

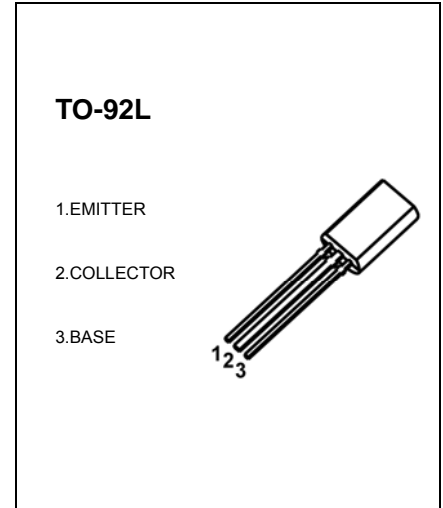
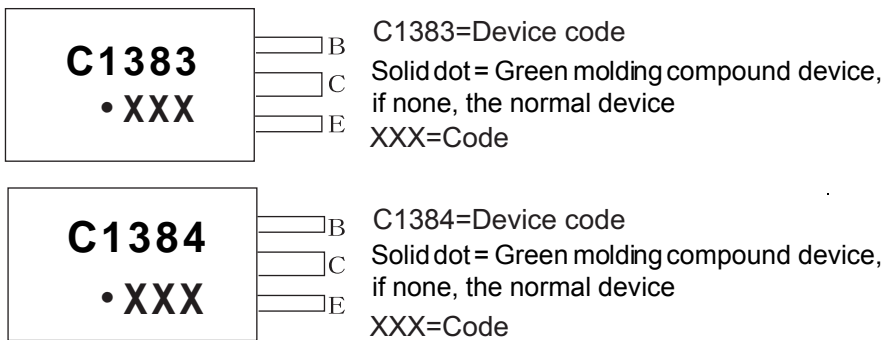
TO-92L Plastic-Encapsulate Transistors

2SC1383 TRANSISTOR (NPN)
2SC1384

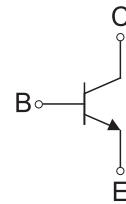
FEATURES

- Low Collector to Emitter Saturation Voltage $V_{CE(sat)}$.
- Complementary Pair with 2SA0683 and 2SA0684.

MARKING



Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SC1383	TO-92L	Bulk	500pcs/Bag
2SC1383-TA	TO-92L	Tape	2000pcs/Box
2SC1384	TO-92L	Bulk	500pcs/Bag
2SC1384-TA	TO-92L	Tape	2000pcs/Box

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

Symbol	Parameter	2SC1383	2SC1384	Unit
V_{CBO}	Collector-Base Voltage	30	60	V
V_{CEO}	Collector-Emitter Voltage	25	50	V
V_{EBO}	Emitter-Base Voltage	5		V
I_C	Collector Current –Continuous	1		A
P_C	Collector Power Dissipation	0.75		W
T_J	Junction Temperature	150		°C
T_{stg}	Storage Temperature	-55-150		°C

ELECTRICAL CHARACTERISTICS

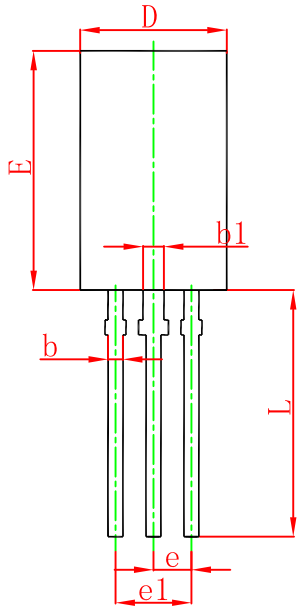
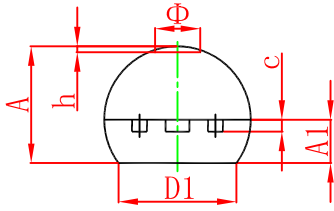
$T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage 2SC1383 2SC1384	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	30 60			V
Collector-emitter breakdown voltage 2SC1383 2SC1384	$V_{(BR)CEO}$	$I_C=2\text{mA}, I_B=0$	25 50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	85		340	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=1\text{A}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=50\text{mA}$		200		MHz

CLASSIFICATION OF $h_{FE(1)}$

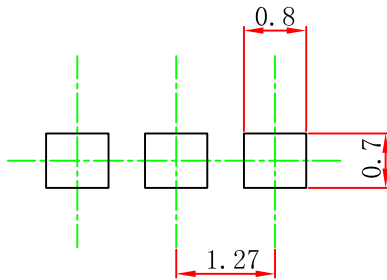
Rank	Q	R	S
Range	85-170	120-240	170-340

TO-92L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	3.750	4.050	0.148	0.159
A1	1.280	1.580	0.050	0.062
b	0.380	0.550	0.015	0.022
b1	0.620	0.780	0.024	0.031
c	0.350	0.450	0.014	0.018
D	4.750	5.050	0.187	0.199
D1	4.000		0.157	
E	7.850	8.150	0.309	0.321
e	1.270 TYP.		0.050 TYP.	
e1	2.440	2.640	0.096	0.104
L	13.800	14.200	0.543	0.559
Φ		1.600		0.063
h	0.000	0.300	0.000	0.012

