

TO-92 Plastic-Encapsulate Transistors

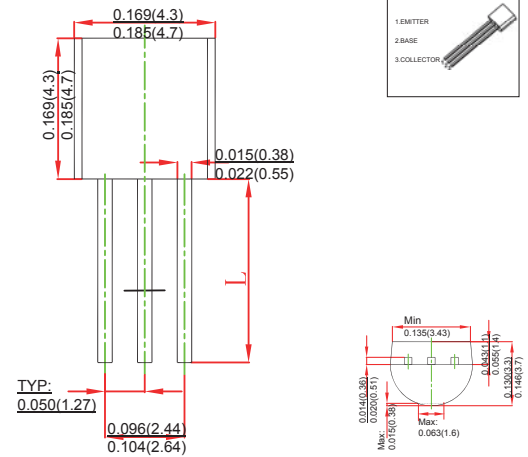
FEATURES

- General Purpose Amplifier
- TRANSISTOR (PNP)

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any

TO-92



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-200	V
V_{CEO}	Collector-Emitter Voltage	-200	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.5	A
P_C	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	200	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

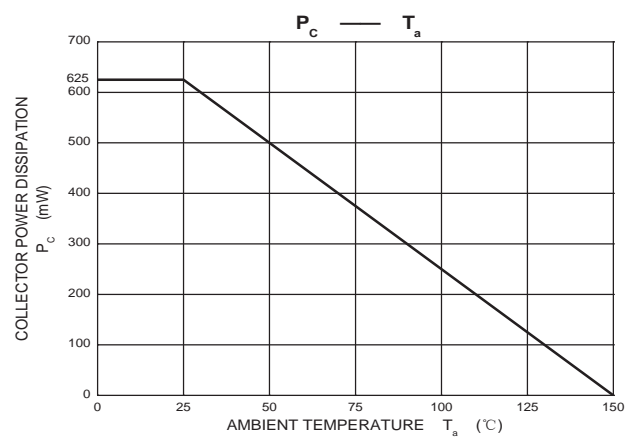
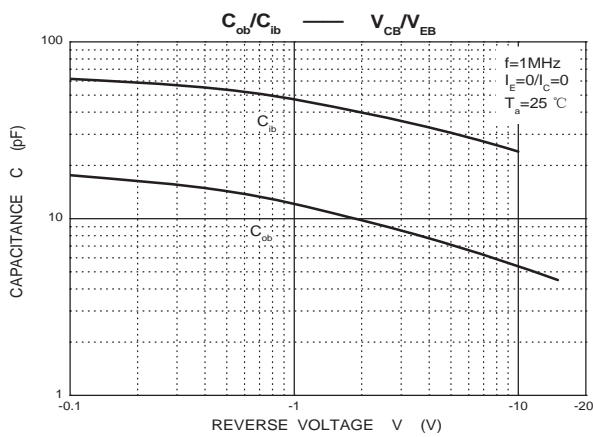
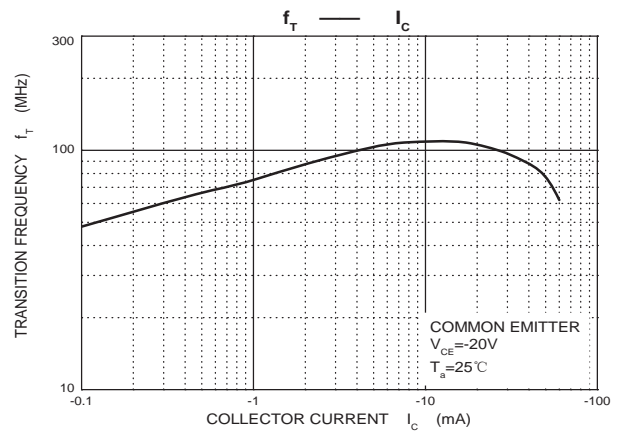
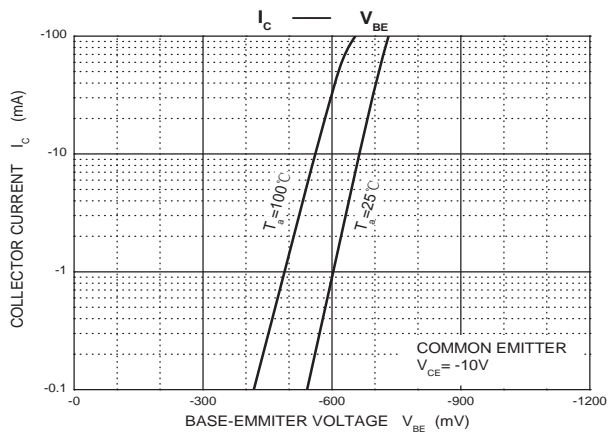
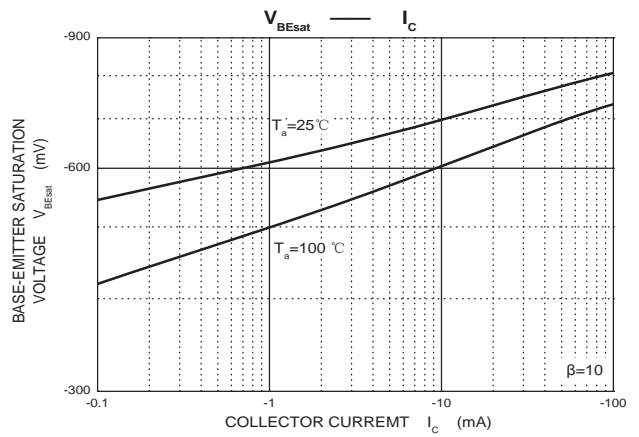
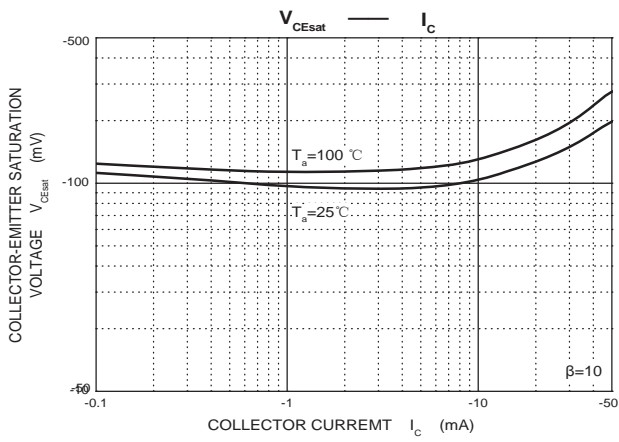
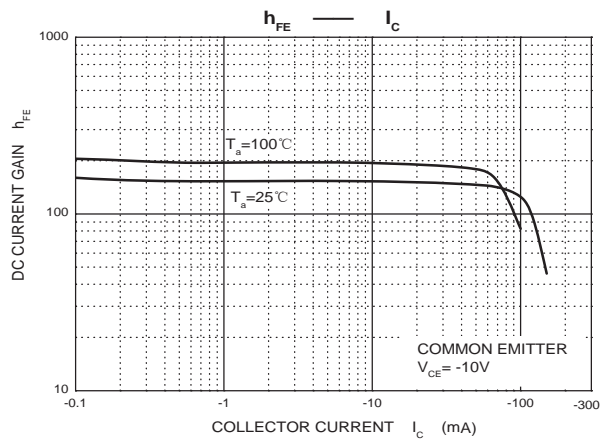
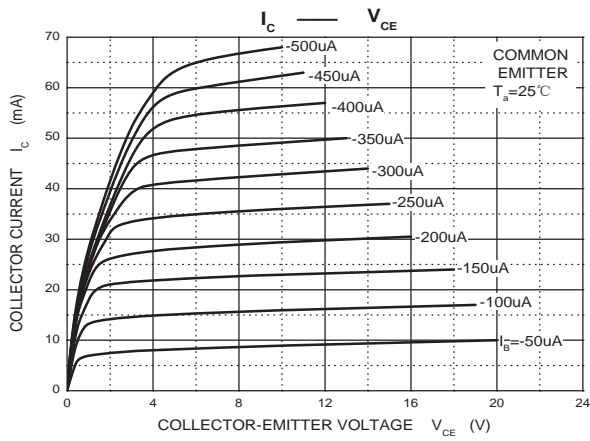
ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MPSA93	TO-92	Bulk	1000pcs/Bag
MPSA93-TA	TO-92	Tape	2000pcs/Box

