

PRIMARY CHARACTERISTICS

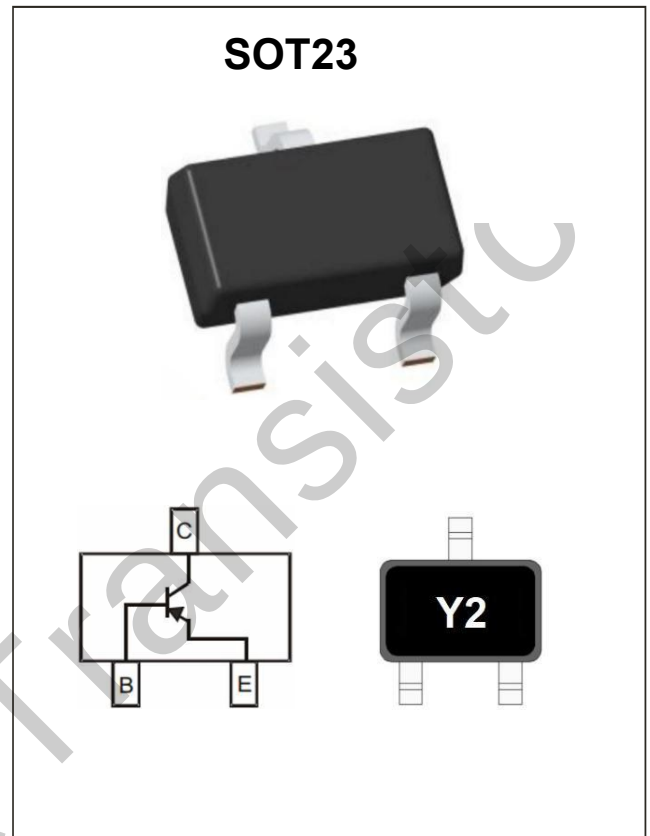
VCEO	IC	VCE(sat)	fT	Tjmax
-25V	-1500mA	-0.50V	100MHz	150°C

Features

- Complementary to SS8050
- 300mW Power Dissipation
- High Stability and High Reliability

Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any


Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameters	Symbols	Limits	Units
Collector-Base Voltage	VCBO	-40	V
Collector-Emitter Voltage	VCEO	-25	V
Emitter -Base Voltage	VEBO	-5	V
Collector Current-Continuous	IC	-1500	mA
Collector Power Dissipation	PC	300	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	55~+150	°C
Thermal resistance From junction to ambient	R θ JA	417	°C/W

