

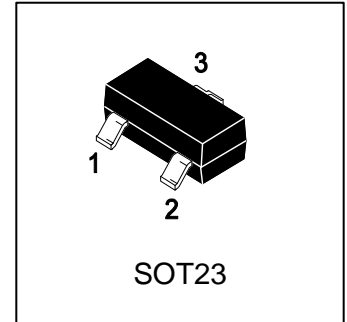
LMBT5551LT1G

S-LMBT5551LT1G

High Voltage Transistors

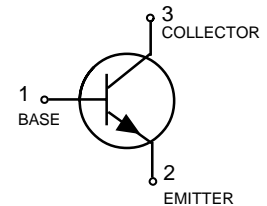
1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LMBT5551LT1G	G1	3000/Tape&Reel
LMBT5551LT3G	G1	10000/Tape&Reel



3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	V _{CEO}	160	V
Collector-Base voltage	V _{CBO}	180	V
Emitter-Base Voltage	V _{EB0}	6	V
Collector current--Continuous	I _C	600	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-5 Board (Note 1) @ TA = 25°C Derate above 25°C	PD	225 1.8	mW mW/°C
Thermal Resistance, Junction-to-Ambient	R _{θJA}	556	°C/W
Total Device Dissipation, Alumina Substrate, (Note 2) @ TA = 25°C Derate above 25°C	PD	300 2.4	mW mW/°C
Thermal Resistance, Junction-to-Ambient	R _{θJA}	417	°C/W
Junction and Storage temperature	T _J , T _{stg}	-55~+150	°C

