SIEMENS
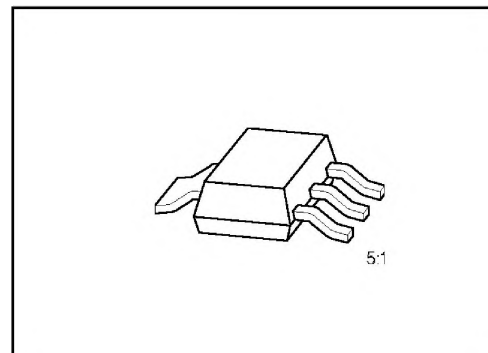
PNP Silicon High-Voltage Transistors

● High breakdown voltage
● Low collector-emitter saturation voltage
● Complementary types: PZTA 42, PZTA 43 (NPN)

Type	Marking	Ordering Code (tape and reel)	Pin Configuration				Package[1]
			1	2	3	4	
PZTA 92	PZTA 92	Q62702-Z2037	B	C	E	C	SOT-223
PZTA 93	PZTA 93	Q62702-Z2038					

Maximum Ratings

Parameter	Symbol	Values		Unit
		PZTA 92	PZTA 93	
Collector-emitter voltage	V_{CE0}	300	200	V
Collector-base voltage	V_{CB0}	300	200	
Emitter-base voltage	V_{EB0}	5		
Collector current	I_C	500		mA
Base current	I_B	100		
Total power dissipation, T_s = 124 °C	P_{tot}	1.5		W
Junction temperature	T_j	150		°C
Storage temperature range	T_{stg}	− 65 … + 150		

Thermal Resistance

Junction - ambient[2]	$R_{th\ JA}$	≤ 72	K/W
Junction - soldering point	$R_{th\ JS}$	≤ 17	

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[1] For detailed information see chapter Package Outlines.
[2] Package mounted on epoxy pcb 40 mm × 40 mm × 1.5 mm/6 cm² Cu.

Electrical Characteristics

at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC characteristics

Parameter	Symbol	min.	typ.	max.	Unit
Collector-emitter breakdown voltage I_C = 1 mA, I_B = 0　　　　　PZTA 92 PZTA 93	$V_{(BR)CE0}$	300 200	– –	– –	V
Collector-base breakdown voltage I_C = 100 µA, I_B = 0　　　　PZTA 92 PZTA 93	$V_{(BR)CB0}$	300 200	– –	– –	
Emitter-base breakdown voltage I_E = 100 µA, I_C = 0	$V_{(BR)EB0}$	5	–	–	
Collector-base cutoff current V_{CB} = 200 V　　　　　　　PZTA 92 V_{CB} = 160 V　　　　　　　PZTA 93 V_{CB} = 200 V, T_A = 150 °C　PZTA 92 V_{CB} = 160 V, T_A = 150 °C　PZTA 93	I_{CB0}	– – – –	– – – –	250 250 20 20	nA nA µA µA
Emitter-base cutoff current V_{EB} = 3 V, I_C = 0	I_{EB0}	–	–	100	nA
DC current gain[1] I_C = 1 mA, V_{CE} = 10 V I_C = 10 mA, V_{CE} = 10 V I_C = 30 mA, V_{CE} = 10 V	h_{FE}	25 40 25	– – –	– – –	–
Collector-emitter saturation voltage[1] I_C = 20 mA, I_B = 2 mA　　　PZTA 92 PZTA 93	V_{CEsat}	– –	– –	0.5 0.4	V
Base-emitter saturation voltage[1] I_C = 20 mA, I_B = 2 mA	V_{BEsat}	–	–	0.9	

AC characteristics

Parameter	Symbol	min.	typ.	max.	Unit
Transition frequency I_C = 20 mA, V_{CE} = 10 V, f = 100 MHz	f_t	–	100	–	MHz
Collector-base capacitance V_{CB} = 20 V, f = 1 MHz　　　PZTA 92 PZTA 93	C_{obo}	– –	– –	6 8	pF

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[1] Pulse test conditions: $t \le$ 300 µs, D = 2 %.

