

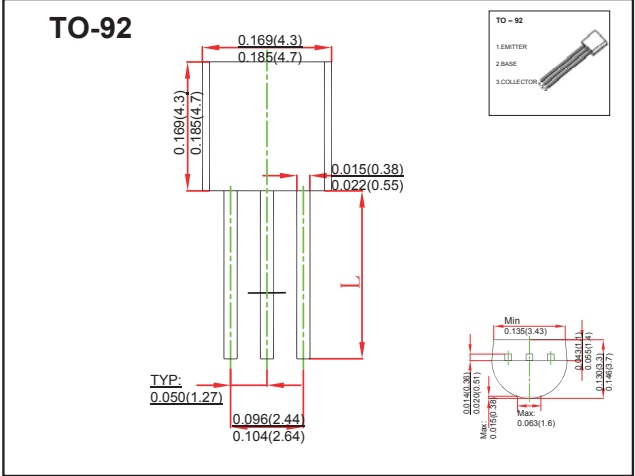
TO-92 Plastic-Encapsulate Transistors

FEATURES

- General Purpose Amplifier Transistor
- TRANSISTOR(PNP)

MECHANICAL DATA

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-40	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-0.6	A
P _D	Collector Power Dissipation	625	mW
R _{KJA}	Thermal Resistance from Junction to Ambient	200	°C /W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

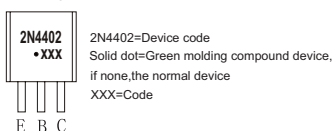
ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2N4402	TO-92	Bulk	1000pcs/Bag
2N4402-TA	TO-92	Tape	2000pcs/Box

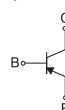
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = -0.1mA, I _E =0	-40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-0.1mA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-40V, I _E =0			-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-4V, I _C =0			-0.1	μA
DC current gain	h _{FE}	V _{CE} =-1V, I _C =-1mA	30			
		V _{CE} =-1V, I _C =-10mA	50			
		V _{CE} =-2V, I _C =-150mA	50		150	
		V _{CE} =-2V, I _C =-500mA	20			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-150mA, I _B =-15mA			-0.4	V
		I _C =-500mA, I _B =-50mA			-0.75	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-150mA, I _B =-15mA	-0.75		-0.95	V
		I _C =-500mA, I _B =-50mA			-1.3	V
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz			8.5	pF
Emitter input capacitance	C _{ib}	V _{EB} =-0.5V, I _C =0, f=1MHz			30	pF
Transition frequency	f _T	V _{CE} =-10V, I _C =-20mA, f=100MHz	150			MHz

*Pulse test: pulse width ≤300μs, duty cycle ≤ 2.0%.

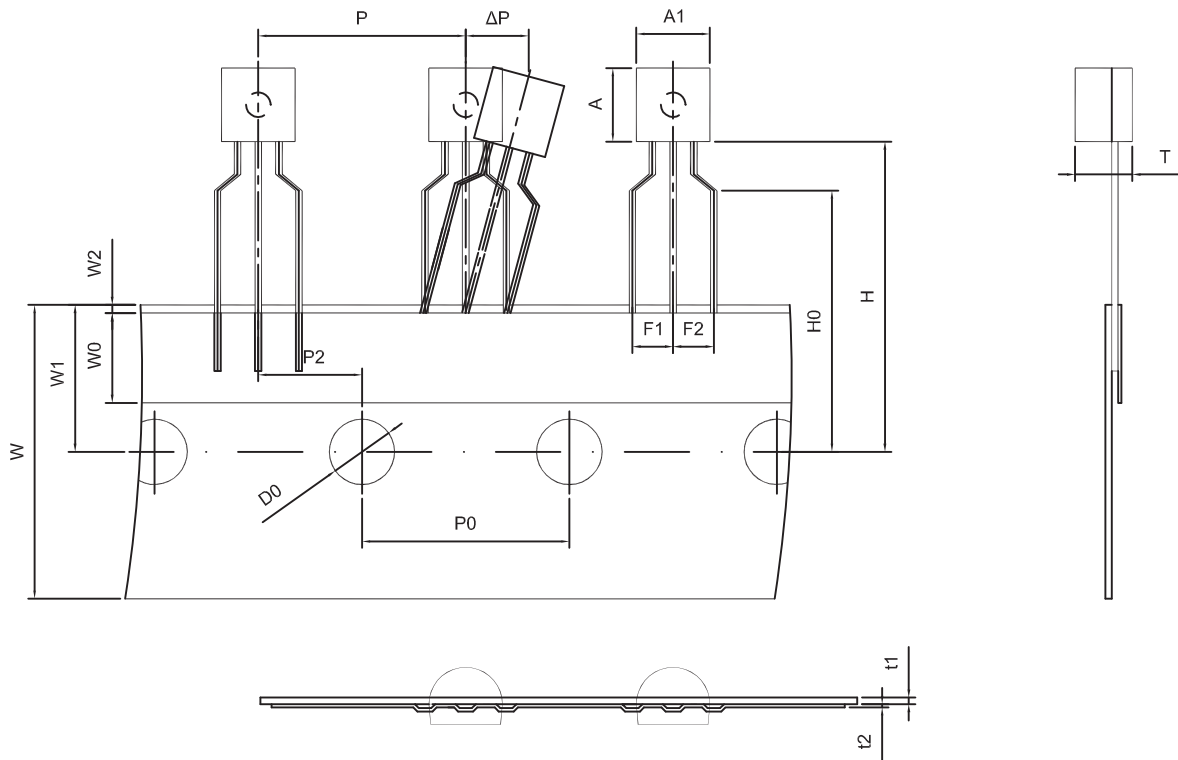
MARKING



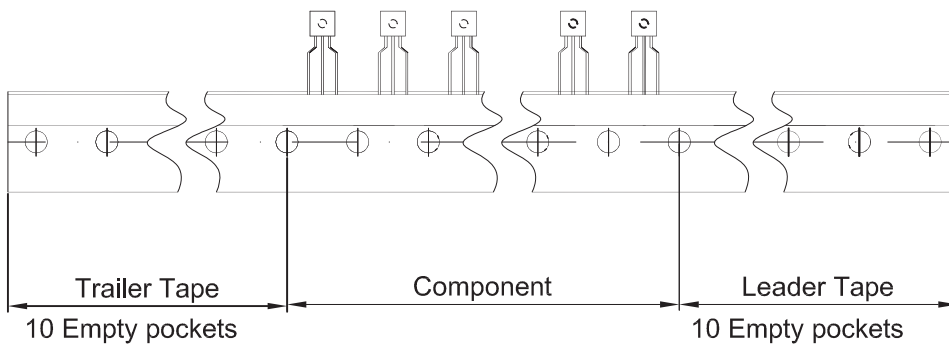
Equivalent Circuit



TO-92 PACKAGE TAPEING DIMENSION



Dimensions 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