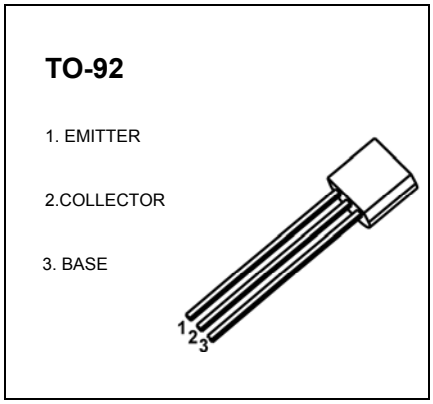
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

BF420
BF422

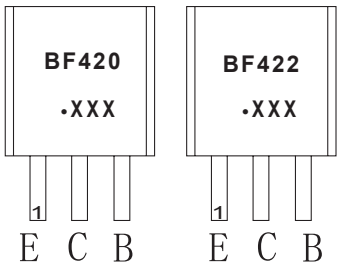
TRANSISTOR (NPN)



FEATURES

- Low feedback capacitance.
- NPN transistors in a TO-92 plastic package.
  PNP complements: BF421 and BF423
- Class-B video output stages in colour
  television and professional monitor equipment.

MARKING

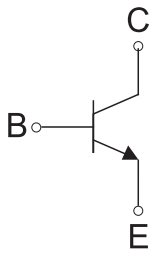


BF420,BF422=Device code

Solid dot=Green molding compound device,
if none,the normal device

XXX=Code

Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
BF420	TO-92	Bulk	1000pcs/Bag
BF420-TA	TO-92	Tape	2000pcs/Box
BF422	TO-92	Bulk	1000pcs/Bag
BF422-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

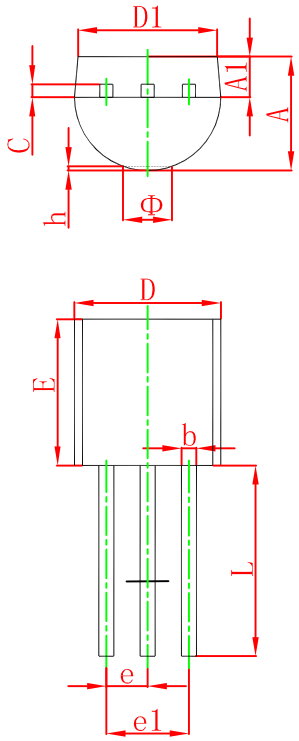
Symbol	Parameter	BF420	BF422	Unit
V_{CBO}	Collector-Base Voltage	300	250	V
V_{CEO}	Collector-Emitter Voltage	300	250	V
V_{EBO}	Emitter-Base Voltage	5		V
I_C	Collector Current -Continuous	100		mA
P_C	Collector Power Dissipation	0.830		W
R_{thja}	Thermal resistance from junction to ambient	151		℃/W
T_j	Junction temperature	150		℃
T_{stg}	Storage Temperature Range	-55~150		℃

ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

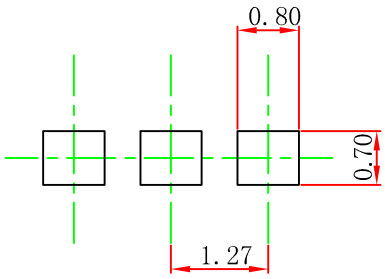
Parameter		Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	**BF420**	$V_{(BR)CBO}$	I_C=100μA, I_E=0	300		V
	BF422			250		
Collector-emitter breakdown voltage	**BF420**	$V_{(BR)CEO}$	I_C= 1mA , I_B=0	300		V
	BF422			250		
Emitter-base breakdown voltage		$V_{(BR)EBO}$	I_E=100μA, I_C=0	5		V
Collector cut-off current		I_{CBO}	V_{CB}=200V, I_E=0		0.01	μA
Emitter cut-off current		I_{EBO}	V_{EB}=5V, I_C=0		0.05	μA
DC current gain		h_{FE}	V_{CE}=20V, I_C=25mA	50		
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=30mA, I_B= 5mA		0.6	V
Transition frequency		f_T	V_{CE}=10V, I_C= 10mA f=100MHz	60		MHz
Feedback capacitance		C_{re}	V_{CE}=30V,I_C=0,f=1MHz		1.6	pF