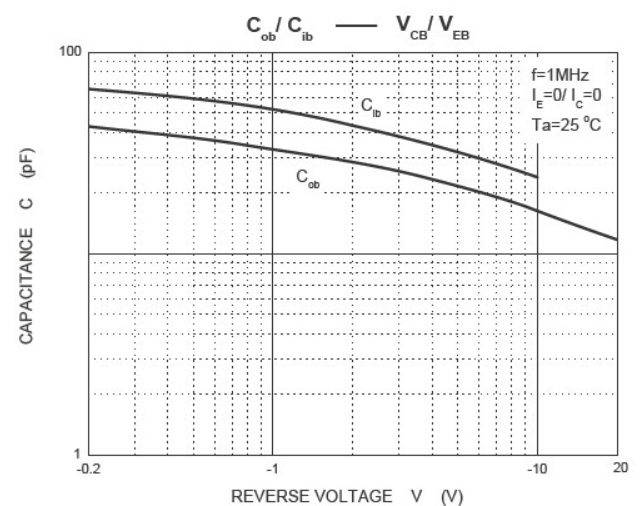
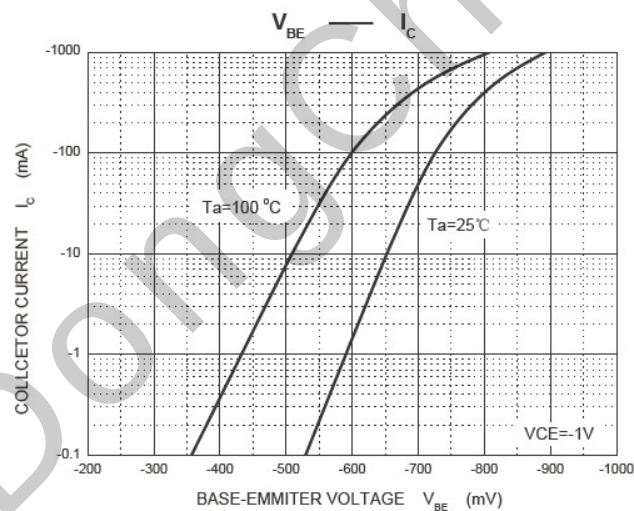
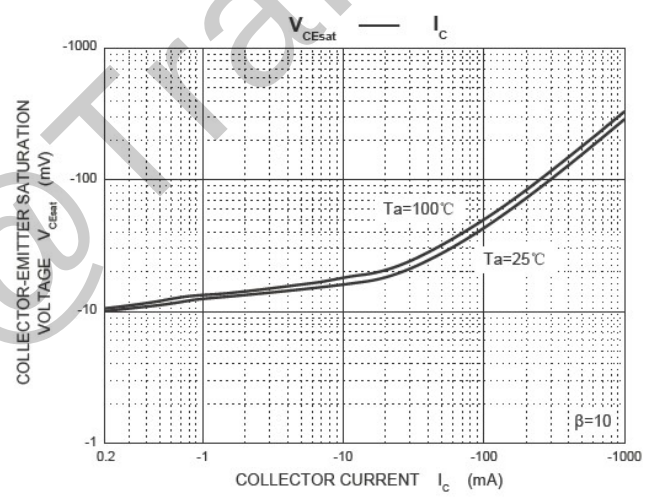
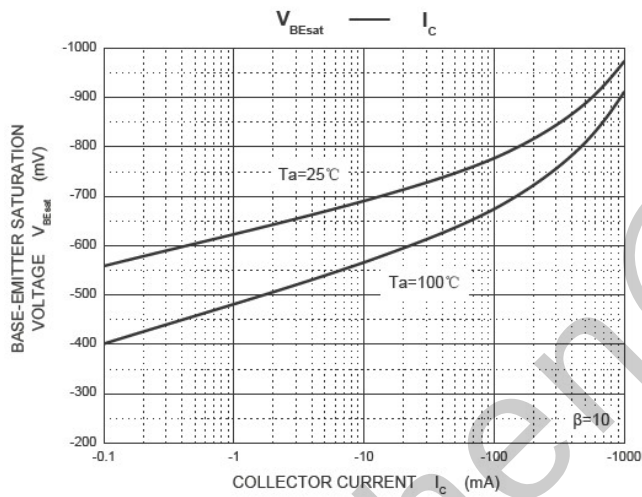
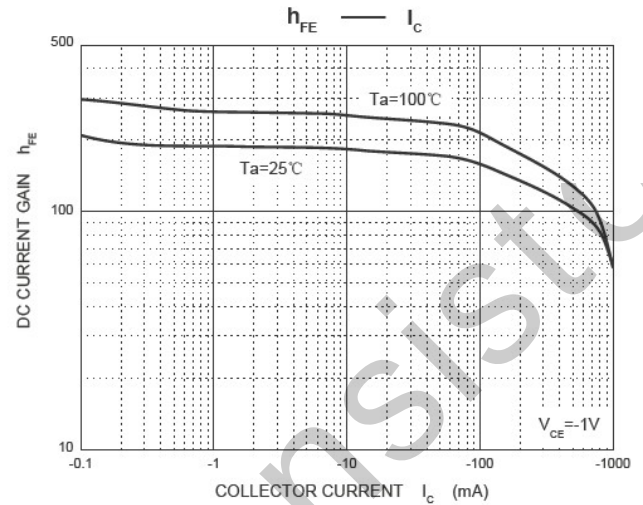
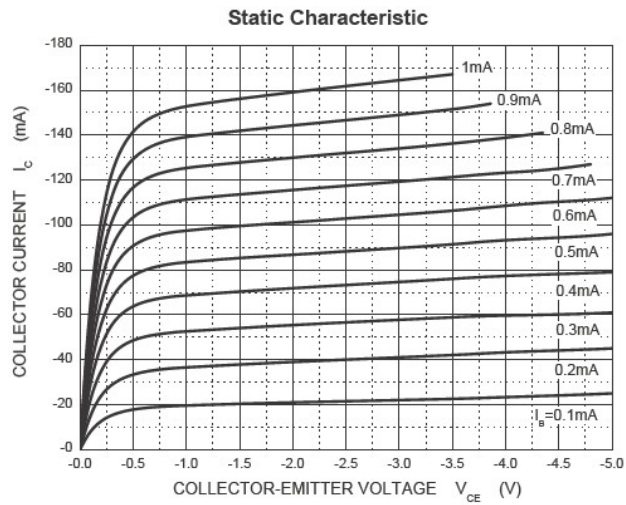
Electrical Characteristics(Ta=25°C unless otherwise noted)

