

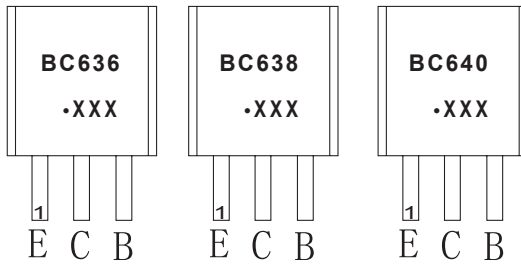
TO-92 Plastic-Encapsulate Transistors

BC636 / BC638 / BC640 TRANSISTOR (PNP)

FEATURES

High current transistors

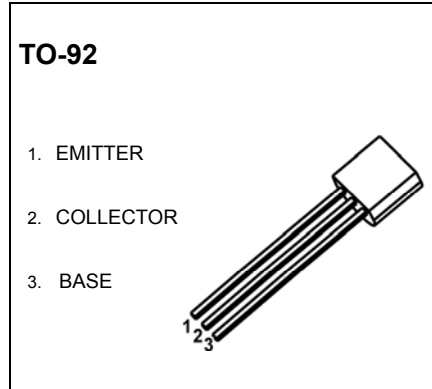
MARKING



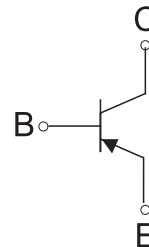
BC636,BC638,BC640=Device code

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

XXX=Code



Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
BC636	TO-92	Bulk	1000pcs/Bag
BC636-TA	TO-92	Tape	2000pcs/Box
BC638	TO-92	Bulk	1000pcs/Bag
BC638-TA	TO-92	Tape	2000pcs/Box
BC640	TO-92	Bulk	1000pcs/Bag
BC640-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	BC636	-45
		BC638	-60
		BC640	-100
V _{CEO}	Collector-Emitter Voltage	BC636	-45
		BC638	-60
		BC640	-80
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-1	A
P _C	Collector Power Dissipation	0.83	W
R _{θJA}	Thermal Resistance, junction to Ambient	150	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$ BC636	-45			V
		BC638	-60			
		BC640	-100			
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$ BC636	-45			V
		BC638	-60			
		BC640	-80			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-30\text{V}, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=-2\text{V}, I_C=-5\text{mA}$	40			
	$h_{FE(2)}$	$V_{CE}=-2\text{V}, I_C=-150\text{mA}$	63		250	
	$h_{FE(3)}$	$V_{CE}=-2\text{V}, I_C=-500\text{mA}$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-0.5	V
Base-emitter voltage	V_{BE}	$V_{CE}=-2\text{V}, I_C=-500\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-50\text{mA}, f=100\text{MHz}$	100			MHz

CLASSIFICATION OF $h_{FE(2)}$

Rank	BC636-10	BC636-16, BC638-16, BC640-16
Range	63-160	100-250

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

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

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