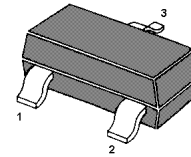


MMBTA92 / MMBTA93

PNP Silicon High Voltage Transistors

for high voltage switching and amplifier applications.

As complementary types the NPN transistors
MMBTA42 and MMBTA43 are recommended.



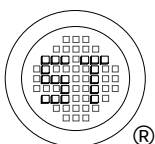
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	MMBTA92 MMBTA93 $-V_{CBO}$	300 200	V
Collector Emitter Voltage	MMBTA92 MMBTA93 $-V_{CEO}$	300 200	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	500	mA
Total Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

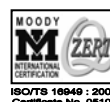
Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 10\text{ V}$, $-I_C = 1\text{ mA}$ at $-V_{CE} = 10\text{ V}$, $-I_C = 10\text{ mA}$ at $-V_{CE} = 10\text{ V}$, $-I_C = 30\text{ mA}$	h_{FE} h_{FE} h_{FE}	25 40 25	- - -	- - -
Collector Base Cutoff Current at $-V_{CB} = 200\text{ V}$ at $-V_{CB} = 160\text{ V}$	MMBTA92 MMBTA93 $-I_{CBO}$ $-I_{CBO}$	- -	0.25 0.25	μA μA
Emitter Base Cutoff Current at $-V_{EB} = 3\text{ V}$	$-I_{EBO}$	-	0.1	μA
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	MMBTA92 MMBTA93 $-V_{(BR)CBO}$ $-V_{(BR)CBO}$	300 200	- -	V V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	MMBTA92 MMBTA93 $-V_{(BR)CEO}$ $-V_{(BR)CEO}$	300 200	- -	V V
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $-I_C = 20\text{ mA}$, $-I_B = 2\text{ mA}$	$-V_{CE(sat)}$	-	0.5	V
Base Emitter Saturation Voltage at $-I_C = 20\text{ mA}$, $-I_B = 2\text{ mA}$	$-V_{BE(sat)}$	-	0.9	V
Current Gain Bandwidth Product at $-V_{CE} = 20\text{ V}$, $-I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	50	-	MHz
Collector Base Capacitance at $-V_{CB} = 20\text{ V}$, $f = 1\text{ MHz}$	MMBTA92 MMBTA93 C_{cb} C_{cb}	- -	6 8	pF pF

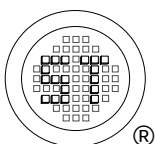
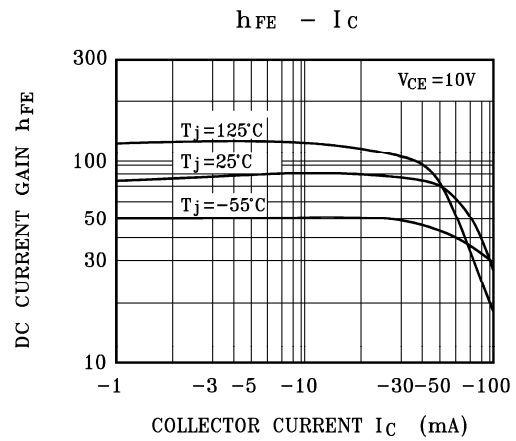
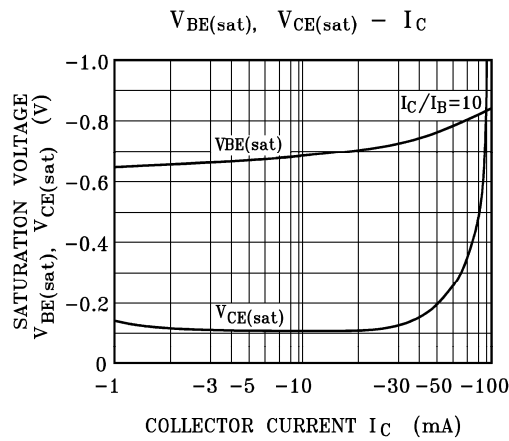
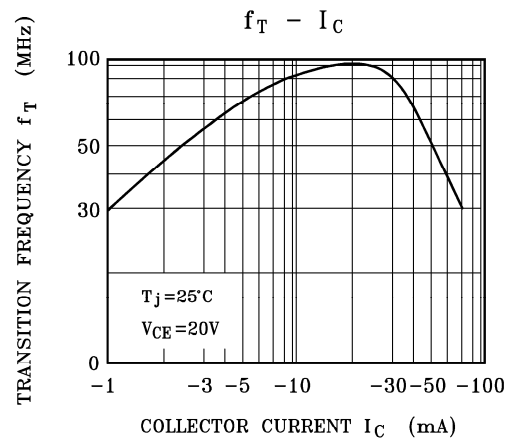
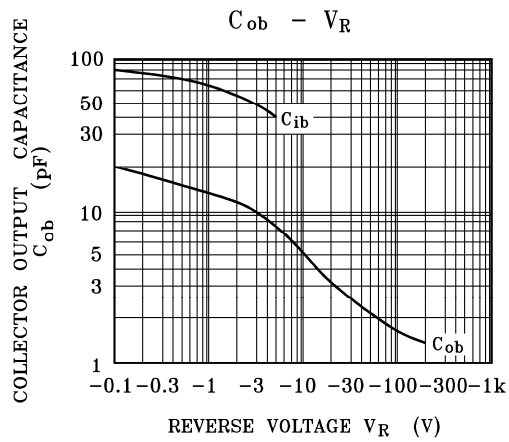


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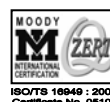
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MMBTA92 / MMBTA93



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Dated :18/06/2009