

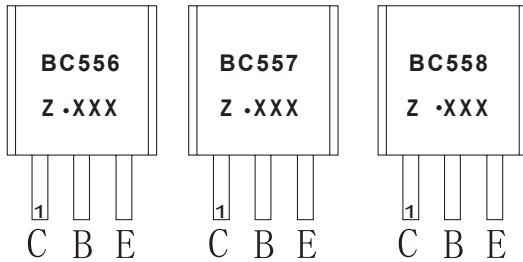
## TO-92 Plastic-Encapsulate Transistors

### BC556 / BC557 / BC558 TRANSISTOR (PNP)

#### FEATURES

- High Voltage
- Complement to BC546,BC547,BC548

#### MARKING



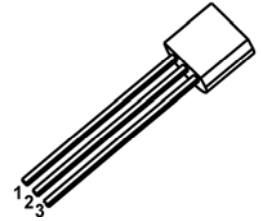
BC556,BC557,BC558=Device code

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

Z=Rank of  $h_{FE}$

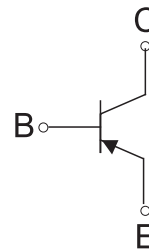
XXX=Code

TO - 92



1. COLLECTOR
2. BASE
3. EMITTER

#### Equivalent Circuit



#### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
BC556	TO-92	Bulk	1000pcs/Bag
BC556-TA	TO-92	Tape	2000pcs/Box
BC557	TO-92	Bulk	1000pcs/Bag
BC557-TA	TO-92	Tape	2000pcs/Box
BC558	TO-92	Bulk	1000pcs/Bag
BC558-TA	TO-92	Tape	2000pcs/Box

#### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	BC556	-80
		BC557	-50
		BC558	-30
$V_{CEO}$	Collector-Emitter Voltage	BC556	-65
		BC557	-45
		BC558	-30
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-0.1	A
$P_C$	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	$^\circ\text{C/W}$
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS

$T_a=25^\circ\text{C}$  unless otherwise specified

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC556	$V_{(BR)CBO}$	$I_C = -0.1\text{mA}, I_E = 0$	-80			V
	BC557			-50			
	BC558			-30			
Collector-emitter breakdown voltage	BC556	$V_{(BR)CEO}$	$I_C = -2\text{mA}, I_B = 0$	-65			V
	BC557			-45			
	BC558			-30			
Emitter-base breakdown voltage		$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	BC556	$I_{CBO}$	$V_{CB} = -70\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
	BC557		$V_{CB} = -45\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
	BC558		$V_{CB} = -25\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Collector cut-off current	BC556	$I_{CEO}$	$V_{CE} = -60\text{V}, I_B = 0$			-0.1	$\mu\text{A}$
	BC557		$V_{CE} = -40\text{V}, I_B = 0$			-0.1	$\mu\text{A}$
	BC558		$V_{CE} = -25\text{V}, I_B = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current		$I_{EBO}$	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
DC current gain		$h_{FE}^*$	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	120		800	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$			-0.3	V
			$I_C = -100\text{mA}, I_B = -5\text{mA}$			-0.65	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$			-0.8	V
			$I_C = -100\text{mA}, I_B = -5\text{mA}$			-1	V
Base-emitter voltage		$V_{BE}$	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	-0.55		-0.7	V
			$V_{CE} = -5\text{V}, I_C = -10\text{mA}$			-0.82	V
Collector output capacitance		$C_{ob}$	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$			6	pF
Transition frequency	BC556	$f_T$	$V_{CE} = -5\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$		150		MHz
	BC557				150		MHz
	BC558				150		MHz