TO-92L Suggested Pad Layout



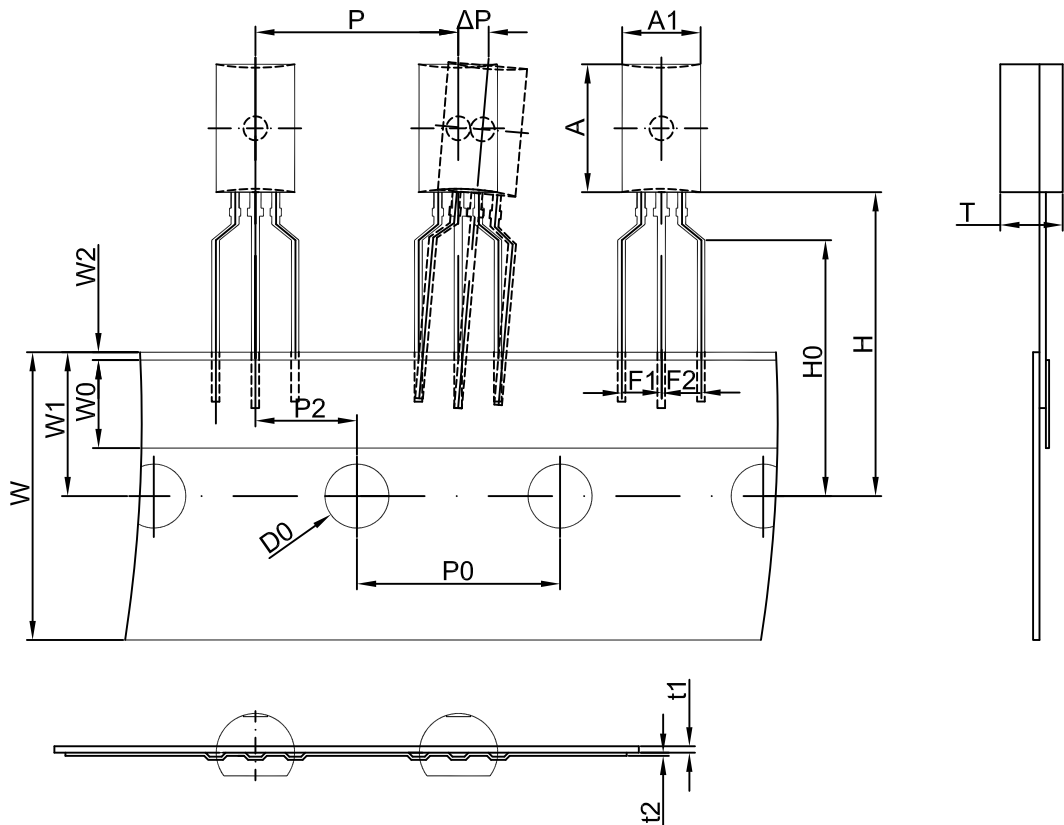
Note:

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

NOTICE

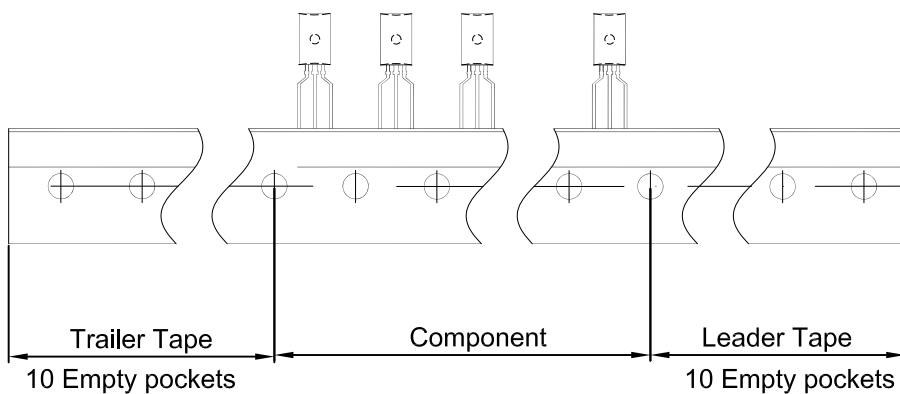
JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

TO-92L PACKAGE TAPING DIMENSION



Dimensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.9	8.0	3.9	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	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92L	2000 pcs	333×203×42	20,000 pcs	493×400×264