

Data sheet	
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PZTA05/PZTA06

Silicon epitaxial transistors

DESCRIPTION

NPN transistors in a microminiature plastic package intended for surface mounted (SMD) applications. They are primarily intended for use in telephony and professional communication equipment.

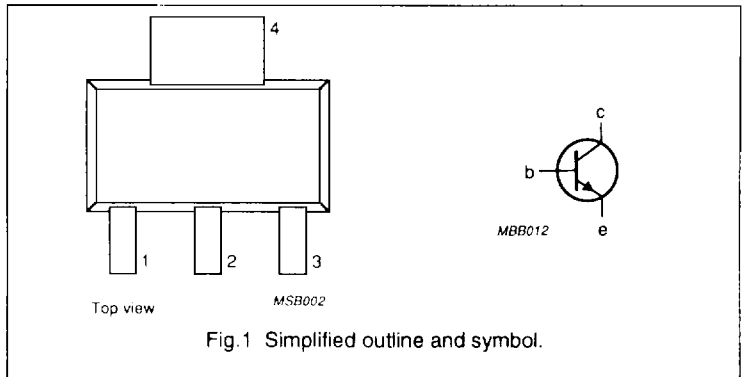
PINNING - SOT223

PIN	DESCRIPTION
1	base
2	collector
3	emitter
4	collector

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage PZTA05 PZTA06	open emitter	-	60	V
			-	80	V
V_{CEO}	collector-emitter voltage PZTA05 PZTA06	open base	-	60	V
			-	80	V
V_{EBO}	emitter-base voltage	open collector	-	4	V
I_C	collector current	DC value	-	500	mA
P_{tot}	total power dissipation	$T_{amb} = 25\text{ }^\circ\text{C}$	-	1.5	W
h_{FE}	DC current gain	$I_C = 100\text{ mA};$ $V_{CE} = 1\text{ V}$	50	-	
f_T	transition frequency	$I_C = 10\text{ mA};$ $V_{CE} = 2\text{ V};$ $f = 100\text{ MHz}$	100	-	MHz
$V_{CE\ sat}$	collector-emitter saturation voltage	$I_C = 100\text{ mA};$ $I_B = 10\text{ mA}$	-	0.25	V

PIN CONFIGURATION



Silicon epitaxial transistors**PZTA05/PZTA06****LIMITING VALUES**

In accordance with the Absolute Maximum System (IEC 134)

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CB0}	collector-base voltage	open emitter		60	V
	PZTA05		-	80	V
V_{CE0}	collector-emitter voltage	open base		60	V
	PZTA05		-	80	V
V_{EB0}	emitter-base voltage	open collector	-	4	V
I_C	collector current	DC value	-	500	mA
P_{tot}	total power dissipation	$T_{amb} = 25\text{ }^\circ\text{C}$ note 1	-	1.5	W
T_{stg}	storage temperature range		-65	150	$^\circ\text{C}$
T_J	junction storage		-	150	$^\circ\text{C}$

Note

1. Mounted on an FR4 printed-circuit board 8 mm x 10 mm x 0.7 mm

THERMAL RESISTANCE

SYMBOL	PARAMETER	CONDITIONS	NOM.	UNIT
$R_{th\ J-A}$	from junction to ambient	on PCB	83.3	K/W

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CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{(BR)CEO}$	collector-emitter breakdown voltage PZTA05 PZTA06	$I_C = 1\text{ mA};$ $I_B = 0;$ $t_p = 300\text{ }\mu\text{s};$ $\delta = 0.02$	60	–	V
			80	–	V
$V_{(BR)EBO}$	emitter-base breakdown voltage	$I_C = 0;$ $I_E = 100\text{ }\mu\text{A}$	4	–	V
I_{CEO}	collector cut-off current	$V_{CE} = 60\text{ V};$ $I_B = 0$	–	0.1	μA
I_{CBO}	collector cut-off current	$I_E = 0$	–	0.1	μA
		$V_{CB} = 60\text{ V}$ $V_{CB} = 80\text{ V}$	–	0.1	μA
$V_{CE\text{ sat}}$	collector-emitter saturation voltage	$I_C = 100\text{ mA};$ $I_B = 10\text{ mA}$	–	0.25	V
$V_{BE(on)}$	base-emitter on voltage	$I_C = 100\text{ mA}$ $V_{CE} = 1\text{ V}$	–	1.2	V
h_{FE}	DC current gain	$V_{CE} = 1\text{ V};$ $I_C = 10\text{ mA};$	50	–	
		$I_C = 100\text{ mA}$	50	–	
f_T	transition frequency	$V_{CE} = 2\text{ V};$ $I_C = 10\text{ mA};$ $f = 100\text{ MHz}$	100	–	MHz