### CLASSIFICATION of $h_{FE}$

RANK	A	B	C
RANGE	120-220	180-460	420-800

## 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



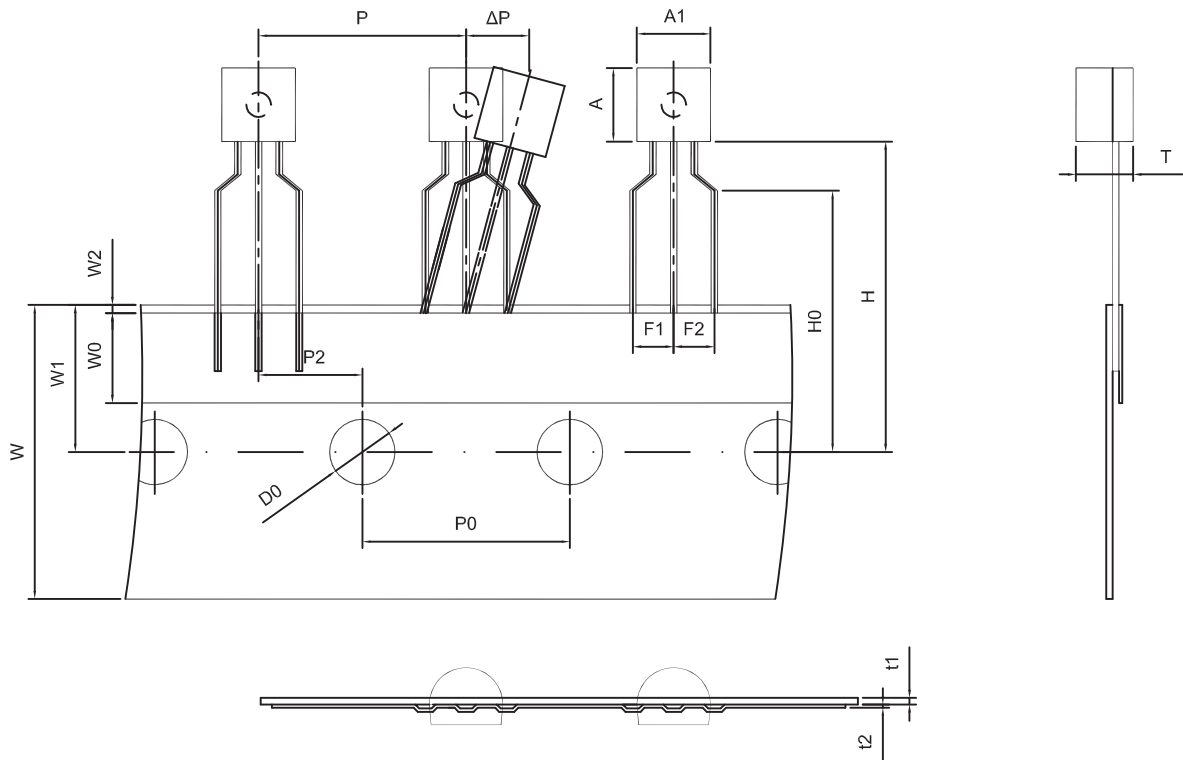
### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

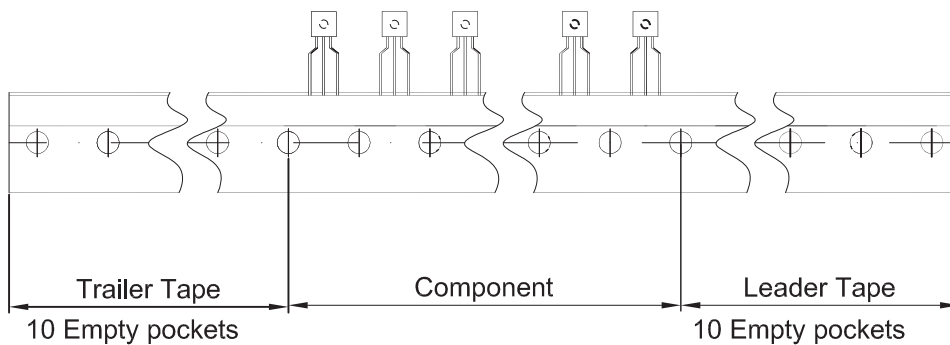
### NOTICE

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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