

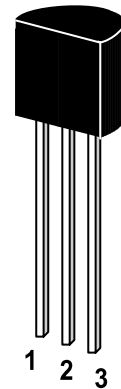
# MPSA 92 / 93

## 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.

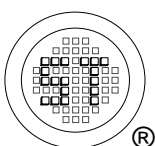


1. Emitter 2. Base 3. Collector

TO-92 Plastic Package  
Weight approx. 0.19g

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

	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 @ $T_a=25^\circ\text{C}$	$P_{tot}$	625		mW
Derate above $25^\circ\text{C}$		5		mW/ $^\circ\text{C}$
Total Device Dissipation @ $T_c=25^\circ\text{C}$	$P_{tot}$	1.5		W
Derate above $25^\circ\text{C}$		12		mW/ $^\circ\text{C}$
Junction Temperature	$T_j$	150		$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to +150		$^\circ\text{C}$



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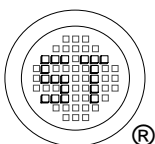


Dated : 16/06/2004

# MPSA 92 / 93

## Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

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



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ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506098

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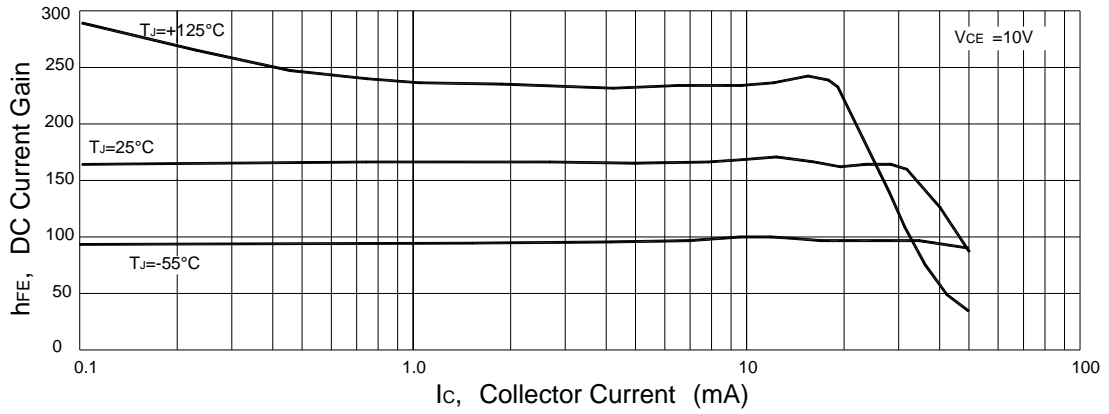


Figure 1. DC Current Gain

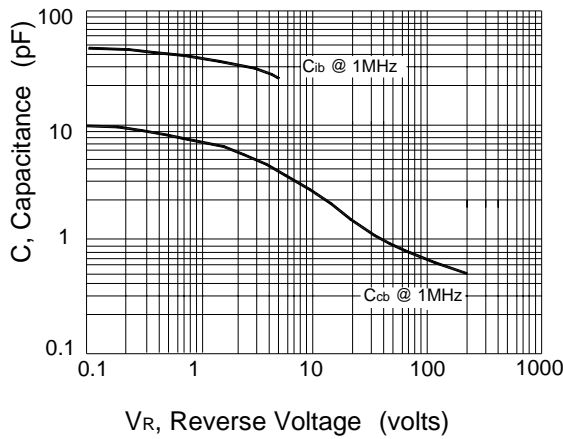


Figure 2. Capacitance

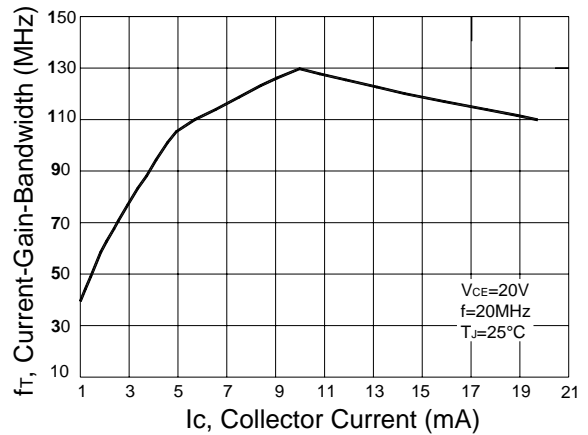
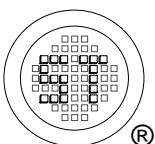


Figure 3. Current-Gain-Bandwidth



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