

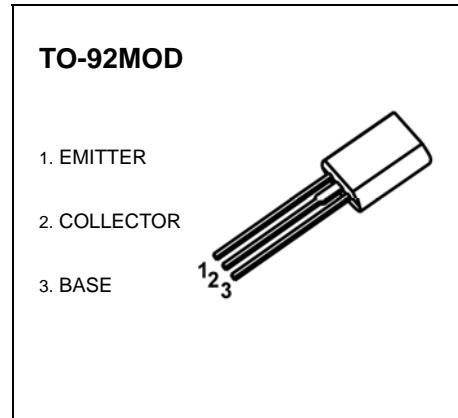


**TO-92MOD Plastic-Encapsulate Transistors**

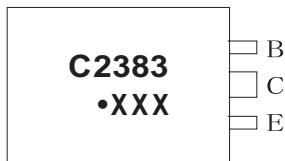
**2SC2383** TRANSISTOR (NPN)

**FEATURE**

- High Voltage:  $V_{CE0}=160V$
- Large Continuous Collector Current Capability
- Complementary to 2SA1013

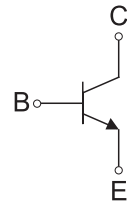


**MARKING**



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

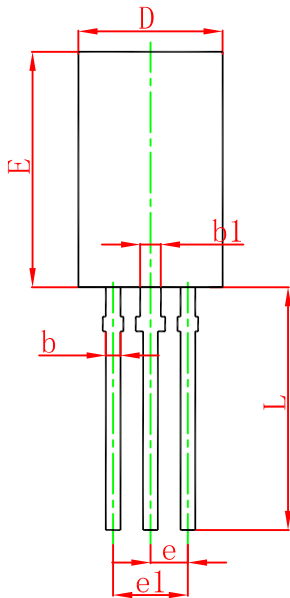
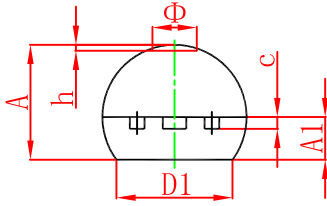
$T_a=25^\circ\text{C}$  unless otherwise specified

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	$I_{\text{CBO}}$	$V_{\text{CB}}=150\text{V}, I_{\text{E}}=0$		1	$\mu\text{A}$
Collector cut-off current	$I_{\text{CER}}$	$V_{\text{CB}}=150\text{V}, R_{\text{EB}}=10\text{M}\Omega$		10	$\mu\text{A}$
Emitter cut-off current	$I_{\text{EBO}}$	$V_{\text{EB}}=6\text{V}, I_{\text{C}}=0$		1	$\mu\text{A}$
DC current gain	$h_{\text{FE1}}$	$V_{\text{CE}}=5\text{V}, I_{\text{C}}=200\text{mA}$	60	320	
	$h_{\text{FE2}}$	$V_{\text{CE}}=5\text{V}, I_{\text{C}}=10\text{mA}$	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	$V_{\text{BE}}$	$I_{\text{C}}=5\text{mA}, V_{\text{CE}}=5\text{V}$		0.75	V
Transition frequency	$f_{\text{T}}$	$V_{\text{CE}}=5\text{V}, I_{\text{C}}=200\text{mA}$	20		MHz

