----|-----|------|-------|--|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | -60 | | | V | $I_C=-1mA, I_E=0$ |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | -60 | | | V | $I_C=-10mA, I_B=0$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | -5 | | | V | $I_E=-1mA, I_C=0$ |
| Collector-Base Cutoff Current | I_{CBO} | | | -10 | nA | $V_{CB}=-50V, I_E=0$ |
| Emitter-Base Cutoff Current | I_{EBO} | | | -10 | nA | $V_{EB}=-5V, I_C=0$ |
| DC Current Gain ^(Note 2) | $h_{FE(1)}$ | 75 | | | | $V_{CE}=-10V, I_C=-0.1mA$ |
| | $h_{FE(2)}$ | 100 | | | | $V_{CE}=-10V, I_C=-1mA$ |
| | $h_{FE(3)}$ | 100 | | | | $V_{CE}=-10V, I_C=-10mA$ |
| | $h_{FE(4)}$ | 100 | | 300 | | $V_{CE}=-10V, I_C=-150mA$ |
| | $h_{FE(5)}$ | 50 | | | | $V_{CE}=-10V, I_C=-500mA$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | -0.4 | V | $I_C=-150mA, I_B=-15mA$ |
| | | | | -1.6 | V | $I_C=-500mA, I_B=-50mA$ |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | | | -1.3 | V | $I_C=-150mA, I_B=-15mA$ |
| | | | | -2.6 | V | $I_C=-500mA, I_B=-50mA$ |
| Transition Frequency | f_T | 200 | | | MHz | $V_{CE}=-10V, I_C=-20mA, f=100MHz$ |
| Output Capacitance | C_{cbo} | | | 8 | pF | $V_{CB}=-10V, I_E=0, f=1MHz,$ |
| Input Capacitance | C_{ibo} | | | 30 | pF | $V_{EB}=-2V, I_C=0, f=1MHz,$ |
| Delay Time | t_d | | | 12 | ns | $V_{CC}=-30V, I_C=-150mA,$ $I_{B1}=-I_{B2}=-15mA$ |
| Rise Time | t_r | | | 30 | ns | |
| Turn On Time | t_{on} | | | 40 | ns | |
| Storage Time | t_s | | | 300 | ns | |
| Fall Time | t_f | | | 65 | ns | |
| Turn Off Time | t_{off} | | | 365 | ns | |