1. FR-5 = 1.0×0.75×0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)
OFF CHARACTERISTICS

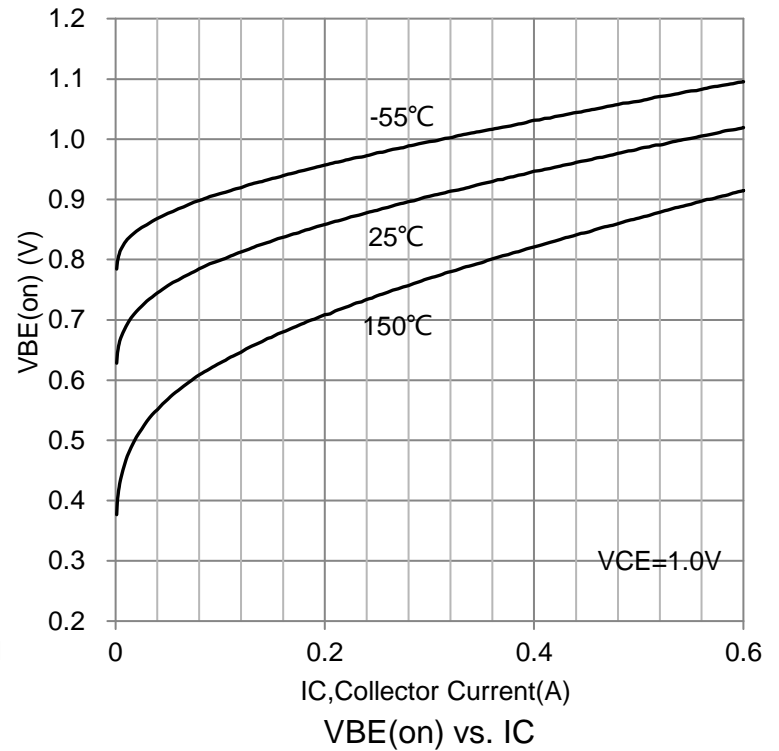
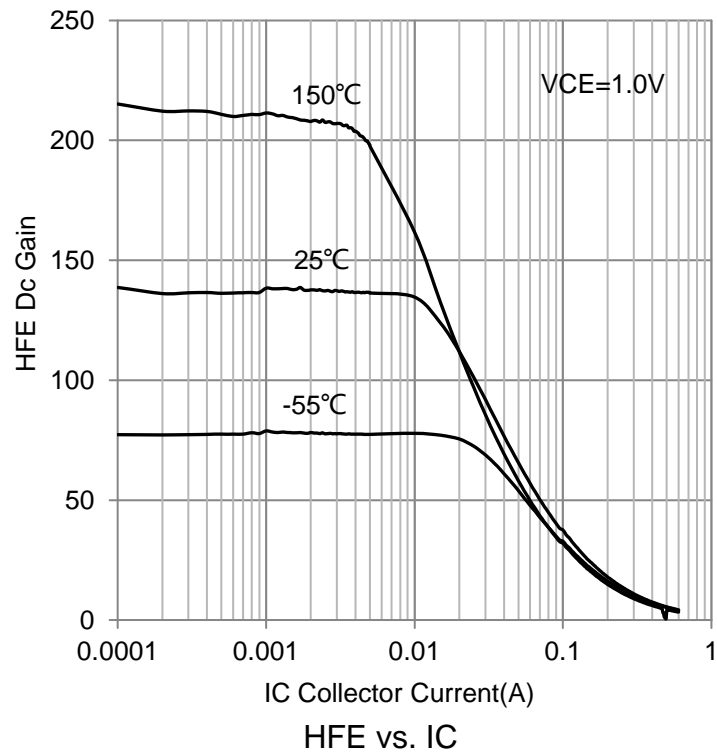
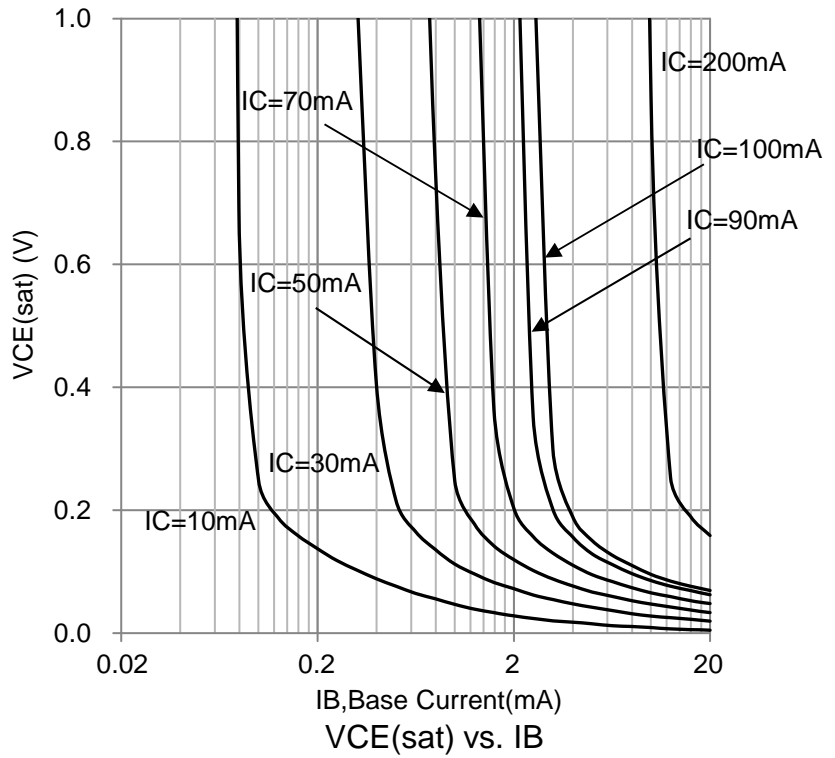
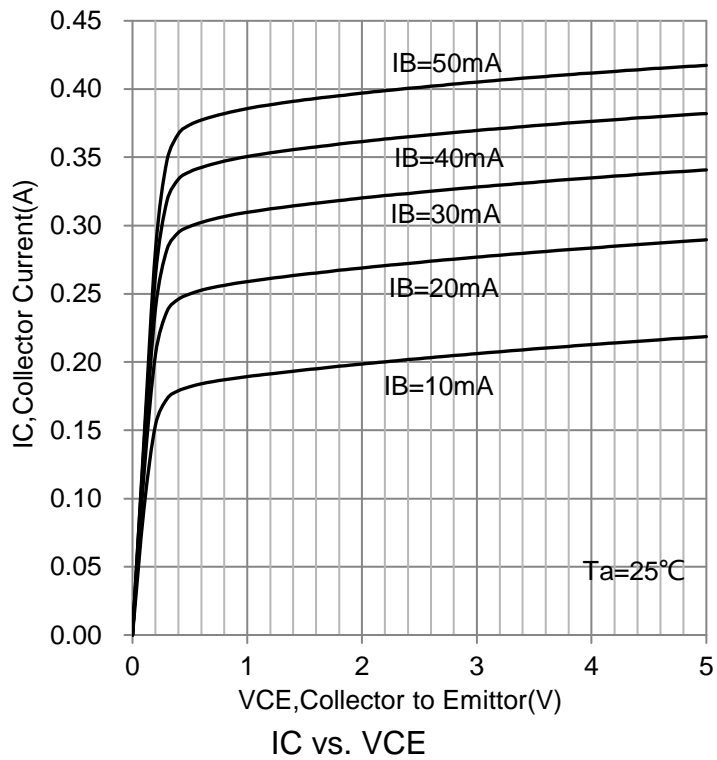
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage (IC = 1.0 mA, IB = 0)	V(BR)CEO	160	-	-	V
Collector-Base Breakdown voltage (IC = 100µA, IE = 0)	V(BR)CBO	180	-	-	V
Emitter-Base Breakdown Voltage (IE = 10 µA, IC = 0)	V(BR)EBO	6	-	-	V
Collector Cutoff Current (VCB = 120 V, IE = 0)	ICBO	-	-	50	nA
(VCB = 120 V, IE = 0, TA = 100°C)		-	-	50	µA
Emitter Cutoff Current (VEB = 4.0 V, IC = 0)	IEBO	-	-	50	nA
Collector-Emitter cutoff Current (VCE = 110V, IB=0)	ICEO	-	-	10	µA