TO-92 Package Outline Dimensions



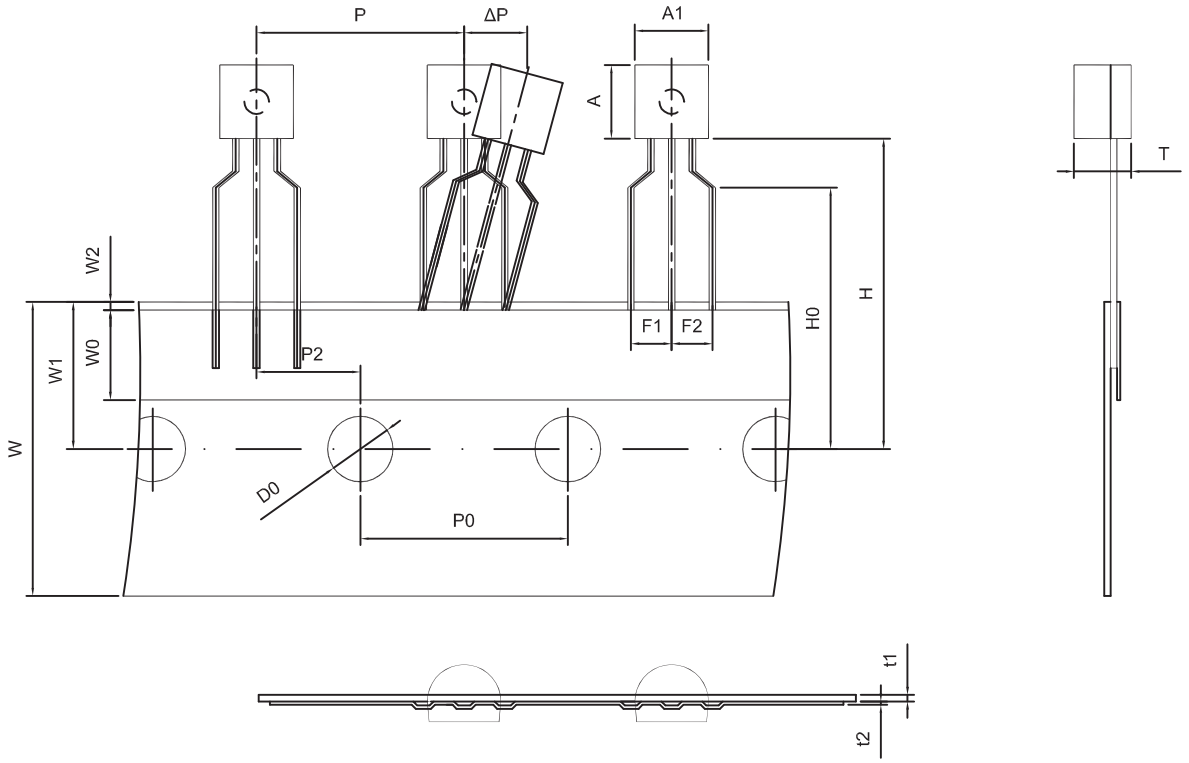
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92 Suggested Pad Layout

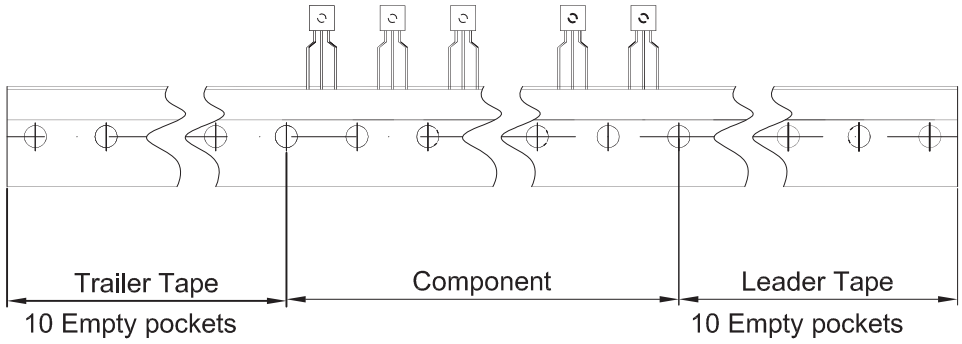


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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