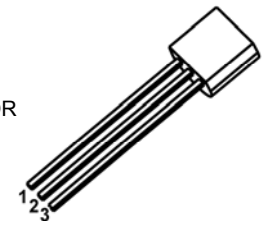
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encap sulate Transistors

BC635 / BC637 / BC639 TRANSISTOR (NPN)

TO-92

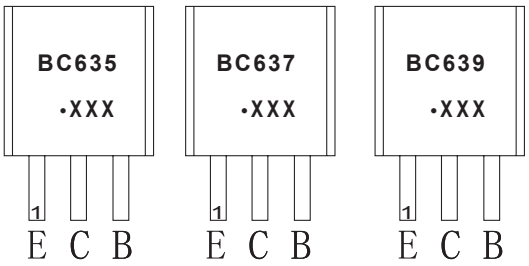
1. EMITTER
2. COLLECTOR
3. BASE



FEATURES

- High current transistors

MARKING

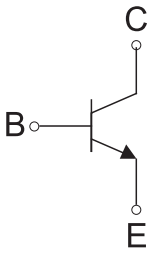


BC635,BC637,BC639=Device code

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

XXX=Code

Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
BC635	TO-92	Bulk	1000pcs/Bag
BC635-TA	TO-92	Tape	2000pcs/Box
BC637	TO-92	Bulk	1000pcs/Bag
BC637-TA	TO-92	Tape	2000pcs/Box
BC639	TO-92	Bulk	1000pcs/Bag
BC639-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

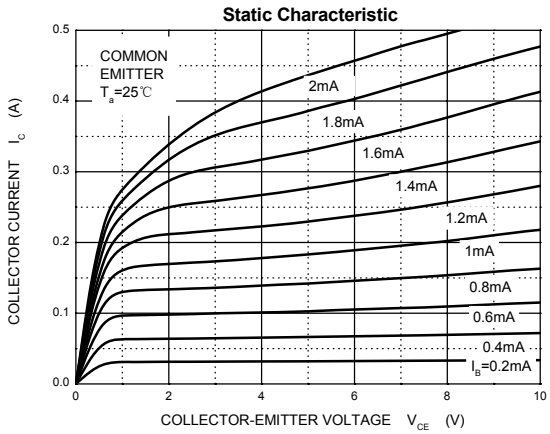
Symbol	Parameter		Value	Unit
V_{CBO}	Collector-Emitter Voltage	BC635	45	V
		BC637	60	V
		BC639	100	V
V_{CEO}	Collector-Emitter Voltage	BC635	45	V
		BC637	60	V
		BC639	80	V
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current -Continuous		1	A
P_C	Collector Power Dissipation		0.83	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature		-65-150	℃