ON CHARACTERISTICS

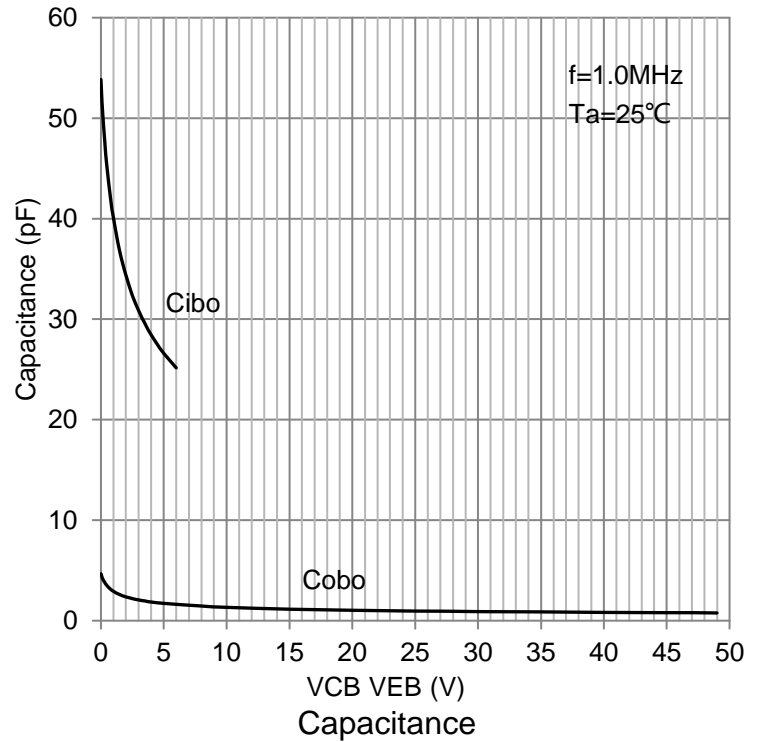
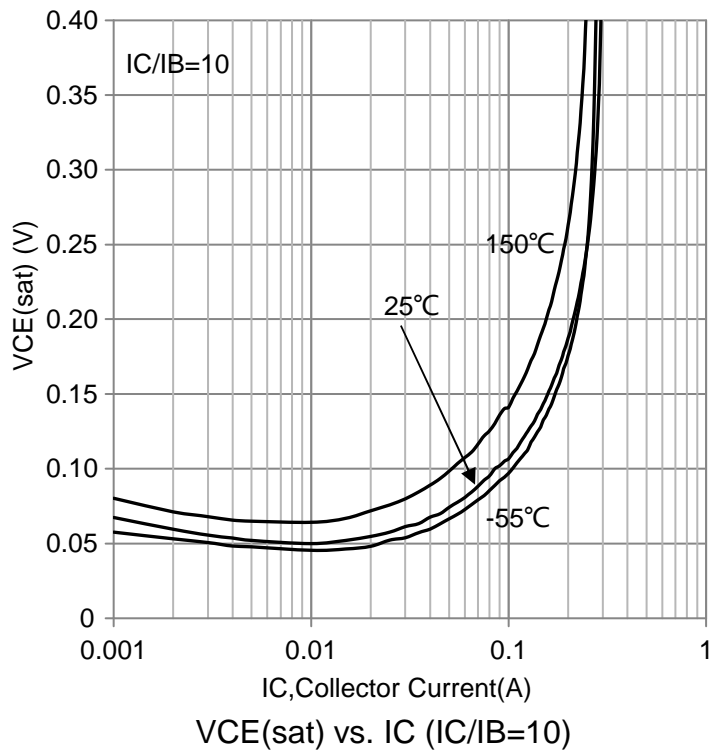
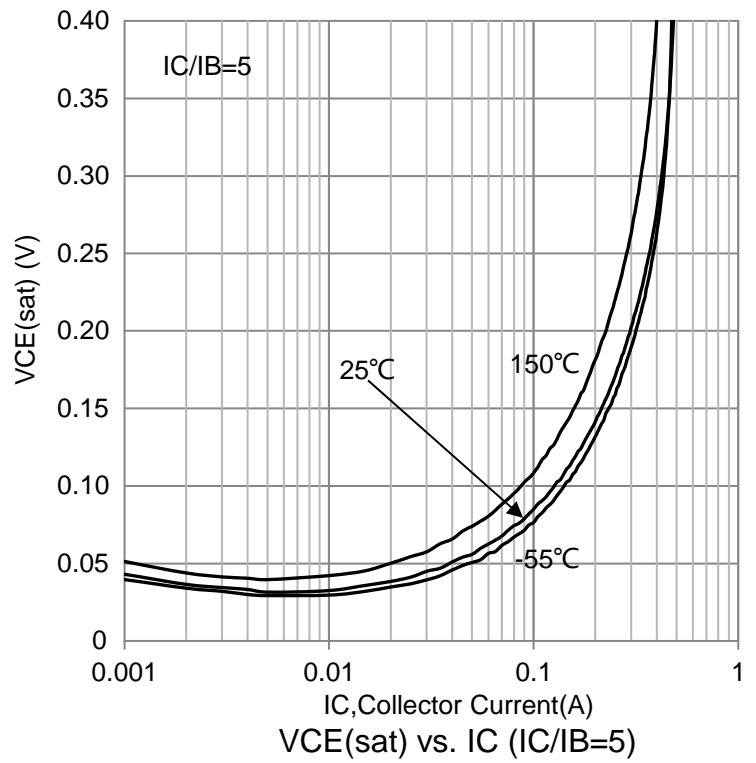
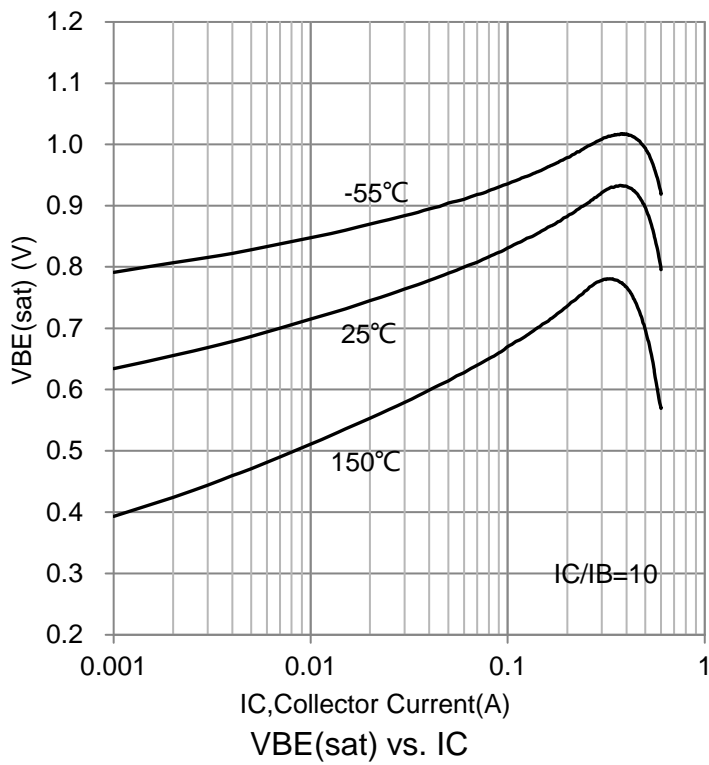
DC Current Gain (IC = 1.0 mA, VCE = 5.0 V)	HFE	80	-	-	
(IC = 10 mA, VCE = 5.0 V)		80	-	250	
(IC = 50 mA, VCE = 5.0 V)		30	-	-	
Collector-Emitter Saturation Voltage (IC = 10 mA, IB = 1.0 mA)	VCE(S)	-	-	0.15	V
(IC = 50 mA, IB = 5.0 mA)		-	-	0.2	
Base-Emitter Saturation Voltage (IC = 10 mA, IB = 1.0 mA)	VBE(S)	-	-	1	V
(IC = 50 mA, IB = 5.0 mA)		-	-	1	
Collector Emitter Cut-off Current (VCE = 10 V)	ICES	-	-	50	nA
(VCE = 75 V)		-	-	100	