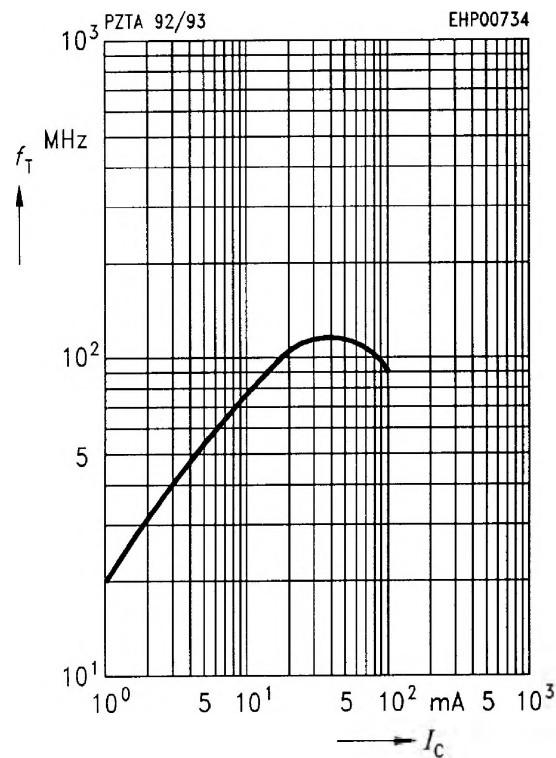## Total power dissipation $P_{tot} = f(T_A*; T_S)$
* Package mounted on epoxy
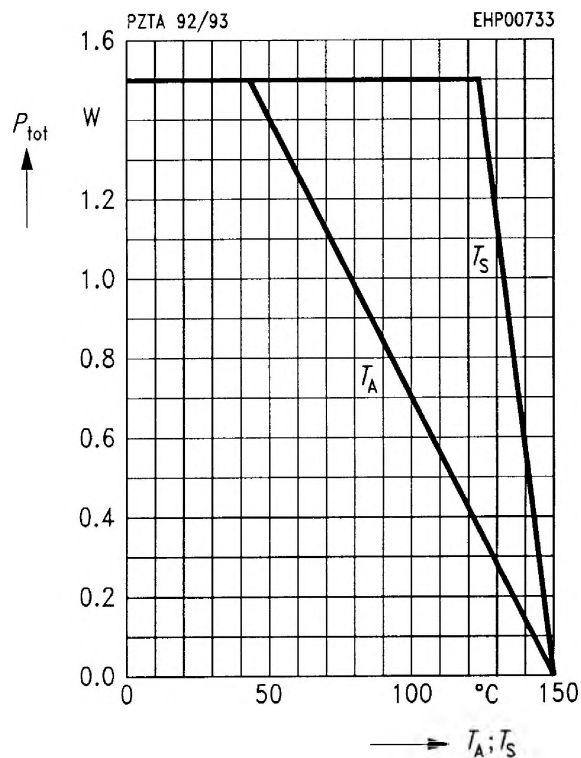
Transition frequency $f_T = f(I_C)$
V_{CE} = 10 V, f = 100 MHz

