

TO-92L Plastic-Encapsulate Transistors

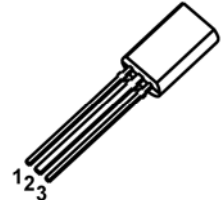
2SC2383 TRANSISTOR (NPN)

FEATURE

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

TO-92L

1. EMITTER
2. COLLECTOR
3. BASE

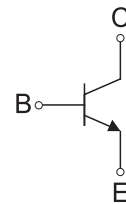


MARKING



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-92L	Bulk	500pcs/Bag
2SC2383-TA	TO-92L	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	0.75	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

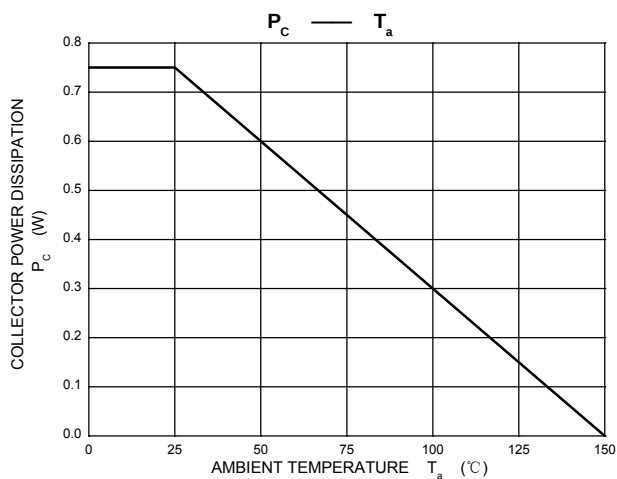
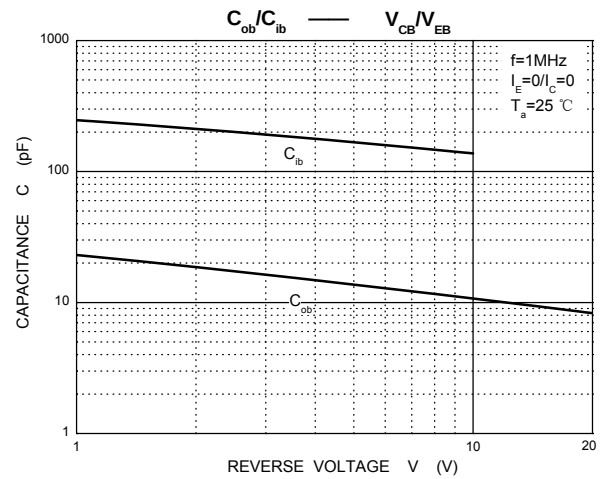
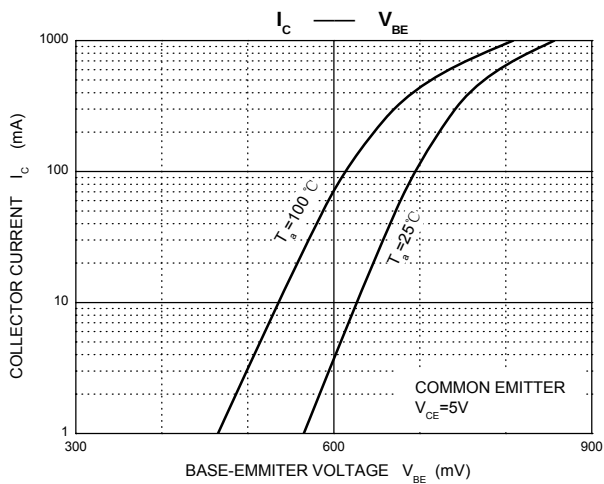
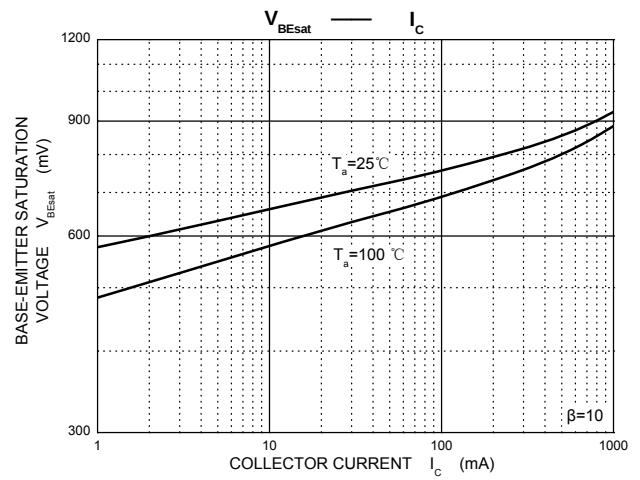
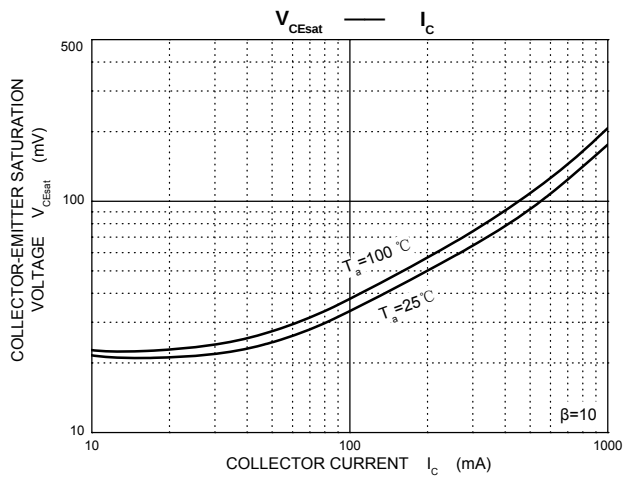
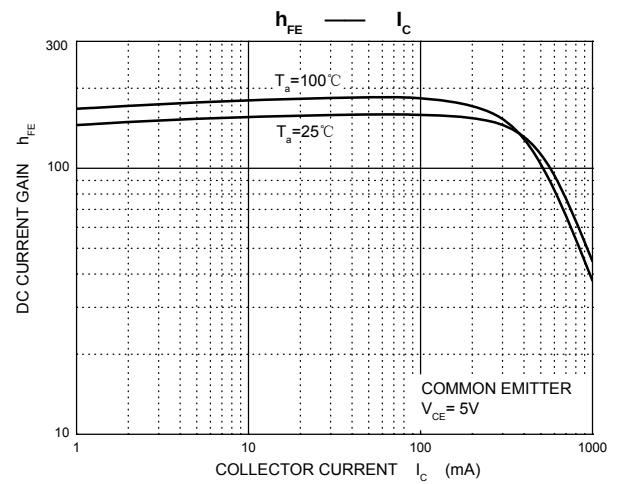
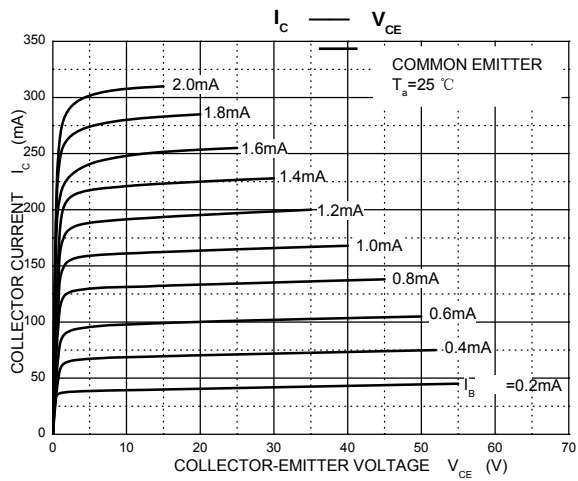
$T_a=25^{\circ}\text{C}$ unless otherwise specified

