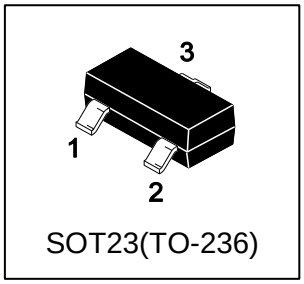
LBC856BLT1G

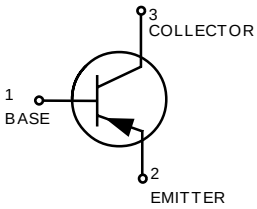
General Purpose Transistors PNP Silicon



SOT23(TO-236)

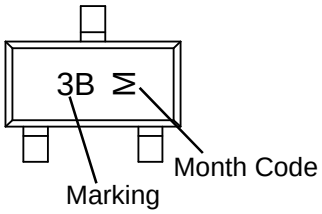
1. FEATURES

- Moisture Sensitivity Level: 1
- ESD Rating – Human Body Model: >4000 V
  – Machine Model: >400 V
- We declare that the material of product compliance with RoHS requirements and Halogen Free.



2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBC856BLT1G	3B	3000/Tape&Reel
LBC856BLT3G	3B	13000/Tape&Reel



3. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	-65	V
Collector–Base Voltage	VCBO	-80	V
Emitter–Base Voltage	VEBO	-5	V
Collector Current — Continuous	IC	-100	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR−5 Board (Note 1) @ TA = 25ºC Derate above 25ºC	PD	 225 1.8	 mW mW/ºC
Thermal Resistance, Junction–to–Ambient(Note 1)	RΘJA	556	ºC/W
Junction and Storage temperature	TJ,Tstg	−55~+150	° C

1. FR–5 = 1.0×0.75×0.062 in.

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = -10 mA,IB = 0)	VBR(CEO)	-65	-	-	V
Collector–Emitter Breakdown Voltage (IC = -10 µA, VEB = 0)	VBR(CES)	-80	-	-	V
Collector–Base Breakdown Voltage (IC = -10 µA,IE = 0)	VBR(CBO)	-80	-	-	V
Emitter–Base Breakdown Voltage (IE = -1.0 µA,IC = 0)	VBR(EBO)	-5	-	-	V
Collector Cutoff Current (VCB = -30 V) (VCB = -30 V, TA = 150°C)	ICBO	- -	- -	-15 -4	nA µA
Emitter-Base cut-off current (VBE = - 5 V,IC = 0)	IEBO	-	-	-100	nA
Collector-Emitter cutoff Current (VCE=- 65V,IB=0)	ICEO	-	-	-10	µA