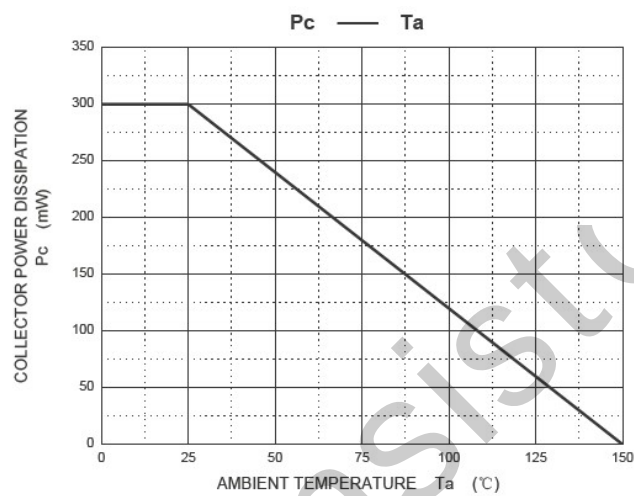
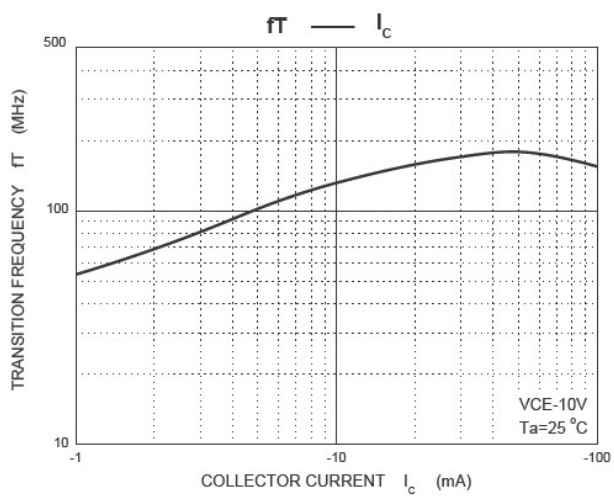
Parameter	Symbol	Conditions	Min.	Max.	Unit
Collector-base breakdown voltage	V(BR)CBO	IC=-100uA, IE=0	-40	-	V
Collector-emitter breakdown voltage	V(BR)CEO	IC=-0.1mA, IB=0	-25	-	V
Emitter-base breakdown voltage	V(BR)EBO	IE=-100uA, IC=0	-5	-	V
Collector cut-off current	ICBO	VCB=-40V, IE=0	-	-100	nA
Collector cut-off current	ICEO	VCE=-20V, IB=0	-	-100	nA
Emitter cut-off current	IEBO	VEB=-5V, IC=0	-	-100	nA
DC current gain	hFE(1)	VCE=-1V, IC=-100mA	120	400	
	hFE(2)	VCE=-1V, IC=-800mA	40	-	
Collector-emitter saturation voltage	VCE(sat)	IC=-800mA, IB=-80mA	-	-0.50	V
Base -emitter saturation voltage	VBE(sat)	IC=-800mA, IB=-80mA	-	-1.20	V
Base-emitter voltage	VBE	VCE=-1V, IC=-10mA	-	-1.00	V
Transition frequency	fT	VCE=-10V, IC=-50mA, f=30MHz	100	-	MHz
Collector output capacitance	Cob	VCB=-10V, IE=0, f=1MHz	-	20	pF

