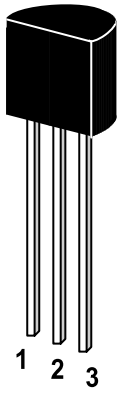
MPSA 92 / 93

PNP Silicon Expitaxial Planar Transistor
for high voltage switching and amplifier applications.

The transistor is subdivided into one group according to its DC current gain. As complementary type the NPN transistor MPSA 42 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
Weight approx. 0.19g

Absolute Maximum Ratings (T_a = 25 °C)

	Symbol	Value		Unit
		MPSA 92	MPSA 93	
Collector Base Voltage	$-V_{CBO}$	300	200	V
Collector Emitter Voltage	$-V_{CEO}$	300	200	V
Emitter Base Voltage	$-V_{EBO}$	5		V
Collector Current	$-I_C$	500		mA
Total Device Dissipation @ Ta=25℃	P_{tot}	625		mW
Derate above 25℃		5		mW/℃
Total Device Dissipation @ Tc=25℃	P_{tot}	1.5		W
Derate above 25℃		12		mW/℃
Junction Temperature	T_j	150		°C
Storage Temperature Range	T_S	-55 to +150		°C

Characteristics at T_{amb}=25 °C

		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain						
at $-I_C$=1mA, $-V_{CE}$=10V		h_{FE}	25	-	-	-
at $-I_C$=10mA, $-V_{CE}$=10V		h_{FE}	40	-	-	-
at $-I_C$=30mA, $-V_{CE}$=10V		h_{FE}	25	-	-	-
Emitter Cutoff Current						
at $-V_{EB}$=3V		$-I_{EBO}$	-	-	0.1	μA
Collector Cutoff Current						
at $-V_{CB}$=200V	MPSA 92	$-I_{CBO}$	-	-	0.25	μA
$-V_{CB}$=160V	MPSA 93	$-I_{CBO}$	-	-	0.25	μA
Collector Base Breakdown Voltage						
at $-I_C$=100μA	MPSA 92	$-V_{(BR)CBO}$	300	-	-	V
	MPSA 93	$-V_{(BR)CBO}$	200	-	-	V
Collector Emitter Breakdown Voltage						
at $-I_C$=1mA	MPSA 92	$-V_{(BR)CEO}$	300	-	-	V
	MPSA 93	$-V_{(BR)CEO}$	200	-	-	V
Emitter Base Breakdown Voltage						
at $-I_E$=100μA		$-V_{(BR)EBO}$	5	-	-	V
Collector Saturation Voltage						
at $-I_C$=20mA, $-I_B$=2mA		$-V_{CE(sat)}$	-	-	0.5	V
Base Saturation Voltage						
at $-I_C$=20mA, $-I_B$=2mA		$-V_{BE(sat)}$	-	-	0.9	V
Gain Bandwidth Product						
at $-I_C$=10mA, $-V_{CE}$=20V, f=100MHz		f_T	50	-	-	MHz
Collector Output Capacitance						
at $-V_{CB}$=20V, f=1MHz	MPSA 92	C_{ob}	-	-	6	pF
	MPSA 93	C_{ob}	-	-	8	pF

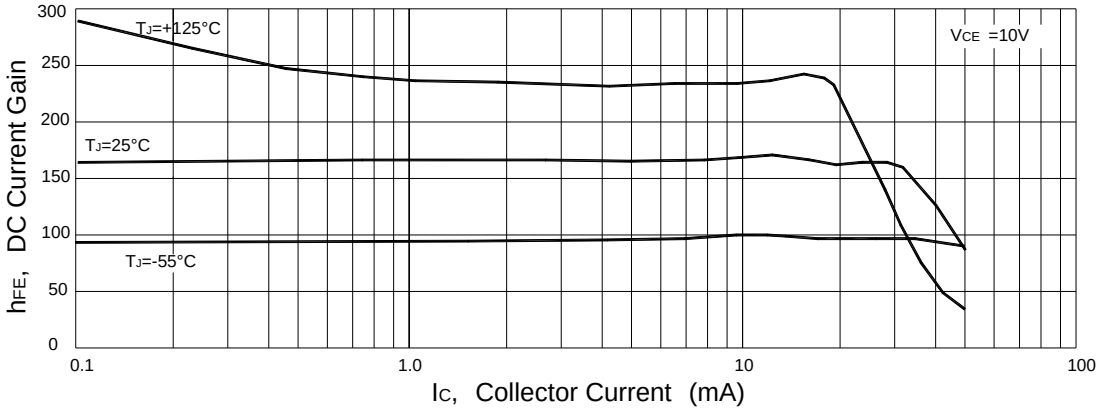


Figure 1. DC Current Gain

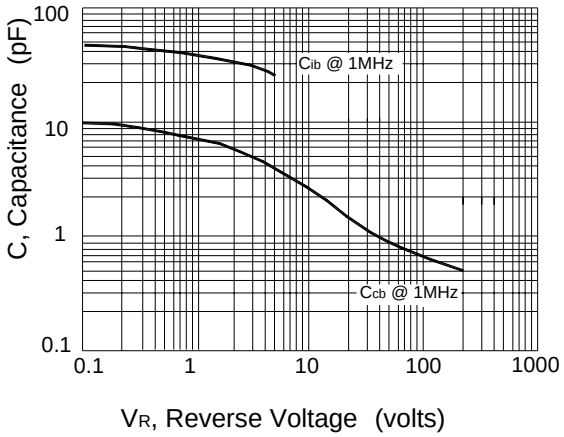


Figure 2. Capacitance

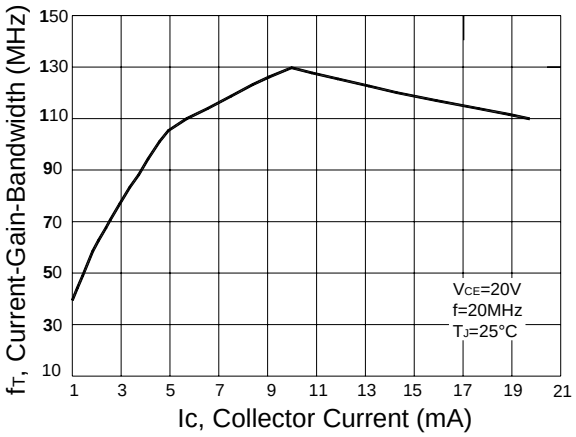


Figure 3. Current-Gain-Bandwidth