 Note: 2. Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2.0\%$

Curve Characteristics

Fig. 1 - Static Characteristics

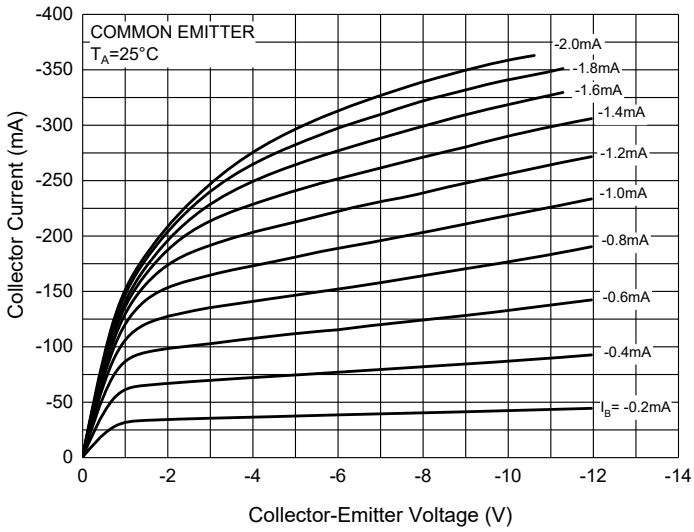


Fig. 2 - DC Current Gain Characteristics

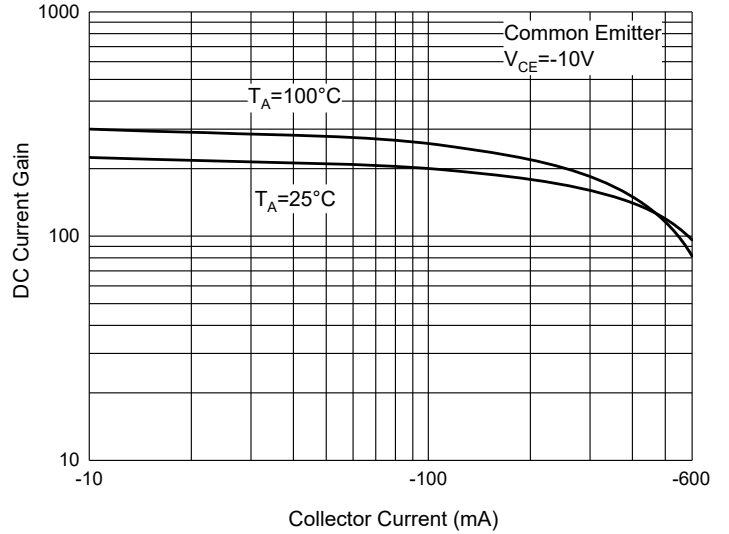


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

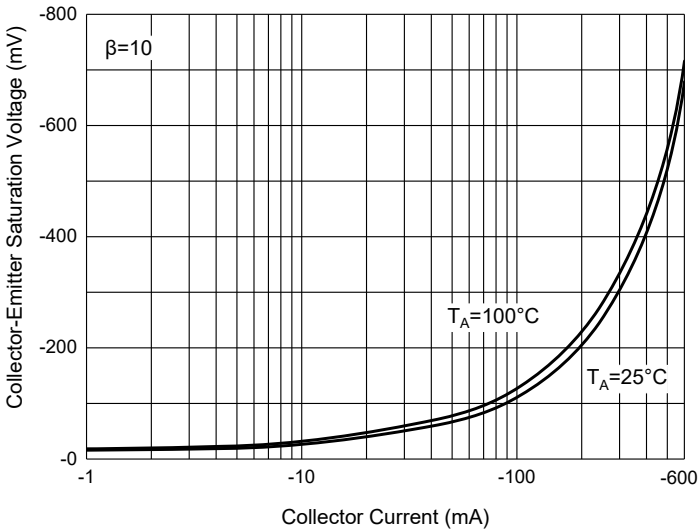


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

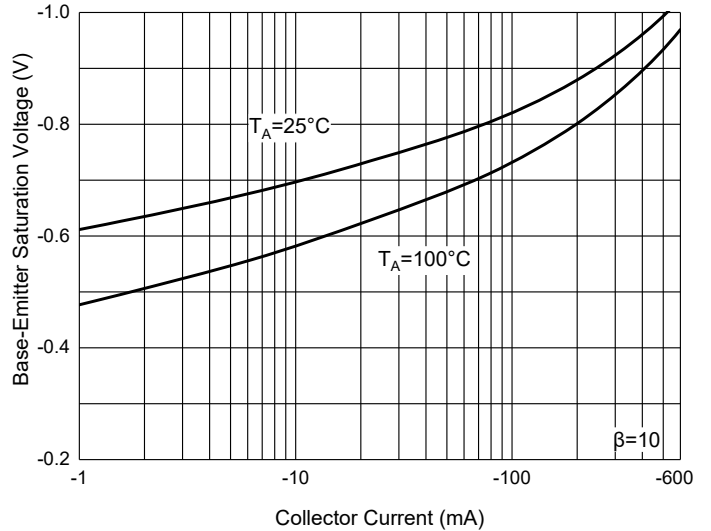


Fig. 5 - Base-Emitter Voltage Characteristics

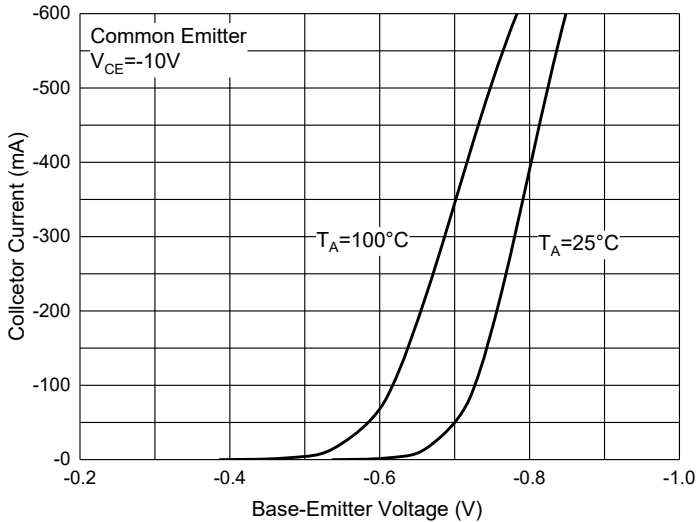
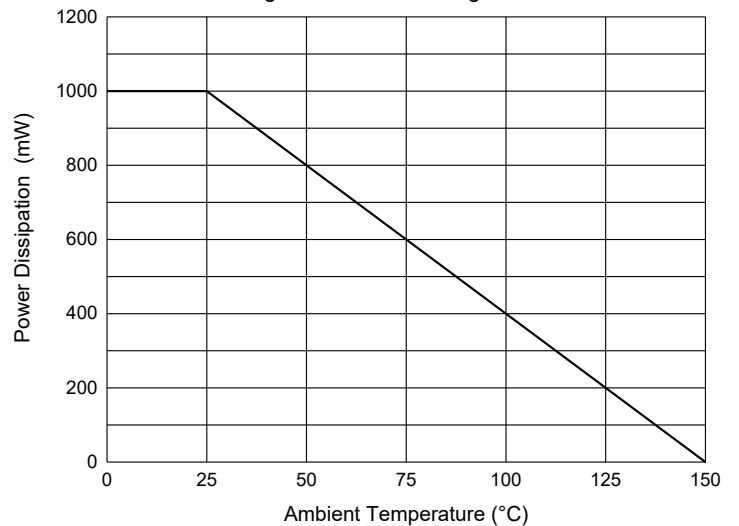


Fig. 6 - Power Derating Curve



Ordering Information

| Device | Packing |
|----------------|-------------------------|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |

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