

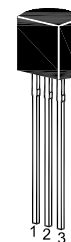
MPSA92 / 93

PNP Silicon Expitaxial Planar Transistor

for high voltage switching and amplifier applications.

As complementary type the NPN transistor MPSA42 and MPSA 43 are recommended.

On special request, these transistors can be manufactured in different pin configurations.



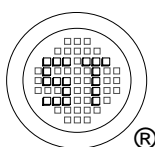
1. Emitter 2. Base 3. Collector
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit	
Collector Base Voltage	MPSA92 MPSA93	- V_{CBO}	300 200	V
Collector Emitter Voltage	MPSA92 MPSA93	- V_{CEO}	300 200	V
Emitter Base Voltage		- V_{EBO}	5	V
Collector Current		- I_C	500	mA
Power Dissipation		P_{tot}	625	mW
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit	
DC Current Gain					
at $-I_C = 1\text{ mA}$, $-V_{CE} = 10\text{ V}$	h_{FE}	25	-	-	
at $-I_C = 10\text{ mA}$, $-V_{CE} = 10\text{ V}$	h_{FE}	40	-	-	
at $-I_C = 30\text{ mA}$, $-V_{CE} = 10\text{ V}$	h_{FE}	25	-	-	
Collector Base Cutoff Current					
at $-V_{CB} = 200\text{ V}$	MPSA92	- I_{CBO}	-	0.25	μA
at $-V_{CB} = 160\text{ V}$	MPSA93	- 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 $-I_C = 100\text{ }\mu\text{A}$	MPSA92	- $V_{(BR)CBO}$	300	-	V
	MPSA93	- $V_{(BR)CBO}$	200	-	V
Collector Emitter Breakdown Voltage					
at $-I_C = 1\text{ mA}$	MPSA92	- $V_{(BR)CEO}$	300	-	V
	MPSA93	- $V_{(BR)CEO}$	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
Gain Bandwidth Product					
at $-I_C = 10\text{ mA}$, $-V_{CE} = 20\text{ V}$, $f = 100\text{ MHz}$		f_T	50	-	MHz
Collector Output Capacitance					
at $-V_{CB} = 20\text{ V}$, $f = 1\text{ MHz}$	MPSA92	C_{ob}	-	6	pF
	MPSA93	C_{ob}	-	8	pF



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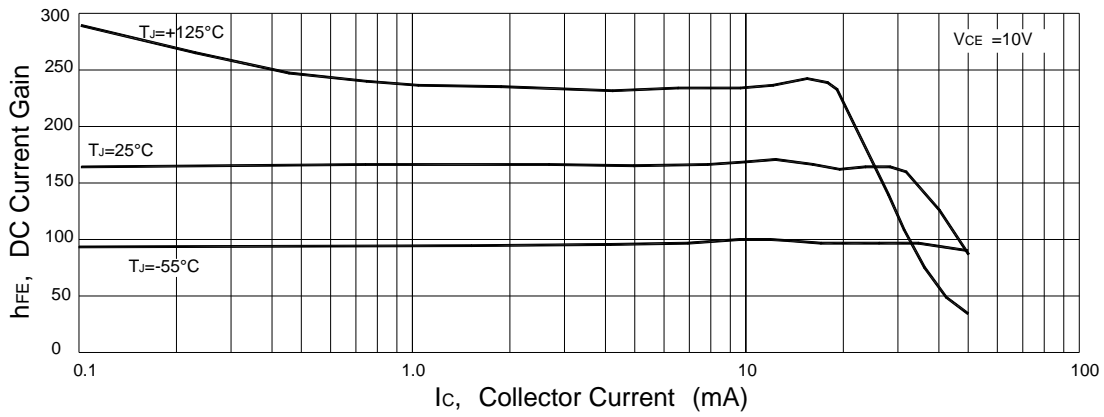


Figure 1. DC Current Gain

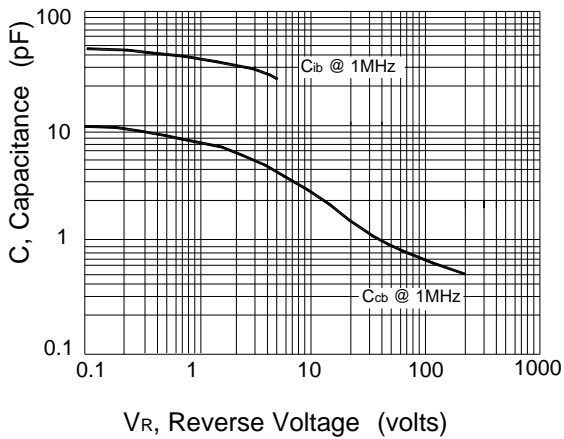


Figure 2. Capacitance

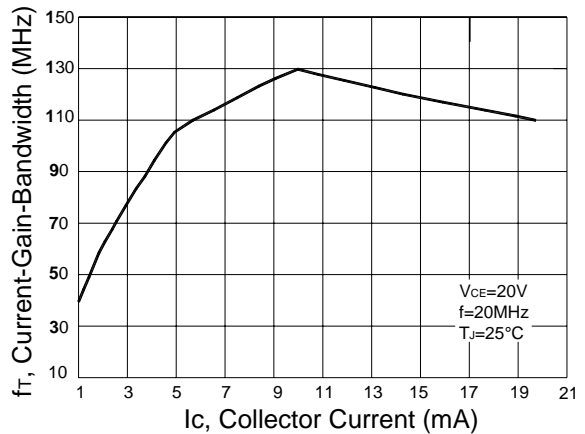
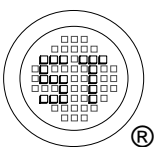


Figure 3. Current-Gain-Bandwidth



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