

## SILICON EPITAXIAL TRANSISTORS

PNP transistors in a microminiature SMD package (SOT-223).  
They are primarily intended for use in telephony and professional communication equipment.

### QUICK REFERENCE DATA

		PZTA92		PZTA93	
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	300	200	V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	300	200	V
Emitter-base voltage (open collector)	$-V_{EBO}$	max.		5	V
Collector current (DC)	$-I_C$	max.		500	mA
Total power dissipation up to $T_{amb} = 25^\circ\text{C}$	$P_{tot}$	max.		1,5	W
DC current gain	$h_{FE}$	min.		40	
$-I_C = 10\text{ mA}; -V_{CE} = 10\text{ V}$					
Transition frequency at $f = 100\text{ MHz}$	$f_T$	min.		50	MHz
$-I_C = 10\text{ mA}; -V_{CE} = 20\text{ V}$					
Collector-base capacitance at $f = 1\text{ MHz}$	$C_c$	max.	6	8	pF
$I_E = 0; -V_{CB} = 20\text{ V}$					

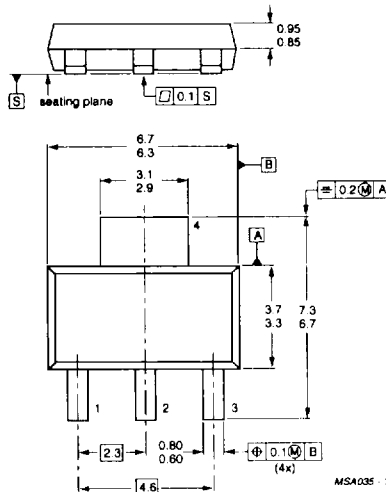
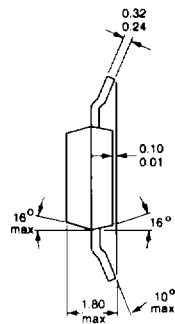
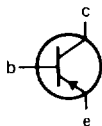
### MECHANICAL DATA

Dimensions in mm

Fig. 1 SOT-223

#### Pinning

- 1 = Base
- 2 = Collector
- 3 = Emitter
- 4 = Collector



MSA035-1

# PZTA92 PZTA93

## RATINGS

Limiting values in accordance with the Absolute Maximum System (IEC 134)

			PZTA92	PZTA93
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	300	200 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	300	200 V
Emitter-base voltage (open collector)	$-V_{EBO}$	max.	5	V
Collector current (DC)	$-I_C$	max.	500	mA
Total power dissipation * up to $T_{amb} = 25\text{ }^\circ\text{C}$	$P_{tot}$	max.	1,5	W
Storage temperature range	$T_{stg}$		-65 to +150	$^\circ\text{C}$
Junction temperature	$T_j$	max.	150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

Thermal resistance

from junction to ambient\*

$$R_{th\ j-a} = 83,3 \text{ K/W}$$

## CHARACTERISTICS

$T_{amb} = 25\text{ }^\circ\text{C}$  unless otherwise specified

			PZTA92	PZTA93
Collector-emitter breakdown voltage $-I_C = 1\text{ mA}; I_B = 0$	$-V_{(BR)CEO}$	min.	300	200 V
Collector-base breakdown voltage $-I_C = 100\text{ }\mu\text{A}; I_E = 0$	$-V_{(BR)CBO}$	min.	300	200 V
Collector cut-off current $-V_{CB} = 200\text{ V}; I_E = 0$ $-V_{CB} = 160\text{ V}; I_E = 0$	$-I_{CBO}$	max. max.	0,25 -	- 0,25 $\mu\text{A}$
Emitter-base breakdown voltage $-I_E = 100\text{ }\mu\text{A}; I_C = 0$	$-V_{(BR)EBO}$	min.	5	V
Emitter cut-off current $I_C = 0; -V_{BE} = 3\text{ V}$	$-I_{EBO}$	max.	0,1	$\mu\text{A}$
Collector-base capacitance at $f = 1\text{ MHz}$ ; $I_E = 0; -V_{CB} = 20\text{ V}$	$C_c$	max.	6	8 pF
Saturation voltages $-I_C = 20\text{ mA}; -I_B = 2\text{ mA}$ $-I_C = 20\text{ mA}; -I_B = 2\text{ mA}$	$-V_{CEsat}$ $-V_{BEsat}$	max. max.	0,5 0,9	V V
DC current gain** $-I_C = 1\text{ mA}; -V_{CE} = 10\text{ V}$ $-I_C = 10\text{ mA}; -V_{CE} = 10\text{ V}$ $-I_C = 30\text{ mA}; -V_{CE} = 10\text{ V}$	$h_{FE}$	min. min. min.	25 40 25	

\* Device mounted on an epoxy printed circuit board 40 mm x 40 mm x 1,5 mm;  
mounting pad for the collector lead min. 6 mm<sup>2</sup>.

\*\* Pulse test conditions:  $t_p = 300\text{ }\mu\text{s}$ ; duty cycle  $\leq 2\%$ .