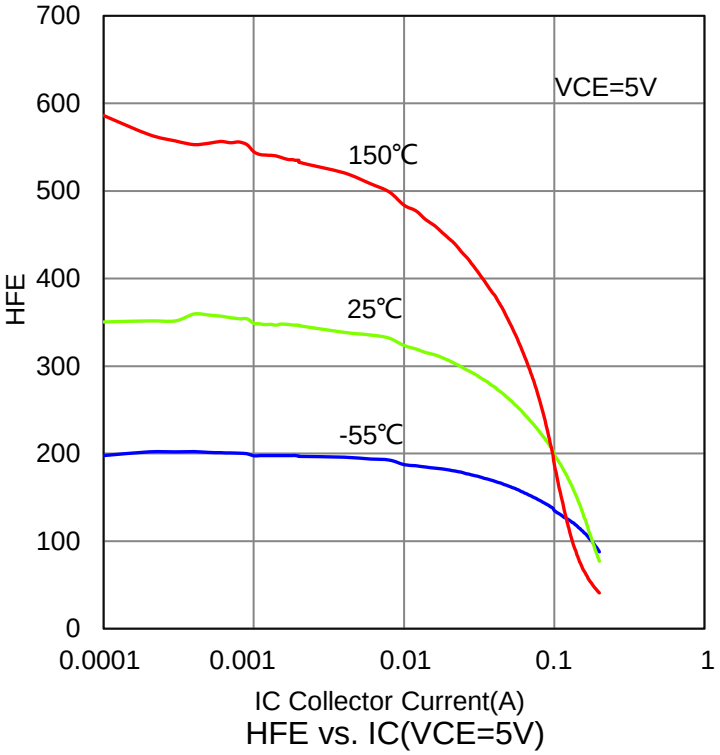
ON CHARACTERISTICS

DC Current Gain (IC = -2.0 mA, VCE = -5.0 V)	HFE	220	290	475	
Collector–Emitter Saturation Voltage (IC = -10 mA, IB = -0.5 mA) (IC = -100 mA, IB = -5.0 mA)	VCE(sat)	- -	- -	-0.3 -0.65	V
Base–Emitter Saturation Voltage (IC = -10 mA, IB = -0.5 mA) (IC = -100 mA, IB = -5.0 mA)	VBE(sat)	- -	-0.7 -0.9	-0.9 -1.1	V
Base–Emitter on Voltage (IC = -2.0 mA, VCE = -5.0 V) (IC = -10 mA, VCE = -5.0 V)	VBE(on)	-0.6 -	- -	-0.75 -0.82	V

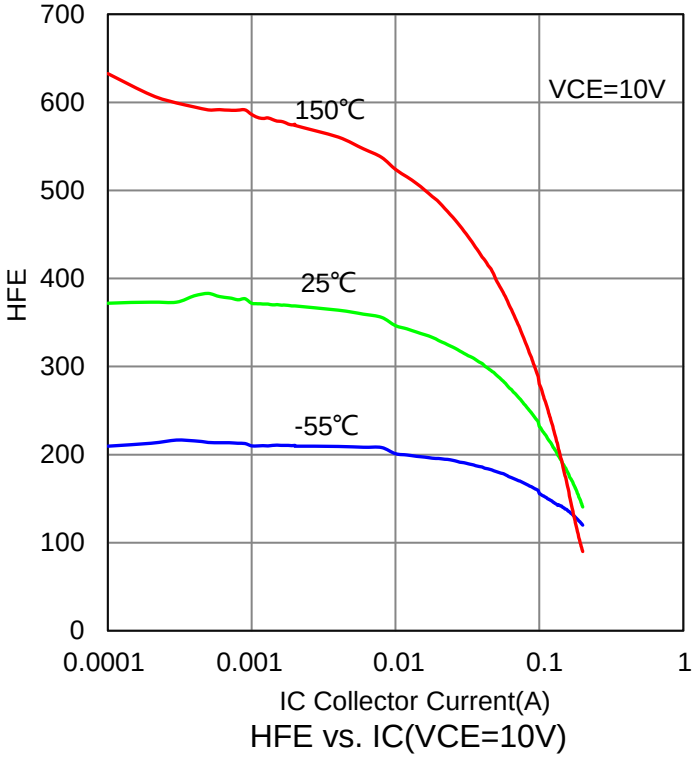
SMALL–SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product (IC = -10 mA, VCE = -5.0 V, f = 100 MHz)	fT	100	-	-	MHz
Output Capacitance (VCB = -10 V, f = 1.0 MHz)	Cobo	-	-	4.5	pF
Noise Figure (IC = -0.2 mA,VCE = -5.0 V, RS = 2.0 kΩ f = 1.0 kHz, BW = 200 Hz)	NF	-	-	10	dB

