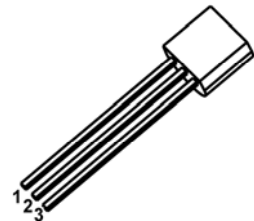
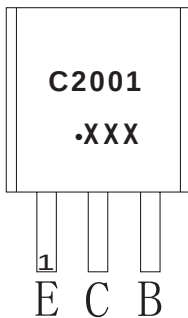


**TO-92 Plastic-Encapsulate Transistors****2SC2001** TRANSISTOR (NPN)**FEATURES**

- High h_{FE} and Low $V_{CE(sat)}$
 $h_{FE}(I_C=100mA)$: 200(Typ)
 $V_{CE(sat)}(700mA)$: 0.2V (Typ)

TO-92

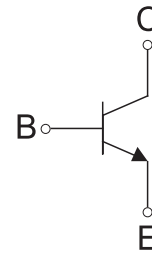
1. EMITTER
2. COLLECTOR
3. BASE

**MARKING**

C2001=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
2SC2001	TO-92	Bulk	1000pcs/Bag
2SC2001-TA	TO-92	Tape	2000pcs/Box

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	700	mA
P_C	Collector Power Dissipation	600	mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55-150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS

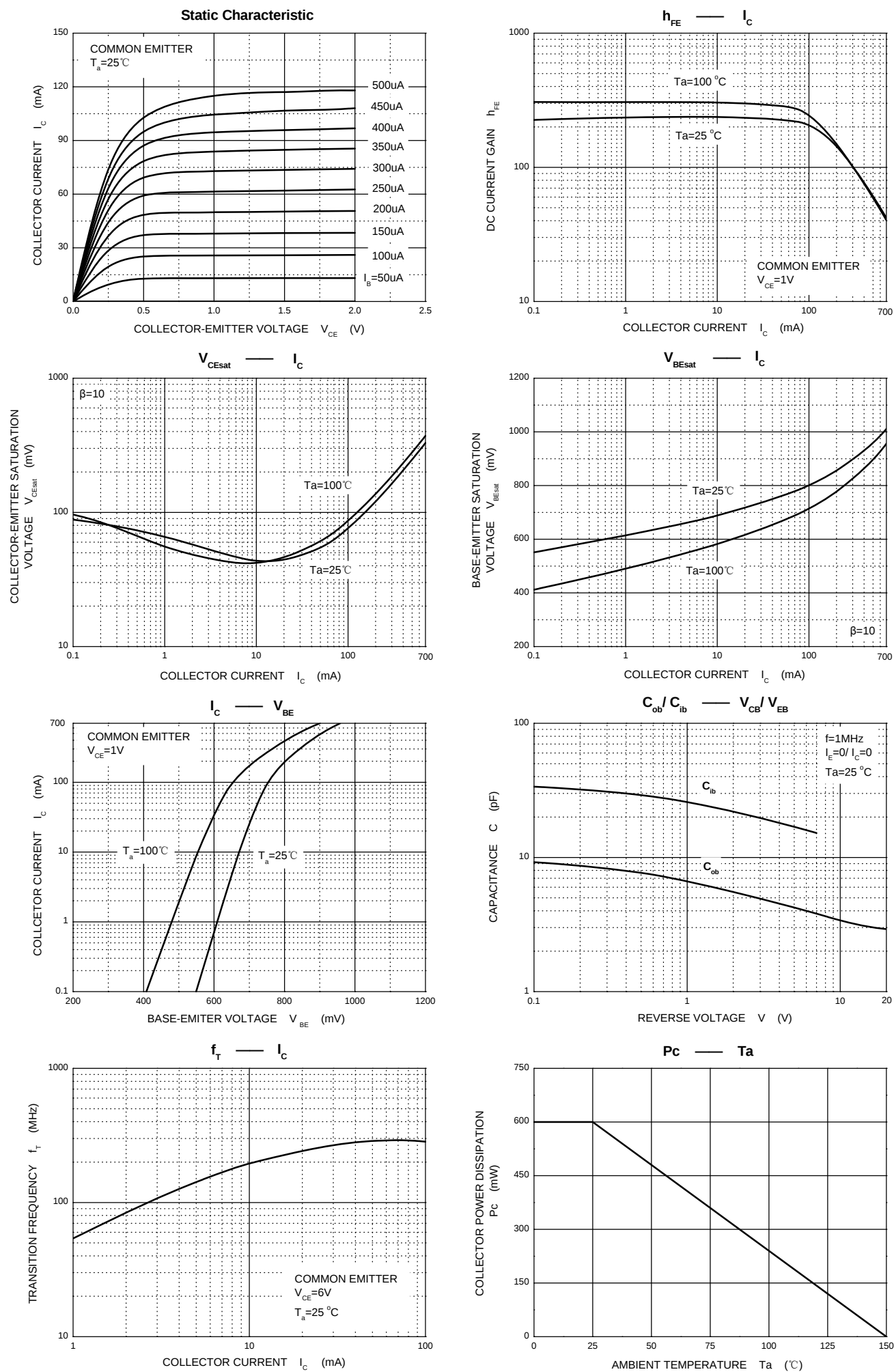
$T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}$, $I_B=0$	25		V
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
Collector cut-off current	I_{CEO}	$V_{CE}=20\text{ V}$, $I_B=0$		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}	$V_{CE}=1\text{V}$, $I_C=100\text{mA}$	90	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=700\text{mA}$, $I_B=70\text{mA}$		0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=700\text{mA}$, $I_B=70\text{mA}$		1.2	V
Transition frequency	f_T	$V_{CE}=6\text{V}$, $I_C=10\text{mA}$ $f=30\text{MHz}$	50		MHz

