

PZTA92

PNP Silicon High Voltage Transistor

- High breakdown voltage
- Low collector-emitter saturation voltage
- Complementary type: PZTA42 (NPN)



Туре	Marking	Pin Configuration				Package
PZTA92	PZTA 92	1=B	2=C	3=E	4=C	SOT223

Maximum Ratings

Parameter	Symbol	Value	Unit	
Collector-emitter voltage	V _{CEO}	300	V	
Collector-base voltage	V _{CBO}	300		
Emitter-base voltage	V _{EBO}	5		
DC collector current	I _C	500	mA	
Base current	I _B	100		
Total power dissipation, $T_{\rm S}$ = 124 °C	P _{tot}	1.5	W	
Junction temperature	Tj	150	°C	
Storage temperature	T _{stg}	-65 150		

Thermal Resistance

Junction - soldering point ¹⁾	R _{thJS}	≤17	K/W

¹For calculation of R_{thJA} please refer to Application Note Thermal Resistance



Electrical Characteristics at $T_A = 25^{\circ}$ C, unless otherwise specified

Parameter	Symbol	Values			Unit	
		min.	typ.	max.	1	
DC Characteristics						
Collector-emitter breakdown voltage	V _{(BR)CEO}	300	-	-	V	
$I_{\rm C}$ = 1 mA, $I_{\rm B}$ = 0						
Collector-base breakdown voltage	V _{(BR)CBO}	300	-	-		
<i>I</i> _C = 100 μA, <i>I</i> _E = 0						
Emitter-base breakdown voltage	V _{(BR)EBO}	5	-	-		
<i>I</i> _E = 10 μA, <i>I</i> _C = 0						
Collector cutoff current	I _{CBO}	-	-	250	nA	
$V_{\rm CB} = 200 \text{ V}, I_{\rm E} = 0$						
Collector cutoff current	I _{CBO}	-	-	20	μA	
V_{CB} = 200 V, I_{E} = 0 , T_{A} = 150 °C						
Emitter cutoff current	I _{EBO}	-	-	100	nA	
$V_{\rm EB}$ = 3 V, $I_{\rm C}$ = 0						
DC current gain 1)	h _{FE}				-	
<i>I</i> _C = 1 mA, <i>V</i> _{CE} = 10 V		25	-	-		
<i>I</i> _C = 10 mA, <i>V</i> _{CE} = 10 V		40	-	-		
$I_{\rm C}$ = 30 mA, $V_{\rm CE}$ = 10 V		25	-	-		
Collector-emitter saturation voltage1)	V _{CEsat}	-	-	0.5	V	
<i>I</i> _C = 20 mA, <i>I</i> _B = 2 mA						
Base-emitter saturation voltage 1)	V _{BEsat}	-	-	0.9	1	
<i>I</i> _C = 20 mA, <i>I</i> _B = 2 mA						

AC Characteristics

Transition frequency	f _T	-	100	-	MHz
<i>I</i> _C = 20 mA, <i>V</i> _{CE} = 10 V, <i>f</i> = 100 MHz					
Collector-base capacitance	C _{cb}	-	-	6	pF
V _{CB} = 20 V, <i>f</i> = 1 MHz					



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Total power dissipation $P_{\text{tot}} = f(T_{\text{S}})$

Transition frequency $f_{\rm T} = f(I_{\rm C})$

 $V_{CE} = 10V, f = 100MHz$



Permissible pulse load

 $P_{\text{totmax}} / P_{\text{totDC}} = f(t_p)$





DC current gain $h_{\text{FE}} = f(I_{\text{C}})$

 $V_{CE} = 10V$





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Collector cutoff current $I_{CBO} = f(T_A)$

 $V_{\rm CB}$ = 200V



Collector current $I_{\rm C} = f(V_{\rm BE})$

*V*_{CE} = 10V









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