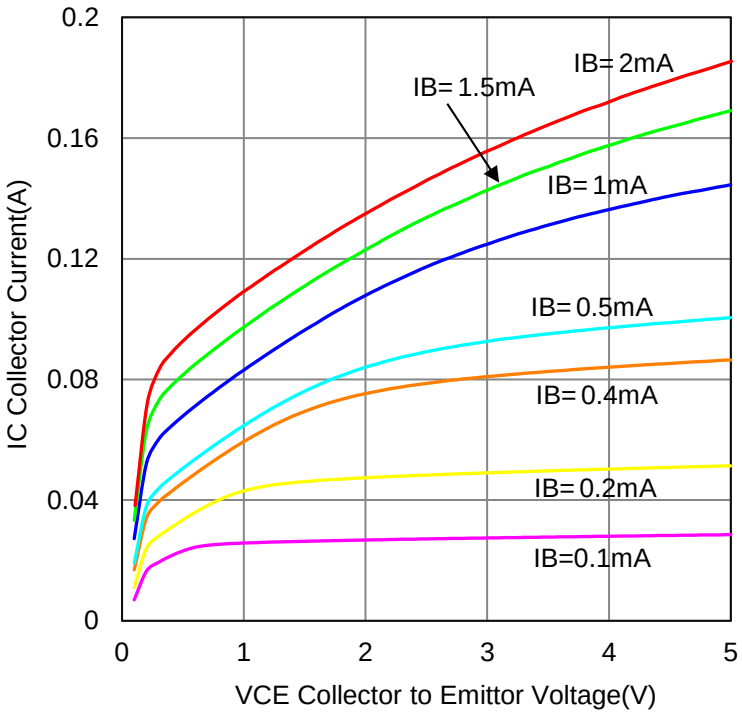
6.ELECTRICAL CHARACTERISTICS CURVES



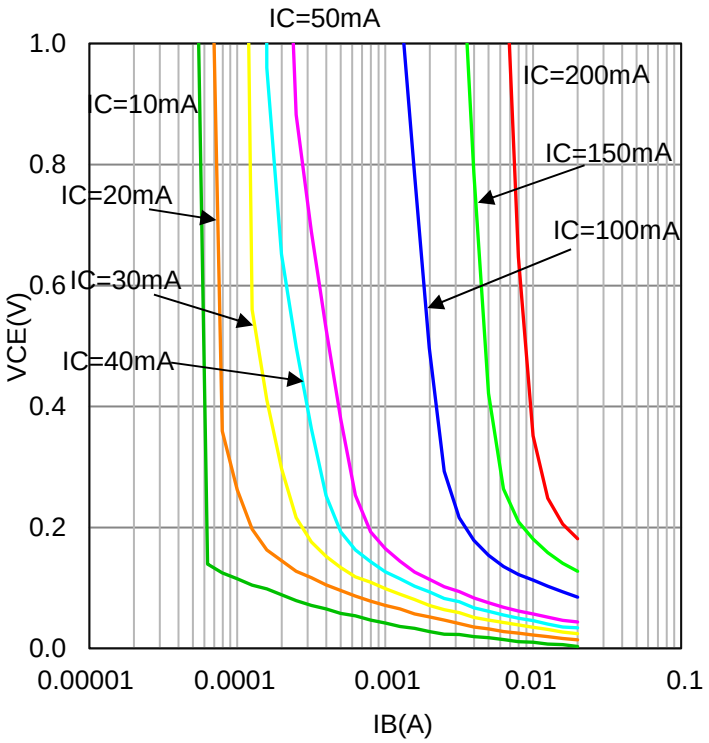
HFE vs. IC(VCE=5V)



HFE vs. IC(VCE=10V)

