



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

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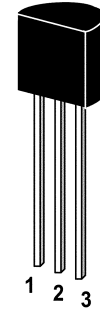
MPSA 42 / 43

NPN Silicon Epitaxial 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 PNP transistor MPSA 92 and MPSA 93 is recommended.

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

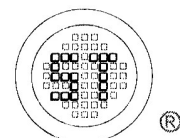


1. Emitter 2. Base 3. Collector

TO-92 Plastic Package
Weight approx. 0.19g

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

	Symbol	Value		Unit
		MPSA 42	MPSA 43	
Collector Base Voltage	V_{CBO}	300	200	V
Collector Emitter Voltage	V_{CEO}	300	200	V
Emitter Base Voltage	V_{EBO}	6		V
Collector Current	I_C	500		mA
Total Device Dissipation @ $T_a=25^\circ\text{C}$ Derate above 25°C	P_{tot}	625		mW
		5.0		$\text{mW}/^\circ\text{C}$
Total Device Dissipation @ $T_c=25^\circ\text{C}$ Derate above 25°C	P_{tot}	1.5		W
		12		$\text{mW}/^\circ\text{C}$
Junction Temperature	T_j	150		$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150		$^\circ\text{C}$



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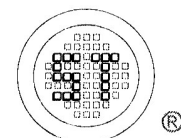
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MPSA 42 / 43

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}	40	-	-	-
Emitter Cutoff Current						
at V _{EB} =6V	MPSA 42	I _{EBO}	-	-	0.1	μA
V _{EB} =4V	MPSA 43	I _{EBO}	-	-	0.1	μA
Collector Cutoff Current						
at V _{CB} =200V	MPSA 42	I _{CBO}	-	-	0.1	μA
V _{CB} =160V	MPSA 43	I _{CBO}	-	-	0.1	μA
Collector Base Breakdown Voltage						
at I _C =100μA	MPSA 42	V _{(BR)CBO}	300	-	-	V
	MPSA 43	V _{(BR)CBO}	200	-	-	V
Collector Emitter Breakdown Voltage						
at I _C =1mA	MPSA 42	V _{(BR)CEO}	300	-	-	V
	MPSA 43	V _{(BR)CEO}	200	-	-	V
Emitter Base Breakdown Voltage						
at I _E =100μA		V _{(BR)EBO}	6	-	-	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 42	C _{ob}	-	-	3	pF
	MPSA 43	C _{ob}	-	-	4	pF



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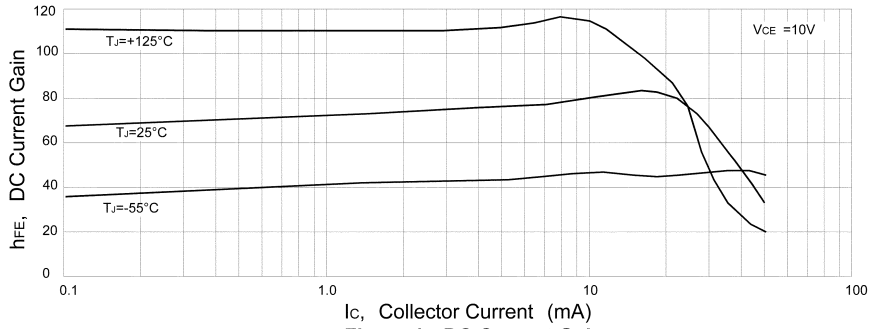


Figure 1. DC Current Gain

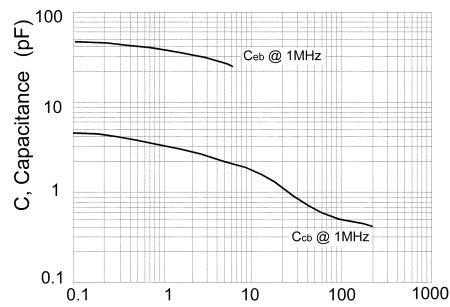


Figure 2. Capacitance

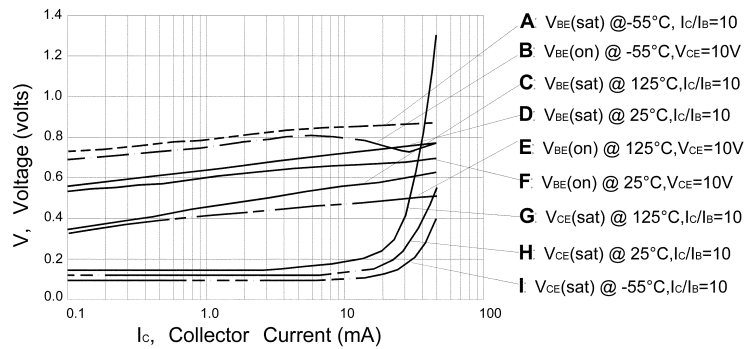
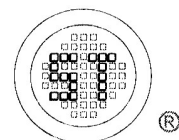


Figure 3. "on" Voltages



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