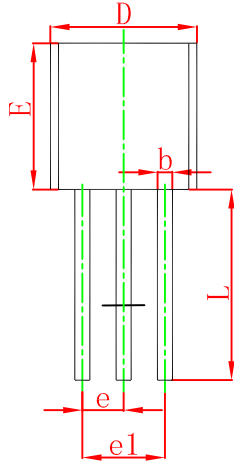
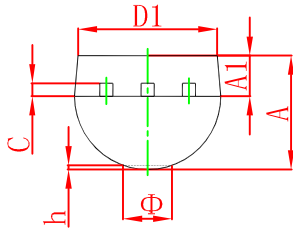
CLASSIFICATION OF h_{FE}

Rank	M	L	K
Range	90-180	135-270	200-400

Typical Characteristics

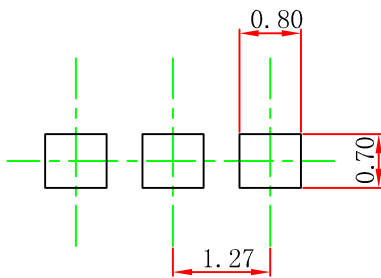


TO-92 Package Outline Dimensions



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

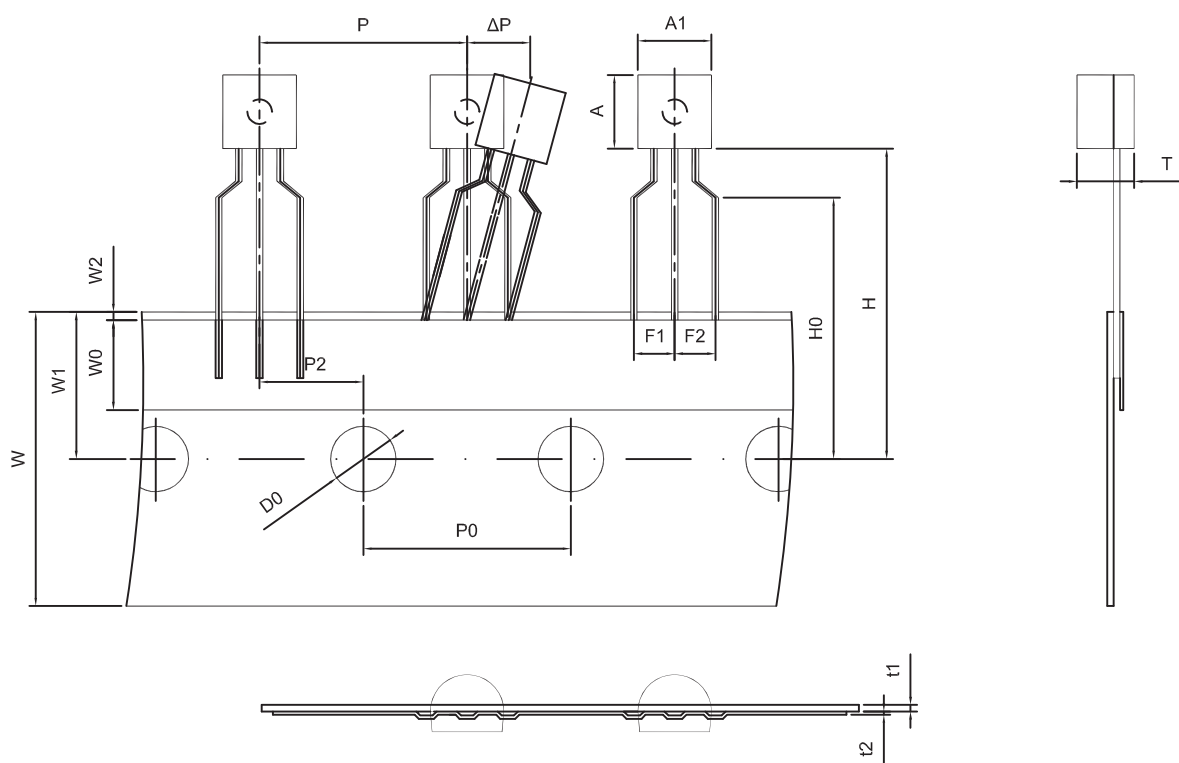


Note:

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

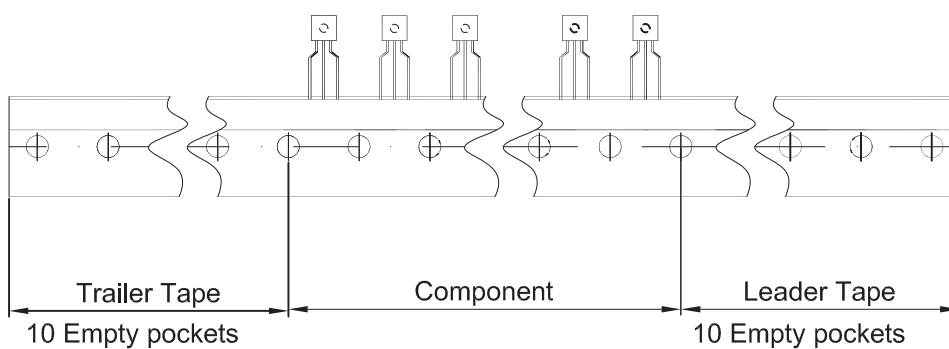
NOTICE

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



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