### CLASSIFICATION OF $h_{\text{FE1}}$

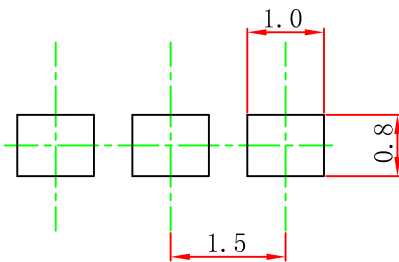
Rank	R	O	Y
Range	60-120	100-200	160-320

## 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
$\Phi$		1.600		0.063
h	0.000	0.380	0.000	0.015

## TO-92MOD Suggested Pad Layout



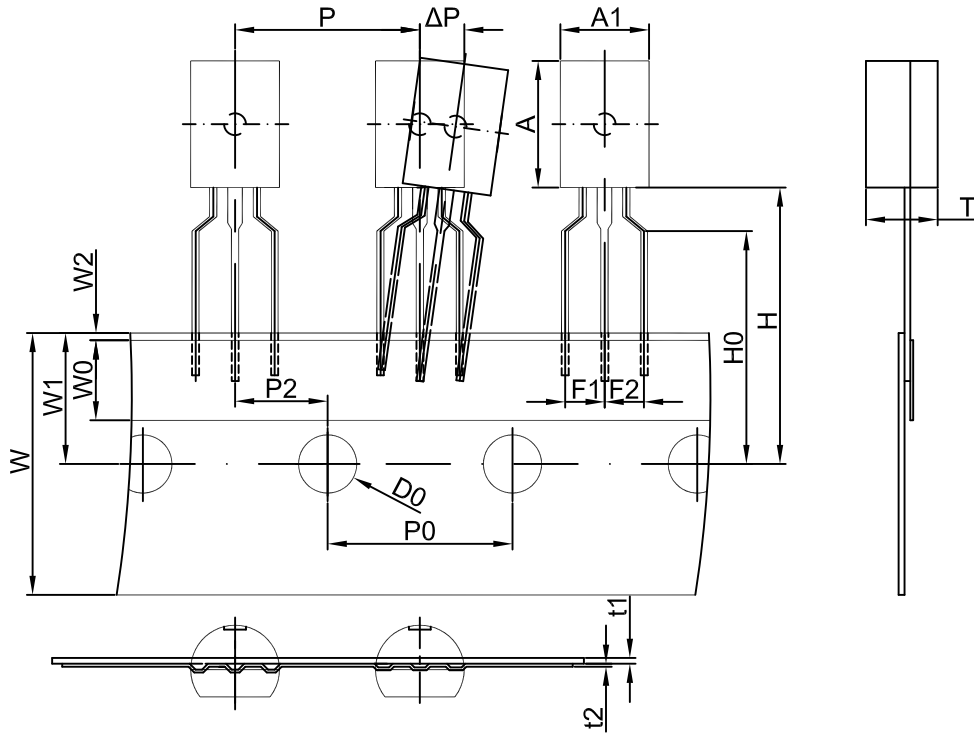
### Note:

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

### NOTICE

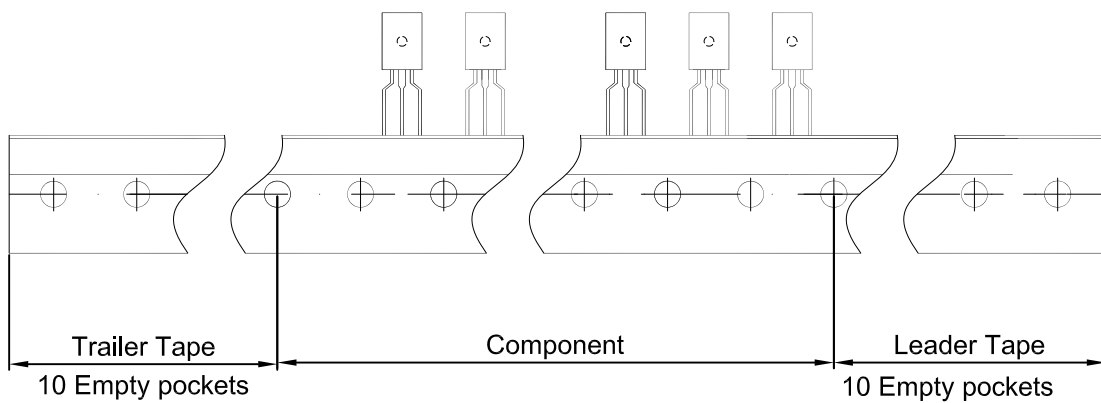
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# TO-92MOD PACKAGE TAPING DIMENSION



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

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