



JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

JSCJ TO-92MOD Plastic-Encapsulate Transistors

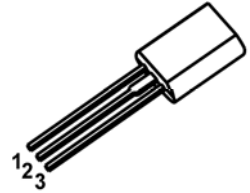
2SC2383 TRANSISTOR (NPN)

FEATURE

- High Voltage: $V_{CEO}=160V$
- Large Continuous Collector Current Capability
- Complementary to 2SA1013

TO-92MOD

1. EMITTER
2. COLLECTOR
3. BASE

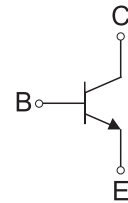


MARKING



C2383=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
2SC2383	TO-92MOD	Bulk	500pcs/Bag
2SC2383-TA	TO-92MOD	Tape	2000pcs/Box

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Power Dissipation	0.9	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

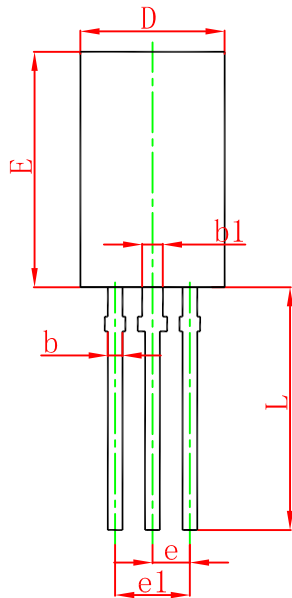
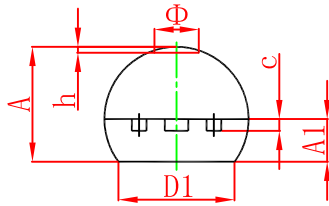
$T_a=25^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V(\text{BR})_{\text{CBO}}$	$I_{\text{C}}=100\mu\text{A}$, $I_{\text{E}}=0$	160		V
Collector-emitter breakdown voltage	$V(\text{BR})_{\text{CEO}}$	$I_{\text{C}}=10\text{mA}$, $I_{\text{B}}=0$	160		V
Emitter-base breakdown voltage	$V(\text{BR})_{\text{EBO}}$	$I_{\text{E}}=10\mu\text{A}$, $I_{\text{C}}=0$	6		V
Collector cut-off current	I_{CBO}	$V_{\text{CB}}=150\text{V}$, $I_{\text{E}}=0$		1	μA
Collector cut-off current	I_{CER}	$V_{\text{CB}}=150\text{V}$, $R_{\text{EB}}=10\text{M}\Omega$		10	μA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}}=6\text{V}$, $I_{\text{C}}=0$		1	μA
DC current gain	h_{FE1}	$V_{\text{CE}}=5\text{V}$, $I_{\text{C}}=200\text{mA}$	60	320	
	h_{FE2}	$V_{\text{CE}}=5\text{V}$, $I_{\text{C}}=10\text{mA}$	40		
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}}=500\text{mA}$, $I_{\text{B}}=50\text{mA}$		1	V
Base-emitter voltage	V_{BE}	$I_{\text{C}}=5\text{mA}$, $V_{\text{CE}}=5\text{V}$		0.75	V
Transition frequency	f_{T}	$V_{\text{CE}}=5\text{V}$, $I_{\text{C}}=200\text{mA}$	20		MHz

CLASSIFICATION OF h_{FE1}

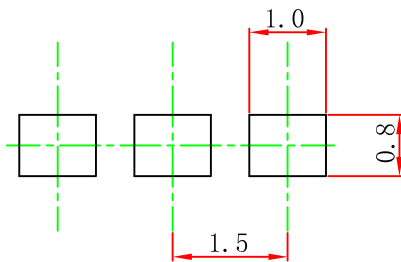
Rank	R	O	Y
Range	60-120	100-200	160-320

TO-92MOD Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.800	5.000	0.189	0.197
A1	1.730	2.030	0.068	0.080
b	0.440	0.600	0.017	0.024
b1	0.940	1.100	0.037	0.043
c	0.350	0.450	0.014	0.018
D	5.900	6.100	0.232	0.240
D1	4.000		0.157	
E	8.500	8.700	0.335	0.343
e	1.500 TYP.		0.059 TYP.	
e1	2.900	3.100	0.114	0.122
L	13.800	14.200	0.543	0.559
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92MOD Suggested Pad Layout