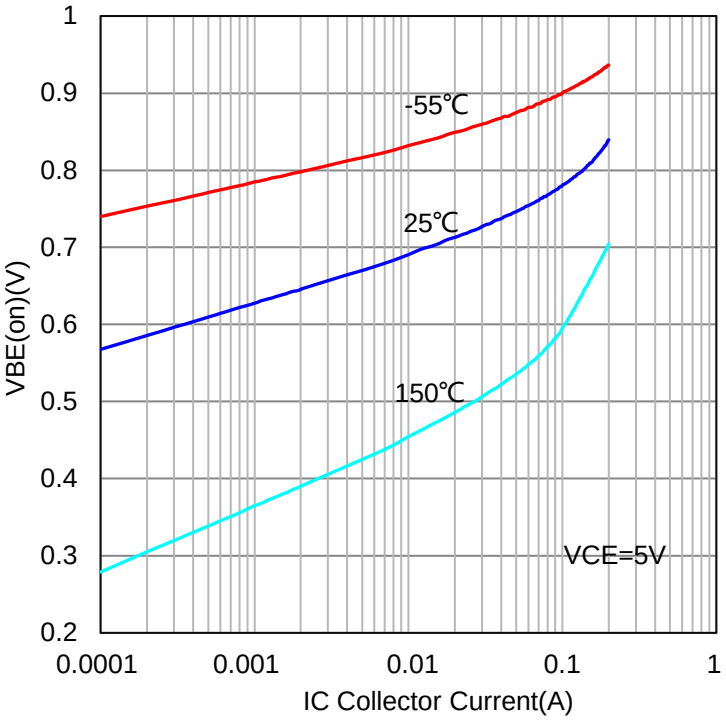


IC vs. VCE

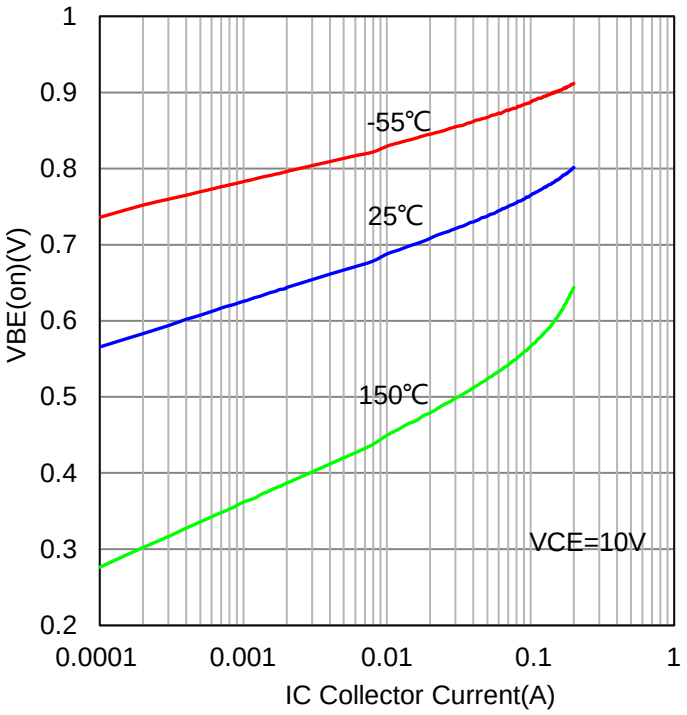


VCE vs. IB

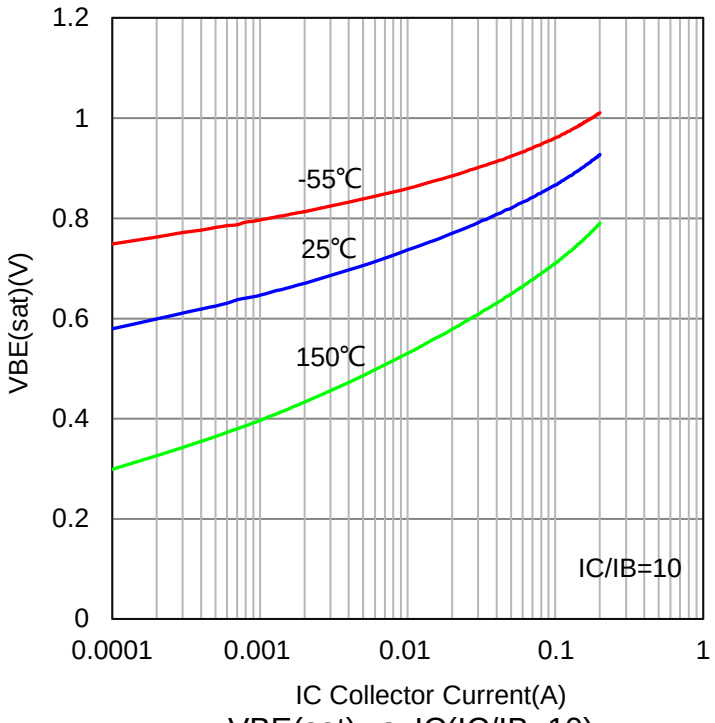
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



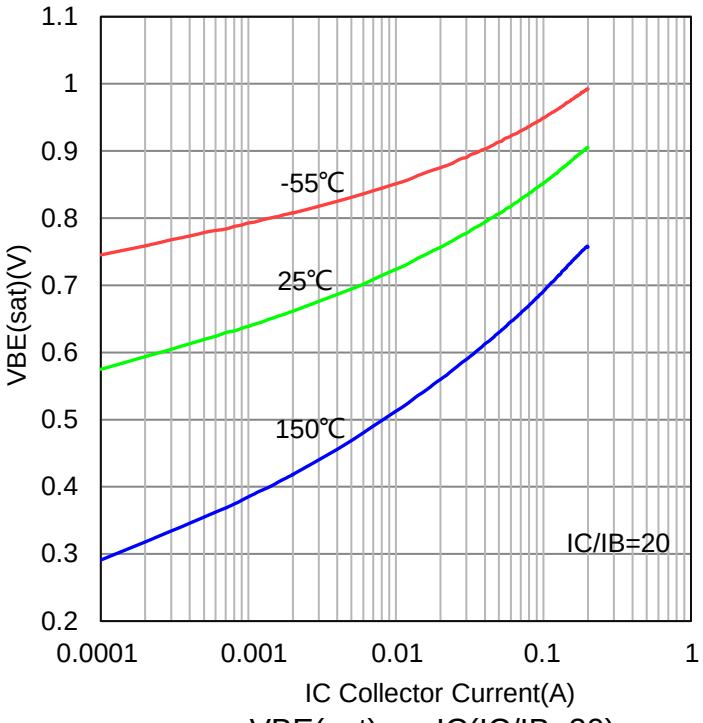
VBE(on) vs. IC(VCE=5V)