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

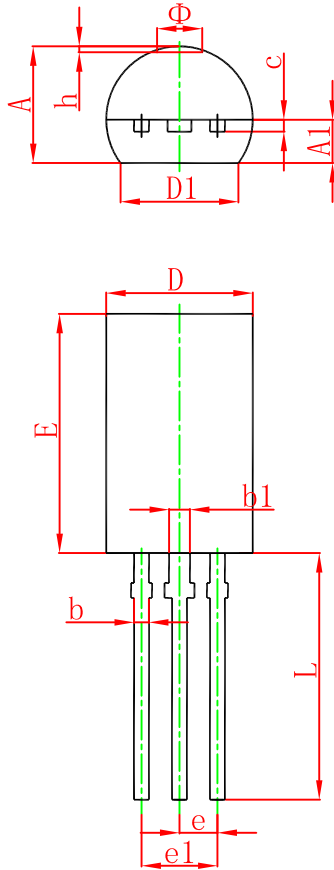
CLASSIFICATION OF h_{FE1}

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

Typical Characteristics

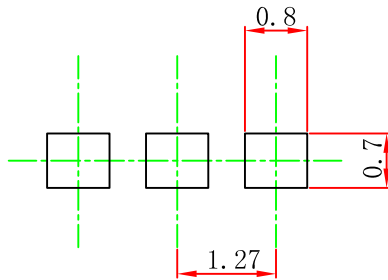


TO-92L Package Outline Dimensions



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



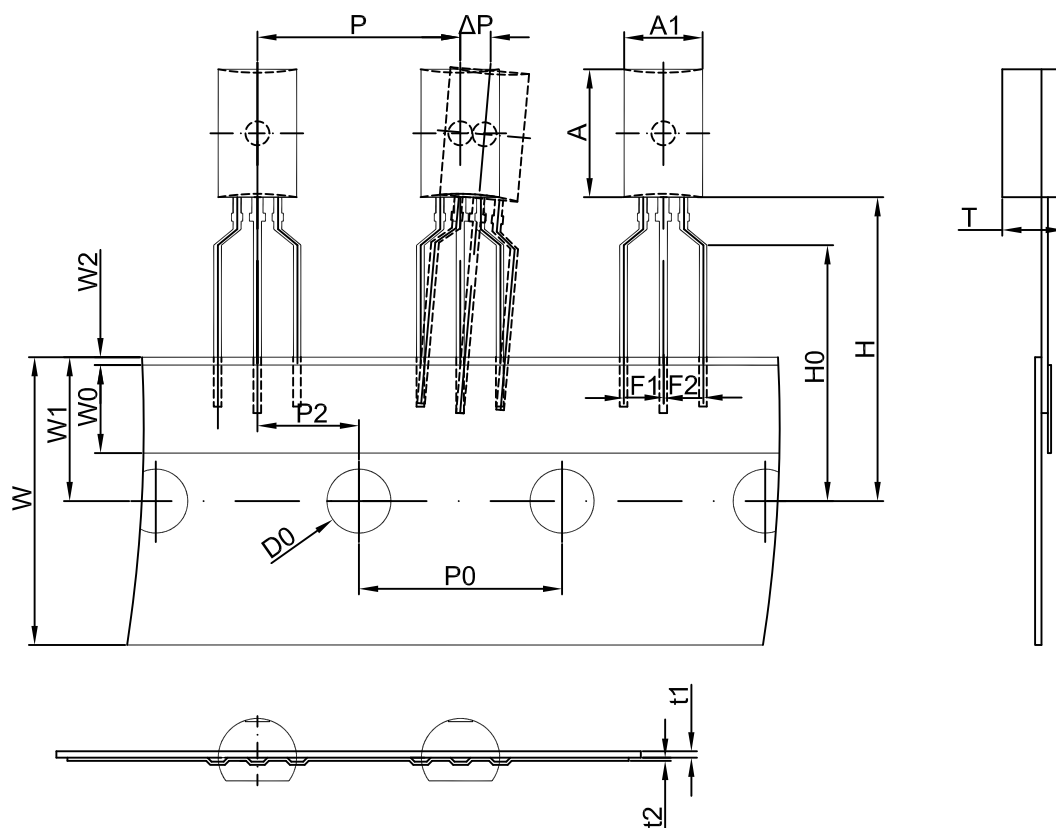
Note:

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

NOTICE

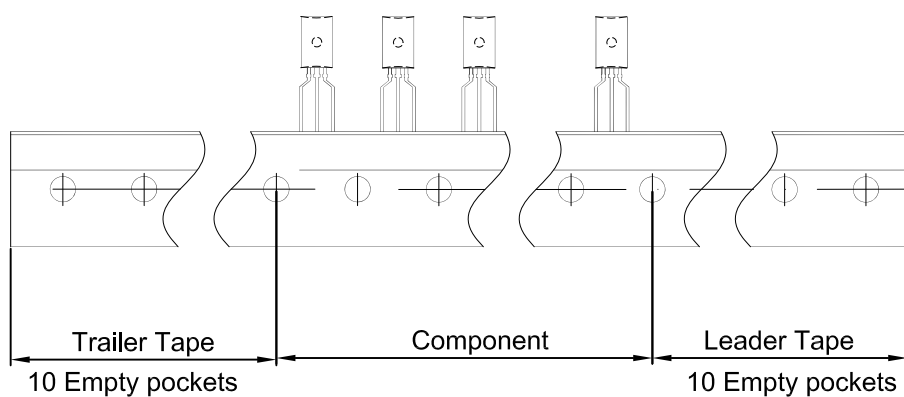
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TO-92L PACKAGE TAPEING DIMENSION



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