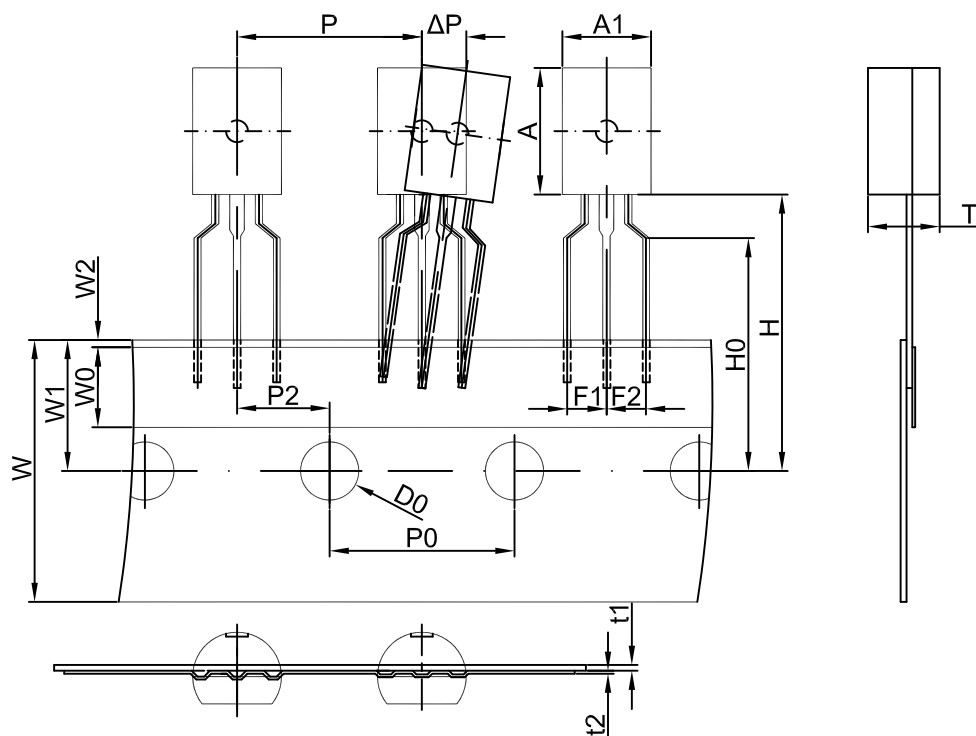
Note:

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

NOTICE

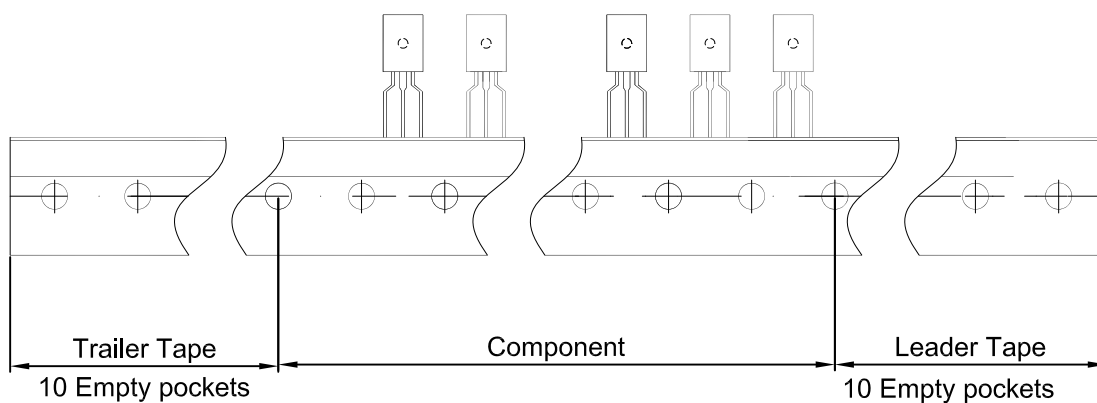
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TO-92MOD PACKAGE TAPING DIMENSION



Dimensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
6.0	8.6	4.9	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-92MOD	2000 pcs	333×245×43	20,000 pcs	573×404×266