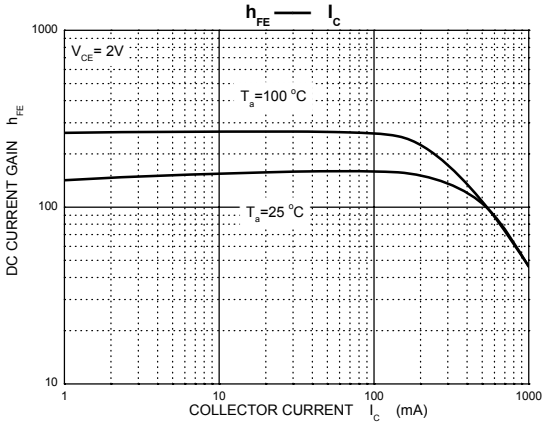
ELECTRICAL CHARACTERISTICS

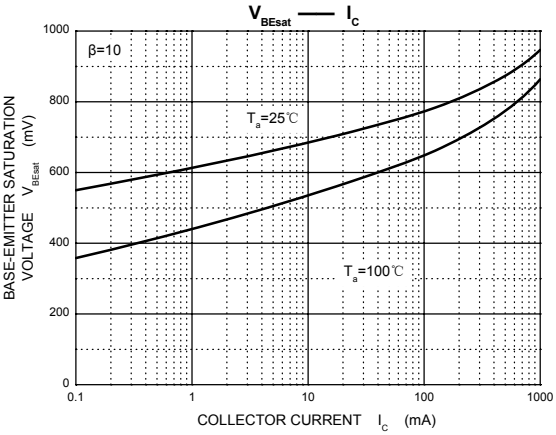
T_a=25℃ unless otherwise specified

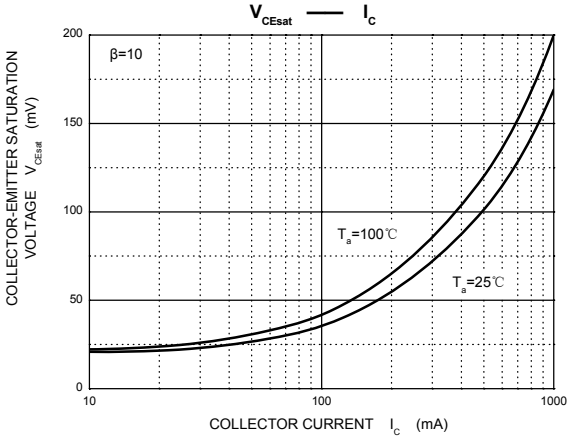
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0 BC635	45			V
		BC637	60			V
		BC639	80			V
Collector cut-off current	I_{CBO}	V_{CB}= 30 V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_B=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=2 V, I_C= 5mA	25			
	$h_{FE(2)}$	V_{CE}=2V, I_C=150mA BC635	40		250	
		BC637-10/BC639-10	63		160	
		BC637-16/BC639-16	100		250	
	$h_{FE(3)}$	V_{CE}=2V, I_C= 500mA	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA			0.5	V
Base-emitter voltage	V_{BE}	V_{CE}=2V, I_C=500mA			1	V
Transition frequency	f_T	V_{CE}=5V, I_C=10mA,f= 50 MH_Z		100		MHz