VBE(on) vs. IC(VCE=10V)

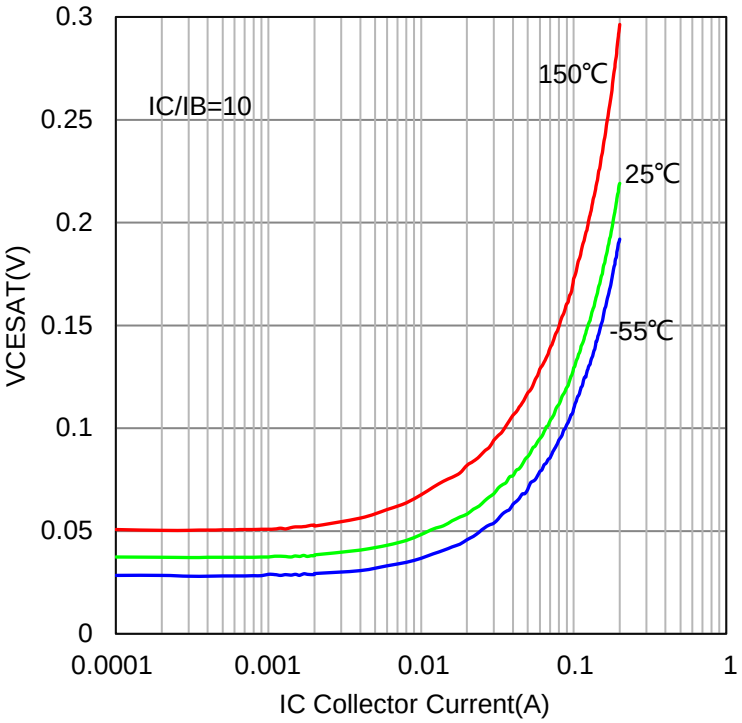


VBE(sat) vs. IC(IC/IB=10)

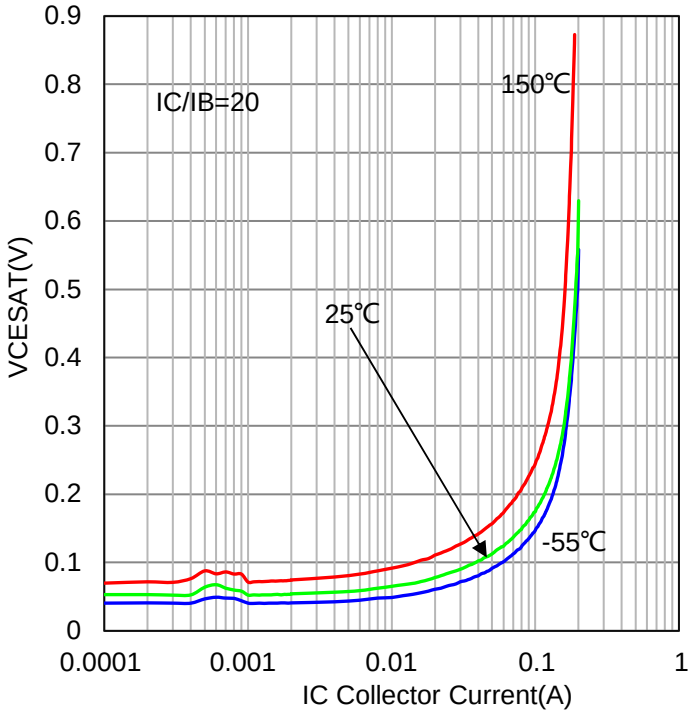


VBE(sat) vs. IC(IC/IB=20)

