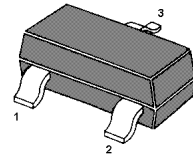


MMBTA92 / MMBTA93

PNP Silicon High Voltage Transistors

for high voltage switching and amplifier applications.



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 $-V_{CE} = 10\text{ V}$, $-I_C = 1\text{ mA}$	h_{FE}	25	-	-
at $-V_{CE} = 10\text{ V}$, $-I_C = 10\text{ mA}$	h_{FE}	80	200	-
at $-V_{CE} = 10\text{ V}$, $-I_C = 30\text{ mA}$	h_{FE}	25	-	-
Collector Base Cutoff Current				
at $-V_{CB} = 200\text{ V}$	MMBTA92 $-I_{CBO}$	-	0.25	μA
at $-V_{CB} = 160\text{ V}$	MMBTA93 $-I_{CBO}$	-	0.25	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 $-V_{(BR)CBO}$	300	-	V
	MMBTA93 $-V_{(BR)CBO}$	200	-	V
Collector Emitter Breakdown Voltage				
at $-I_C = 1\text{ mA}$	MMBTA92 $-V_{(BR)CEO}$	300	-	V
	MMBTA93 $-V_{(BR)CEO}$	200	-	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 C_{cb}	-	6	pF
	MMBTA93 C_{cb}	-	8	pF