Permissible pulse load $P_{tot\,max} / P_{tot\,DC} = f(t_p)$

$$D = \frac{t_p}{T}$$

D=
0
0.005
0.01
0.02
0.05
0.1
0.2
0.5
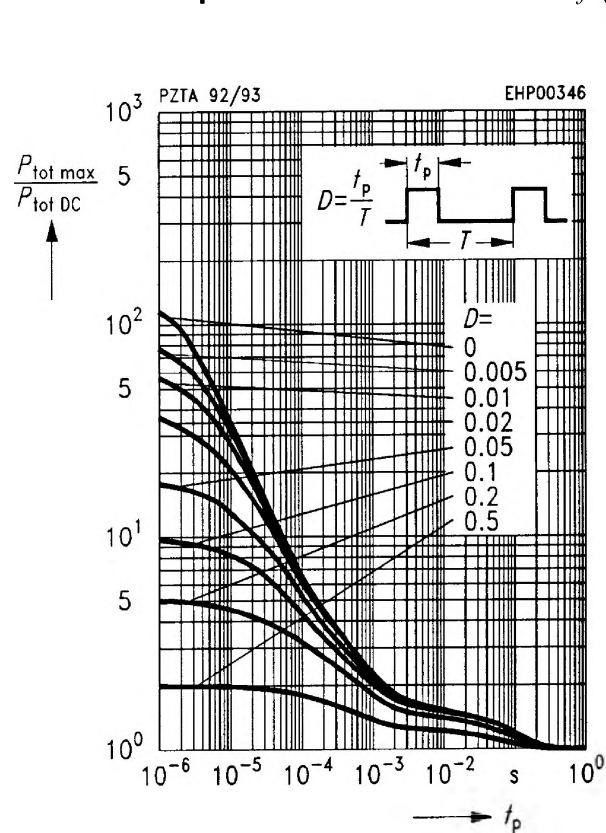
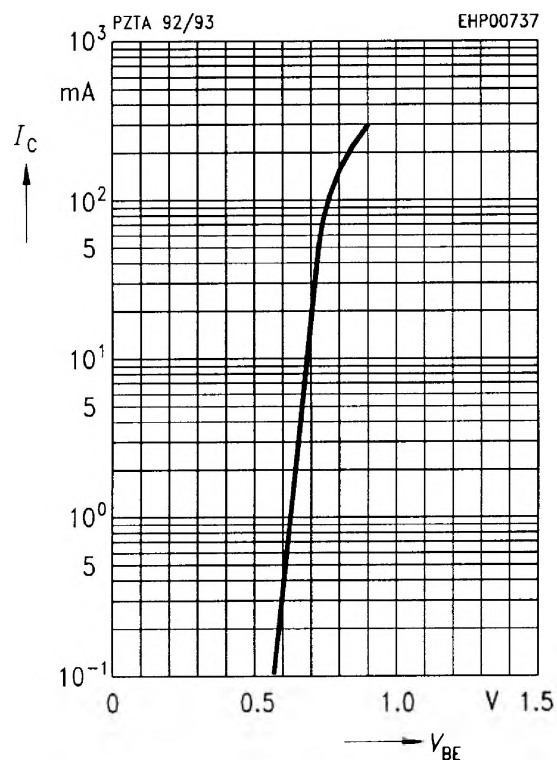## DC current gain $h_{FE} = f(I_C)$
V_{CE} = 10 V
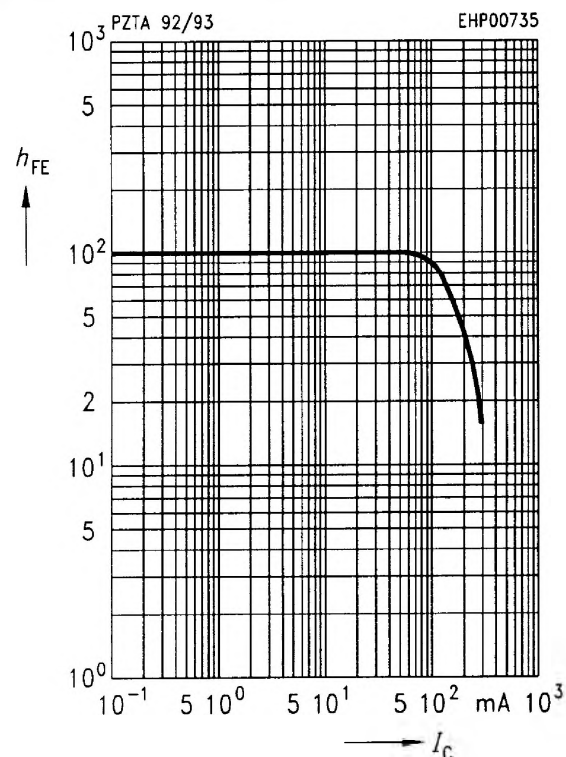
Collector cutoff current $I_{CBO} = f(T_A)$
$V_{CB} = 160$ V
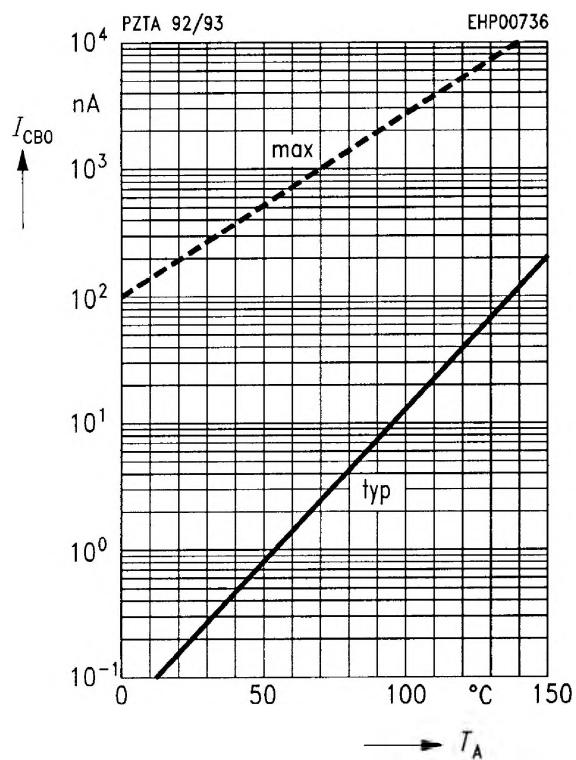
Collector current $I_C = f(V_{BE})$
$V_{CE} = 10$ V

SAB 80515 / 80535 Data Sheet	
Revision History:	**Current Version: 08.95**
Previous Version:	**09.89, 11.92**

Page	Subjects (changes since last revision)
1, 2, 27, 29, 30	– 40 to + 110 °C version deleted; Note: only on request ... added
29	I_C and $V_{int\ ERROR}$ modified
36	Header of table (16 MHz) corrected

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