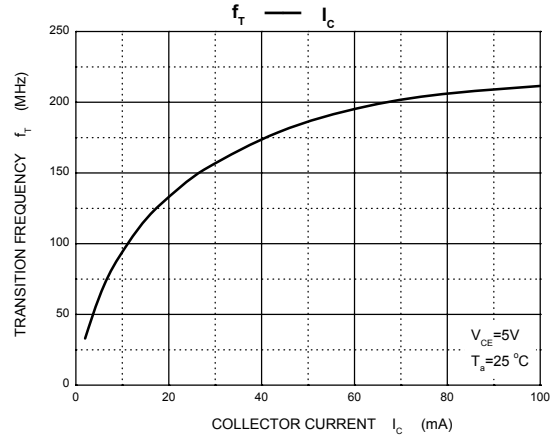
Typical Characteristics

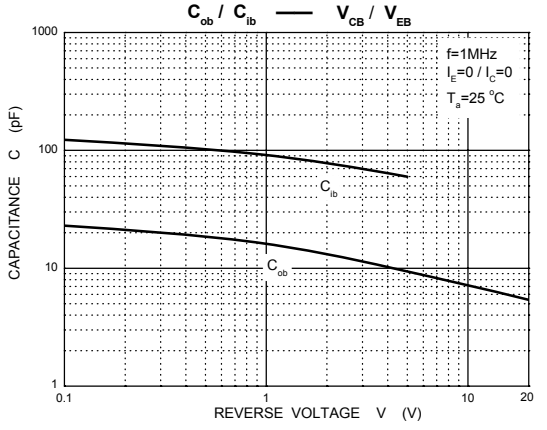


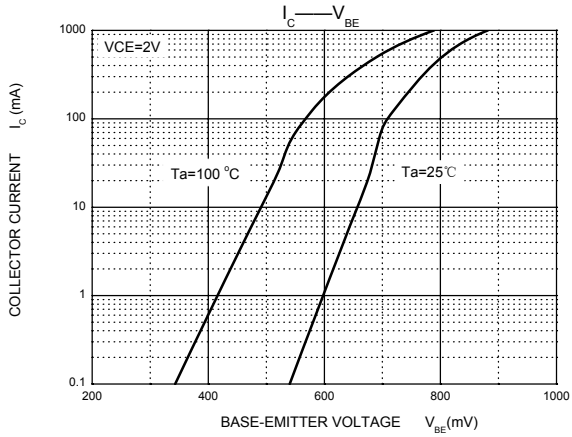


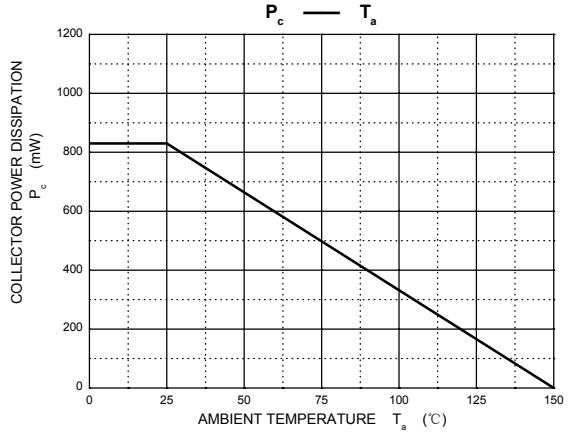




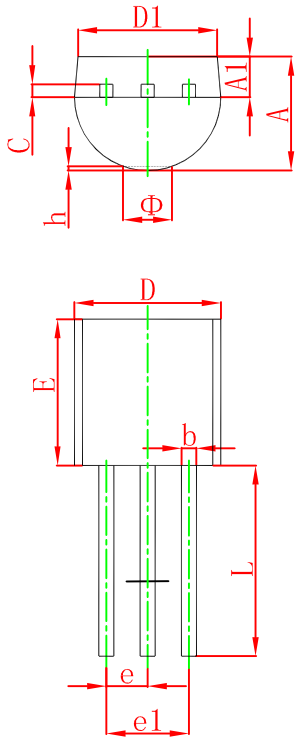






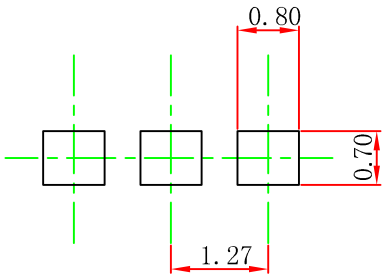


TO-92 Package Outline Dimensions



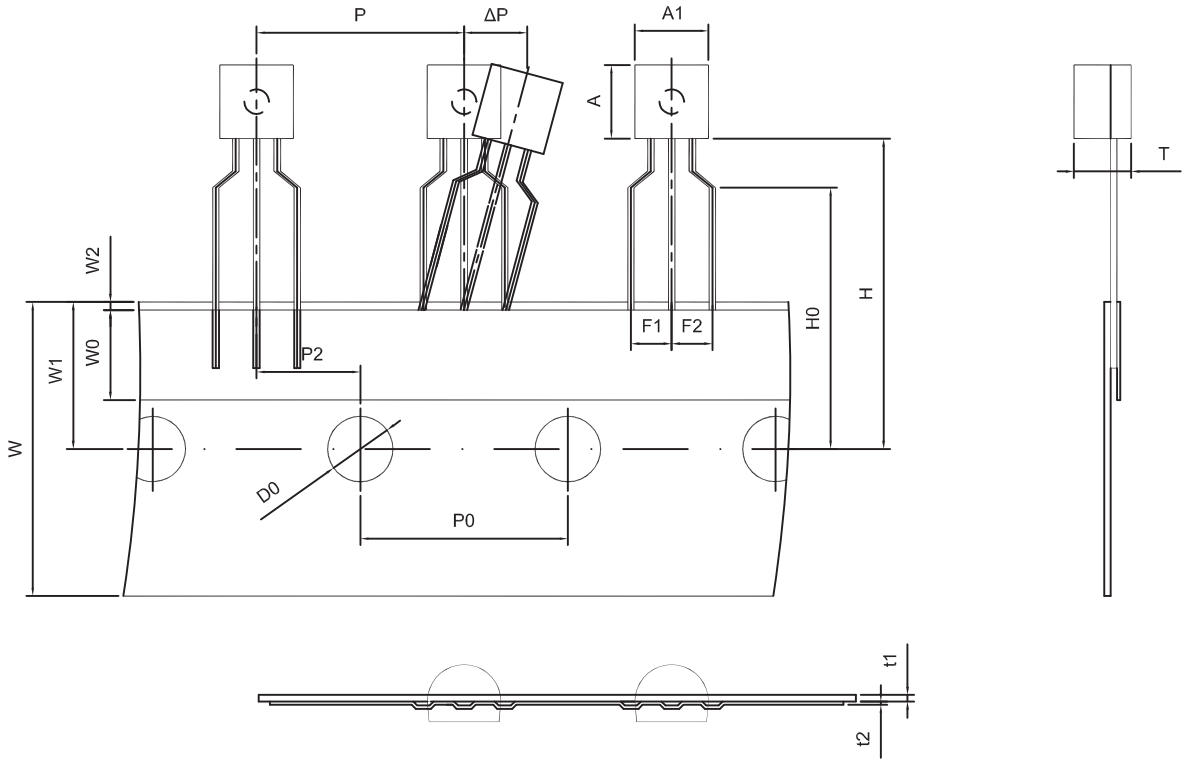
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100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

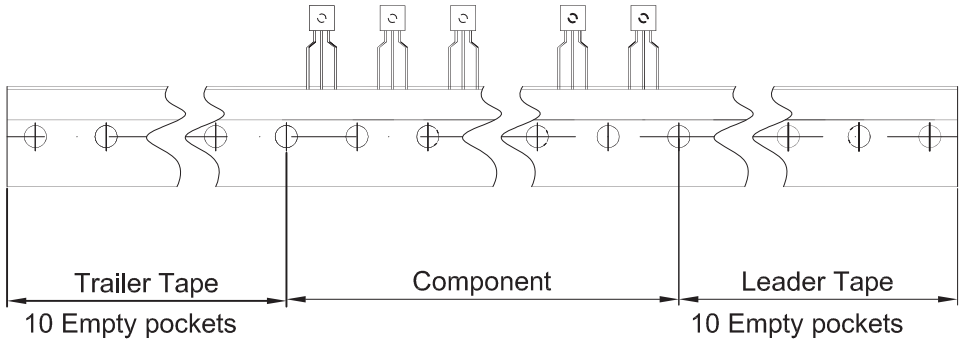


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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