3. Pulse Test: Pulse Width = 300 µs, Duty Cycle = 2.0%.

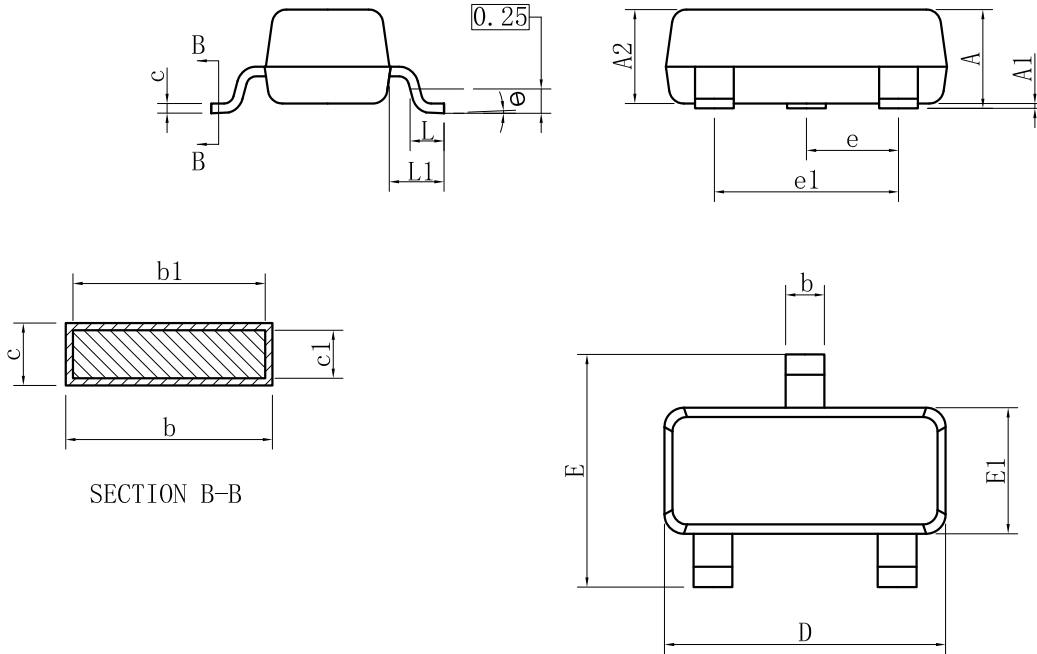
6.ELECTRICAL CHARACTERISTICS CURVES



6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7.OUTLINE AND DIMENSIONS

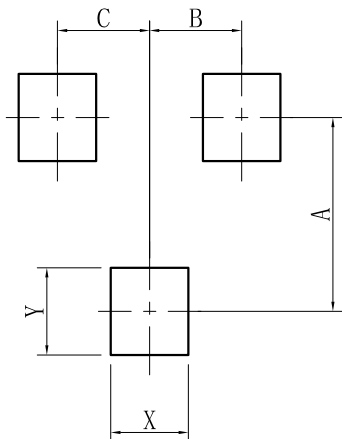


SOT23			
DIM	MIN	NOR	MAX
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.50
b1	0.30	0.40	0.45
c	0.08	-	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	-	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	-	8°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish $Ra0.4 \pm 0.2\mu m$
2. Bottom package surface finish $Ra0.7 \pm 0.2\mu m$
3. Side package surface finish $Ra0.4 \pm 0.2\mu m$

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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