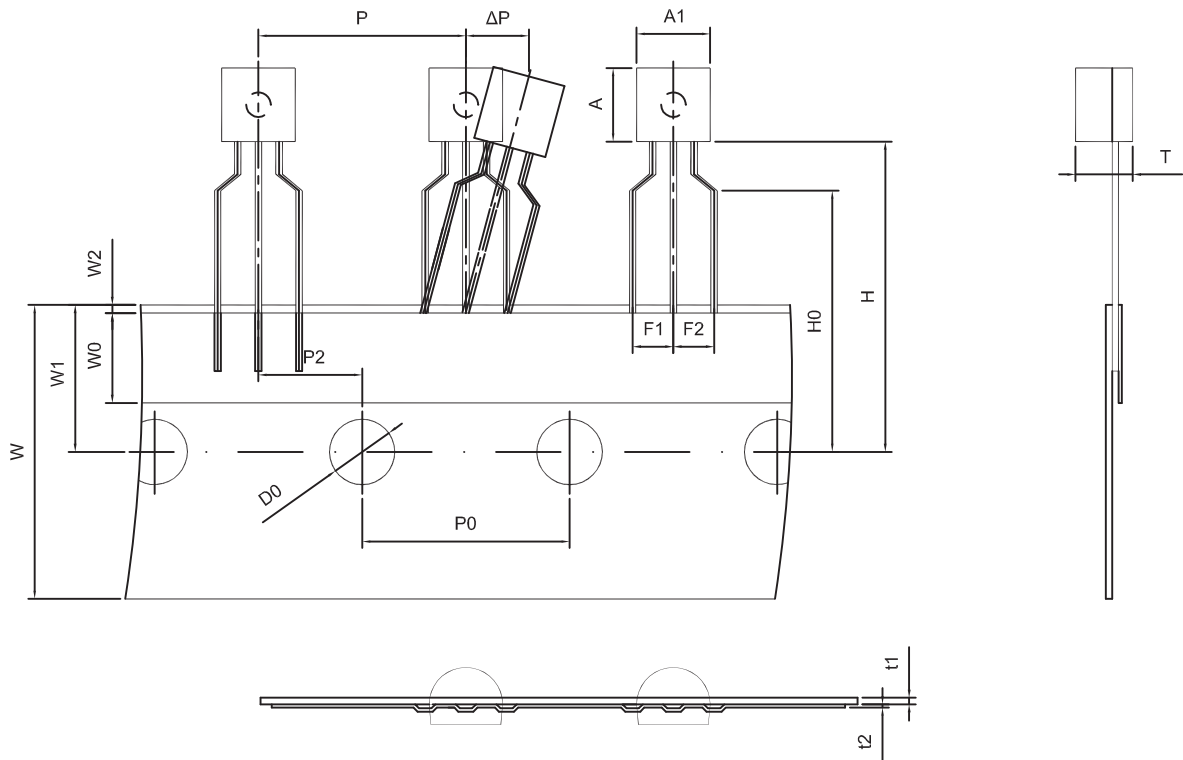
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -0.1mA, I_E = 0$	-2			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C = -1mA, I_B = 0$	-200			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -0.1mA, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -160V, I_E = 0$			-0.25	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3V, I_C = 0$			-0.1	mA
DC current gain	$h_{FE(1)}^*$	$V_{CE} = -10V, I_C = -1mA$				
	$h_{FE(2)}^*$	$V_{CE} = -10V, I_C = -10mA$				
	$h_{FE(3)}^*$	$V_{CE} = -10V, I_C = -30mA$				
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = -20mA, I_B = -2mA$			-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C = -20mA, I_B = -2mA$			-0.9	V
Transition frequency	f_T	$V_{CE} = -20V, I_C = -10mA, f = 100MHz$	50			MHz

*Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$.

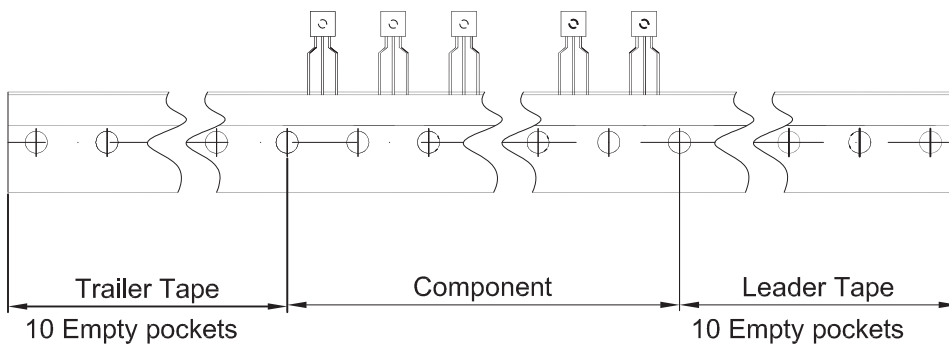
Marking	MPSA93
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TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250