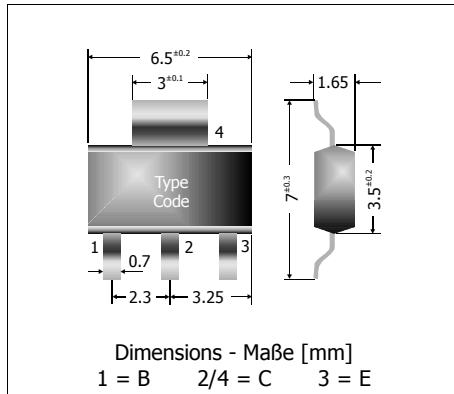


PZT2222 / PZT2222A**NPN**
Surface Mount Si-Epitaxial Planar Switching Transistors
Si-Epitaxie-Planar-Schalttransistoren für die Oberflächenmontage
NPN

Version 2006-05-09


Power dissipation
Verlustleistung

1.3 W

Plastic case
Kunststoffgehäuse

SOT-223

Weight approx.
Gewicht ca.

0.04 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziert

Standard packaging taped and reeled
Standard Lieferform gegurtet auf Rolle
**Maximum ratings (T_A = 25°C)****Grenzwerte (T_A = 25°C)**

| | | | PZT2222 | PZT2222A |
|--|--------|------------------|---------------------|-----------------|
| Collector-Emitter-volt. - Kollektor-Emitter-Spannung | E open | V _{CEO} | 30 V | 40 V |
| Collector-Base-volt. - Kollektor-Basis-Spannung | B open | V _{CBO} | 60 V | 75 V |
| Emitter-Base-voltage - Emitter-Basis-Spannung | C open | V _{EBO} | 5 V | 6 V |
| Power dissipation – Verlustleistung | | P _{tot} | 1.3 W ¹⁾ | |
| Collector current – Kollektorstrom (dc) | | I _C | 600 mA | |
| Junction temperature – Sperrschichttemperatur | | T _j | -55...+150°C | |
| Storage temperature – Lagerungstemperatur | | T _s | -55...+150°C | |

Characteristics (T_j = 25°C)**Kennwerte (T_j = 25°C)**

| | | | Min. | Typ. | Max. |
|---|----------|--------------------|-------------|-------------|-------------|
| Collector-cutoff current – Kollektor-Reststrom | | | | | |
| I _E = 0, V _{CB} = 50 V | PZT2222 | I _{CBO} | – | – | 20 nA |
| | PZT2222A | I _{CBO} | – | – | 10 nA |
| I _E = 0, V _{CB} = 50 V, T _j = 150°C | PZT2222 | I _{CBO} | – | – | 20 µA |
| | PZT2222A | I _{CBO} | – | – | 10 µA |
| Emitter-cutoff current – Emitter-Reststrom | | | | | |
| I _C = 0, V _{EB} = 3 V | | I _{EBO} | – | – | 10 nA |
| Collector saturation voltage – Kollektor-Sättigungsspannung ²⁾ | | | | | |
| I _C = 150 mA, I _B = 15 mA | PZT2222 | V _{CEsat} | – | – | 0.4 V |
| | PZT2222A | V _{CEsat} | – | – | 0.3 V |
| I _C = 500 mA, I _B = 50 mA | PZT2222 | V _{CEsat} | – | – | 1.6 V |
| | PZT2222A | V _{CEsat} | – | – | 1.0 V |

1 Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Löt-pad) an jedem Anschluss

2 Tested with pulses t_p = 300 µs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 µs, Schaltverhältnis ≤ 2%

Characteristics (T_j = 25°C)
Kennwerte (T_j = 25°C)

| | | | Min. | Typ. | Max. |
|---|--|--------------------|------------------------|------|--------|
| Base saturation voltage – Basis-Sättigungsspannung ²⁾ | | | | | |
| I _C = 150 mA, I _B = 15 mA | PZT2222 | V _{BEsat} | – | – | 1.3 V |
| | PZT2222A | V _{BEsat} | – | – | 1.2 V |
| I _C = 500 mA, I _B = 50 mA | PZT2222 | V _{BEsat} | – | – | 2.6 V |
| | PZT2222A | V _{BEsat} | – | – | 2.0 V |
| DC current gain – Kollektor-Basis-Stromverhältnis | | | | | |
| I _C = 0.1 mA, V _{CE} = 10 V | | h _{FE} | 35 | – | – |
| I _C = 1 mA, V _{CE} = 10 V | | h _{FE} | 50 | – | – |
| I _C = 10 mA, V _{CE} = 10 V | | h _{FE} | 75 | – | – |
| I _C = 150 mA, V _{CE} = 10 V ²⁾ | | h _{FE} | 100 | – | 300 |
| I _C = 500 mA, V _{CE} = 10 V ²⁾ | PZT2222 | h _{FE} | 30 | – | – |
| | PZT2222A | h _{FE} | 40 | – | – |
| Gain-Bandwidth Product – Transitfrequenz | | | | | |
| I _C = 20 mA, V _{CE} = 20 V, f = 100 MHz | | f _T | 200 MHz | – | – |
| Collector-Base Capacitance – Kollektor-Basis-Kapazität | | | | | |
| V _{CB} = 10 V, I _E = i _e = 0, f = 1 MHz | | C _{CBO} | – | – | 8 pF |
| Emitter-Base Capacitance – Emitter-Basis-Kapazität | | | | | |
| V _{EB} = 0.5 V, I _C = i _c = 0, f = 1 MHz | | C _{EBO} | – | – | 30 pf |
| Switching times – Schaltzeiten | | | | | |
| delay time | I _{Con} = 150 mA I _{Bon} = 15 mA - I _{Boff} = 15 mA | t _d | – | – | 10 ns |
| rise time | | t _r | – | – | 25 ns |
| storage time | | t _s | – | – | 225 ns |
| fall time | | t _f | – | – | 60 ns |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | | R _{thA} | < 93 K/W ¹⁾ | | |
| Thermal resistance junction to soldering point Wärmewiderstand Sperrschicht – Lötpad | | R _{thS} | < 27 K/W | | |
| Recommended complementary PNP transistors Empfohlene komplementäre PNP-Transistoren | | | PZT2907, PZT2907A | | |

²⁾ Tested with pulses t_p = 300 μs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 μs, Schaltverhältnis ≤ 2%

¹⁾ Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad) an jedem Anschluss