CLASSIFICATION OF hFE

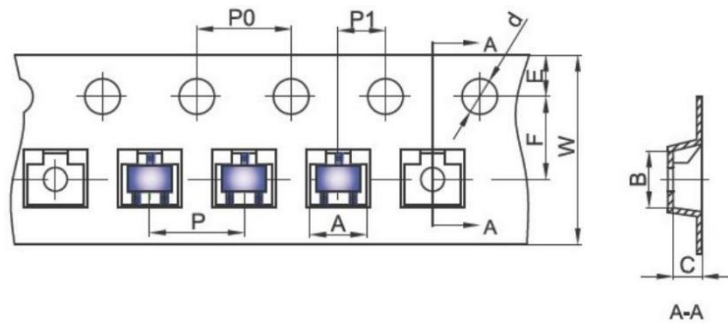
RANK	L	H	J
RANGE	120-200	200-350	300-400

Typical characteristics



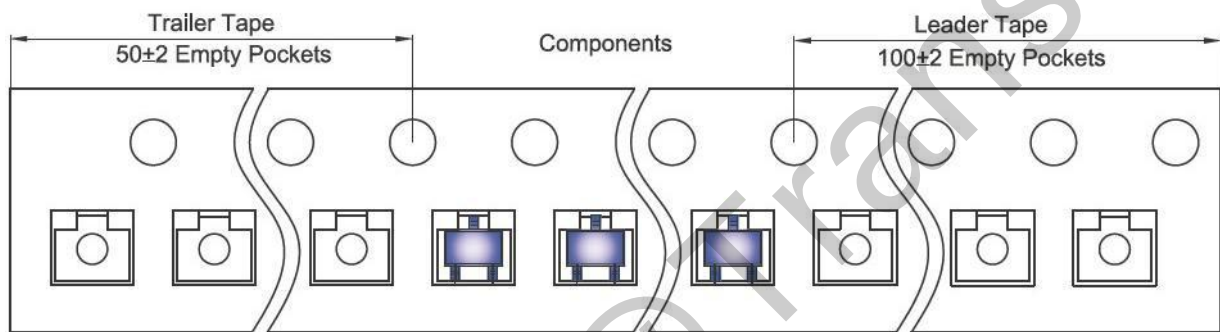


NPN Transistor with high stability and reliability

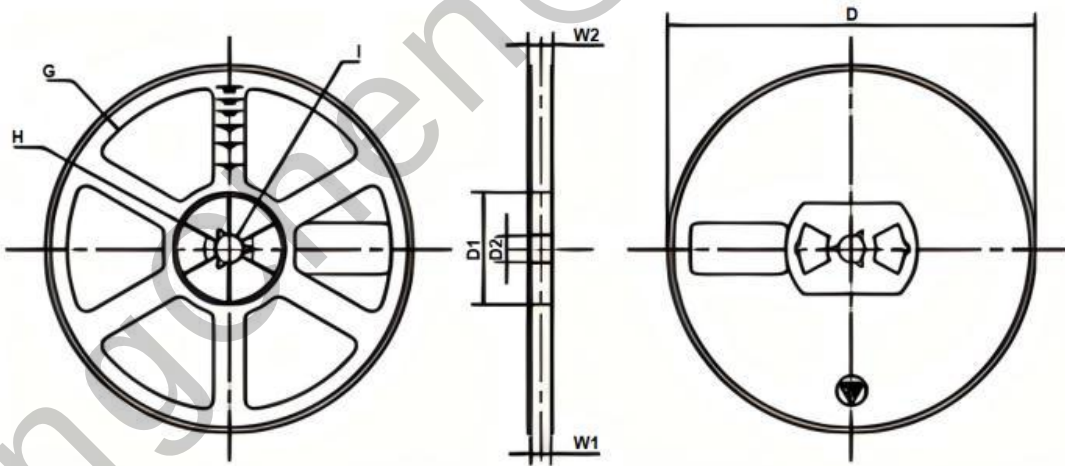


Dimensions are in millimeter

Pkg Type	A	B	C	d	E	F	P0	P	P1	W
SOT-323	2.25	2.55	1.19	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00



Reel Dimension(mm)