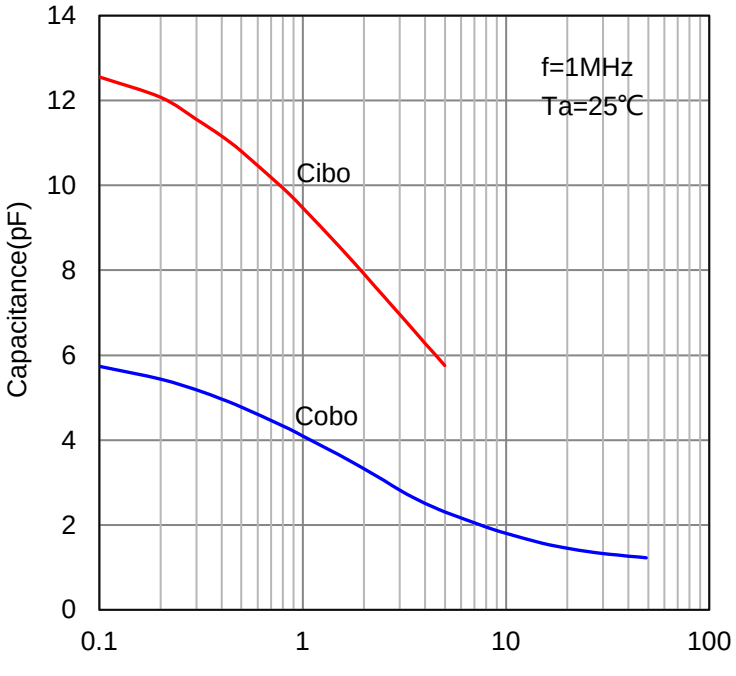
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



VCE(sat) vs. IC(IC/IB=10)

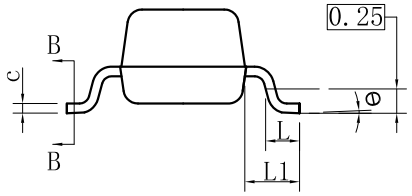


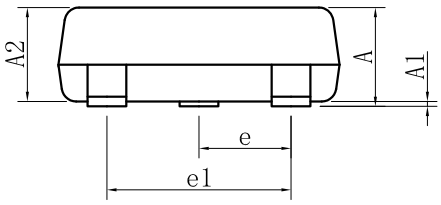
VCE(sat) vs. IC(IC/IB=20)

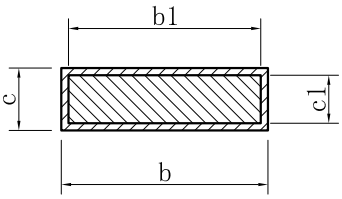


Capacitance

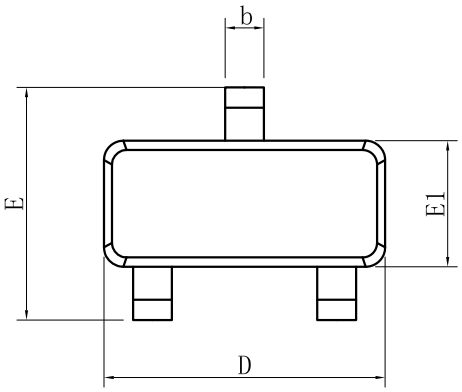
7.OUTLINE AND DIMENSIONS







SECTION B-B

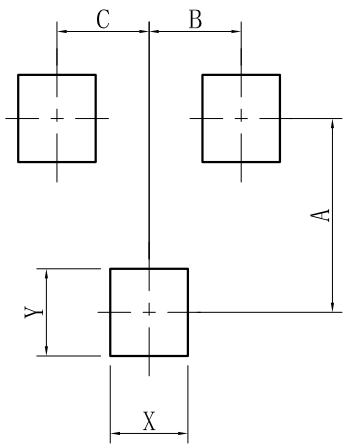


SOT23			
DIM	MIN	NOR	MAX
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.50
b1	0.30	0.40	0.45
c	0.08	-	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	-	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	-	8°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um

8.SOLDERING FOOTPRINT



SOT-23	
DIM	(mm)
X	0.80
Y	0.90
A	2.00
B	0.95
C	0.95

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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