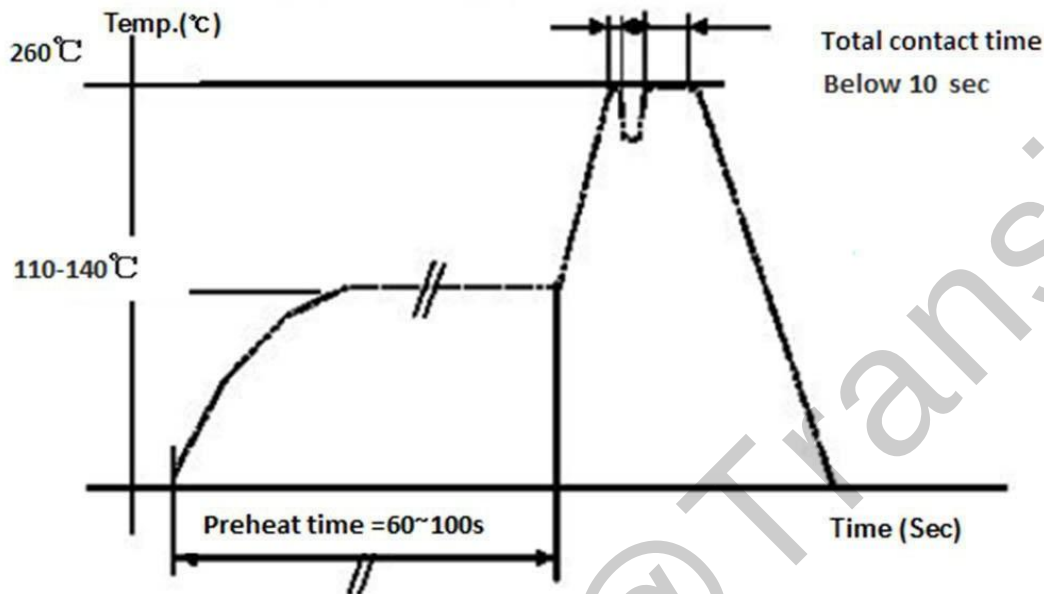
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

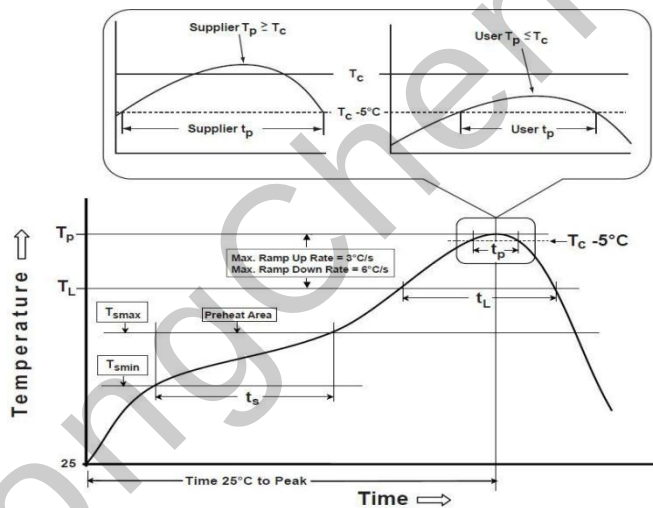
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT323	7'	178	3	210*208*203	45	440*400*230	180

Recommended Soldering Profile for Rectifier Diodes (Pb Free)

a) Wave Soldering Profile



b) Reflow Soldering Profile (Pb Free Application), refer to IPC/JEDEC J-STD-020



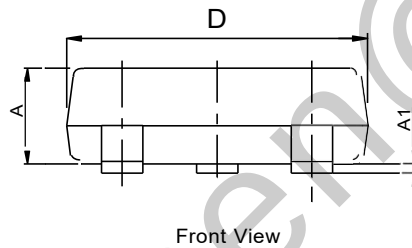
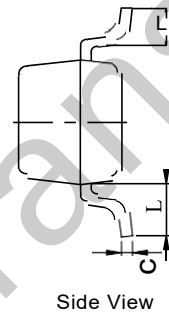
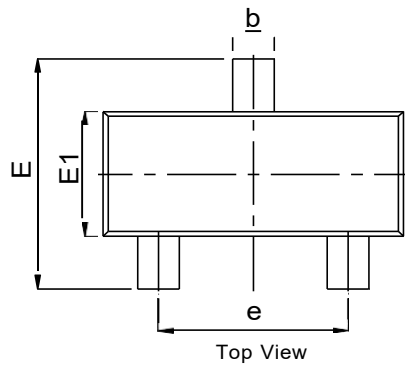
Preheat/Soak Temperature Min (T _{sm}) Temperature Max (T _{sl}) Time (ts) from (T _{sm} to T _{sl})	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5°C
Time within 5°Cbelow Peak Temp.	20~40 Sec
Cooling Rate	6°C/sec (max)
Time from 25°C to Peak Temp.	8min (max)

c) Manual Soldering

When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

Outline Drawing

SOT-23

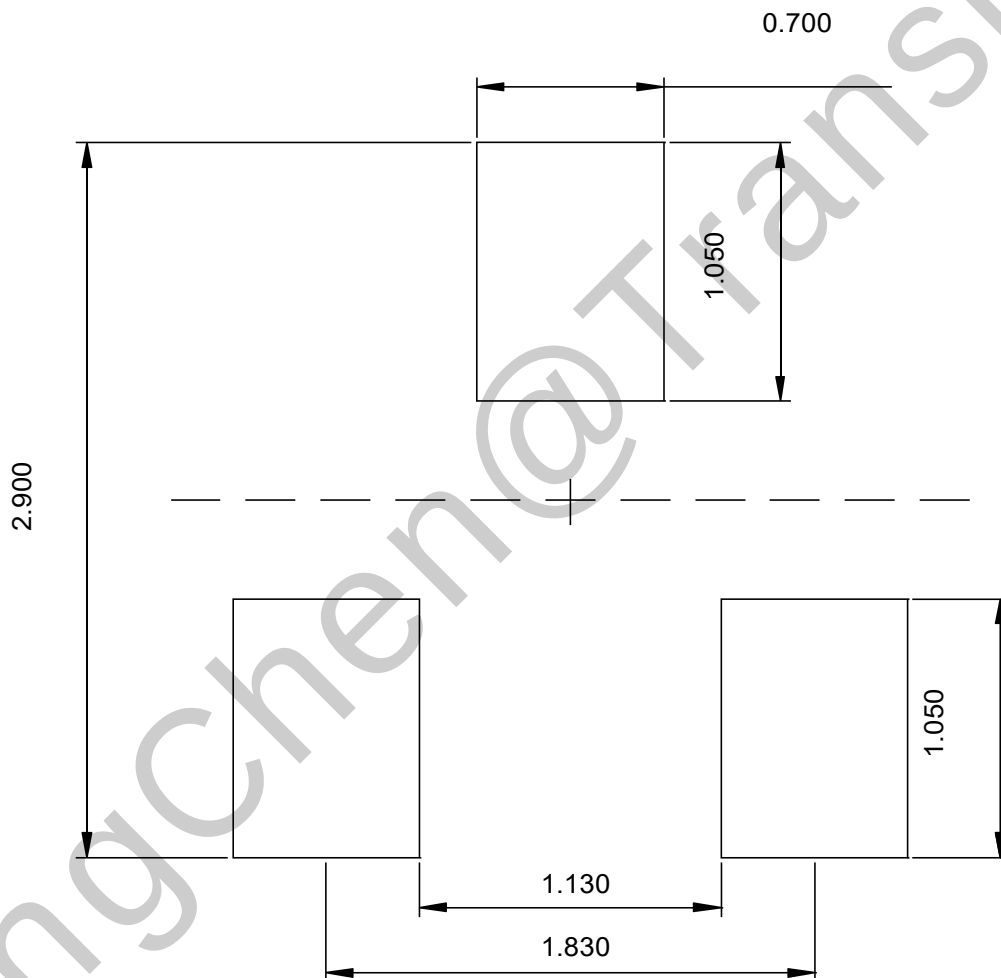


DIM.	MILLIMETER		
	MIN.	NOM.	MAX.
A	0.90	1.00	1.10
A1	0.00	-	0.10
D	2.80	2.90	3.00
E	2.30	2.40	2.50
E1	1.20	1.30	1.40
L	0.45	0.55	0.65
L1	0.20	-	0.55
b	0.30	0.40	0.50
c	-	0.10	0.15
e	-	1.90	-

Dimensions in inches and (millimeters)

Suggested Soldering Pad Layout

SOT-23



Dimensions in inches and (millimeter)

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