

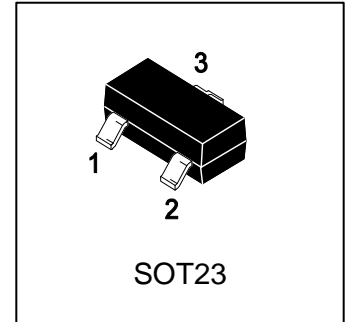
# LMBT5551LT1G

## S-LMBT5551LT1G

High Voltage Transistors

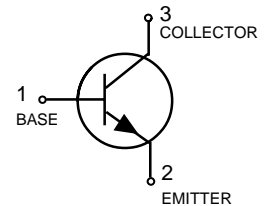
### 1. FEATURES

- 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 <sub>CEO</sub>	160	V
Collector-Base voltage	V <sub>CBO</sub>	180	V
Emitter-Base Voltage	V <sub>EB0</sub>	6	V
Collector current--Continuous	I <sub>C</sub>	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 <sub>θJA</sub>	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 <sub>θJA</sub>	417	°C/W
Junction and Storage temperature	T <sub>J</sub> , T <sub>stg</sub>	-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**

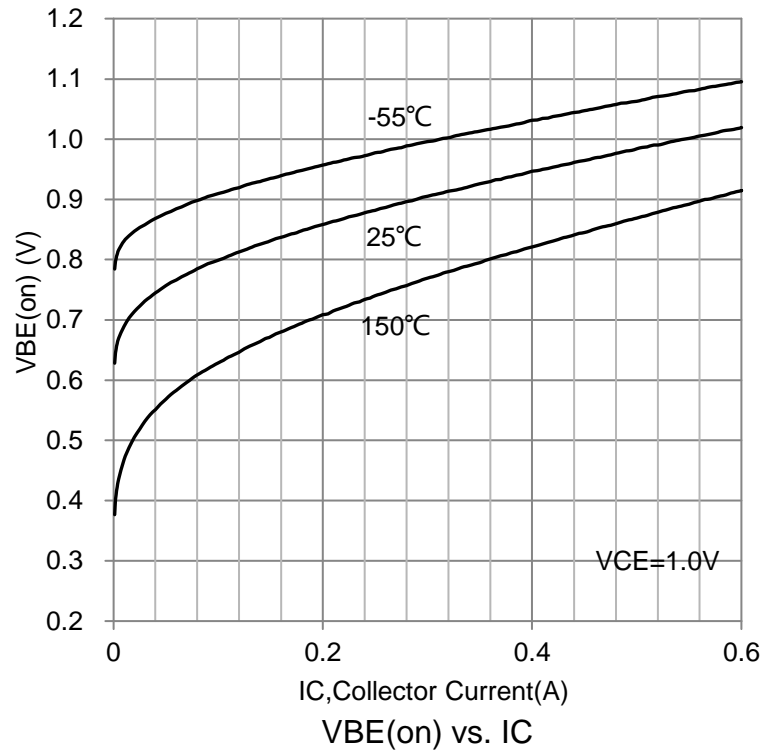
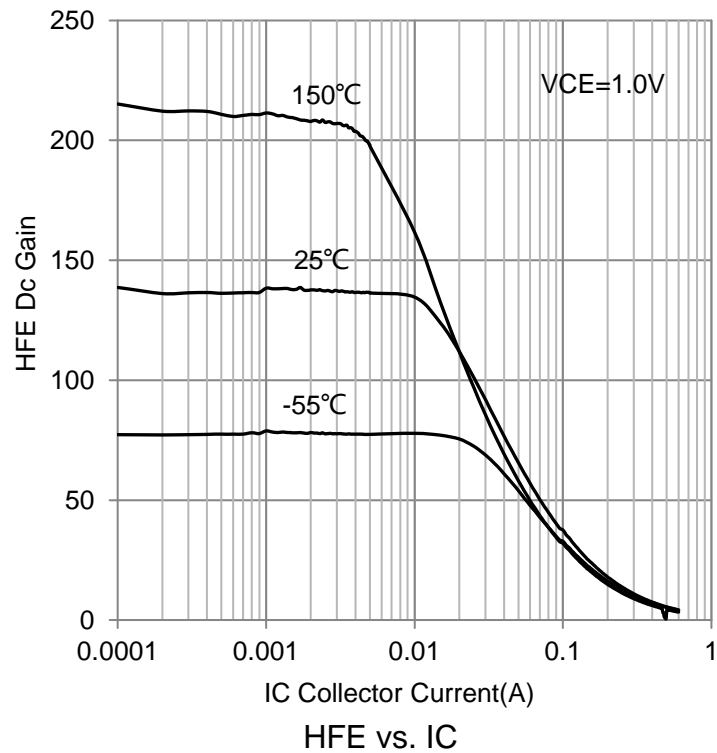
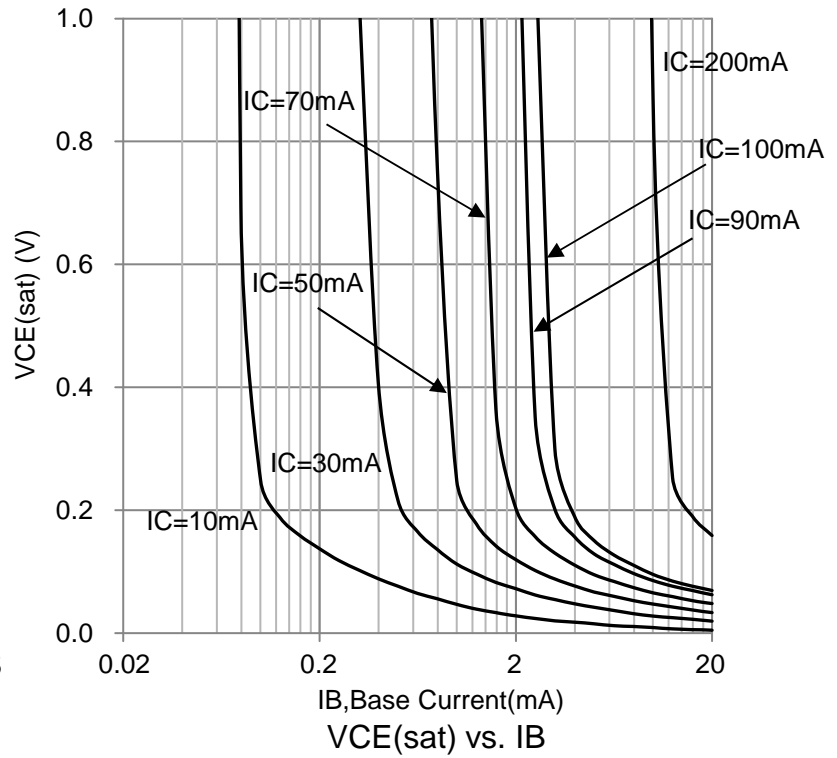
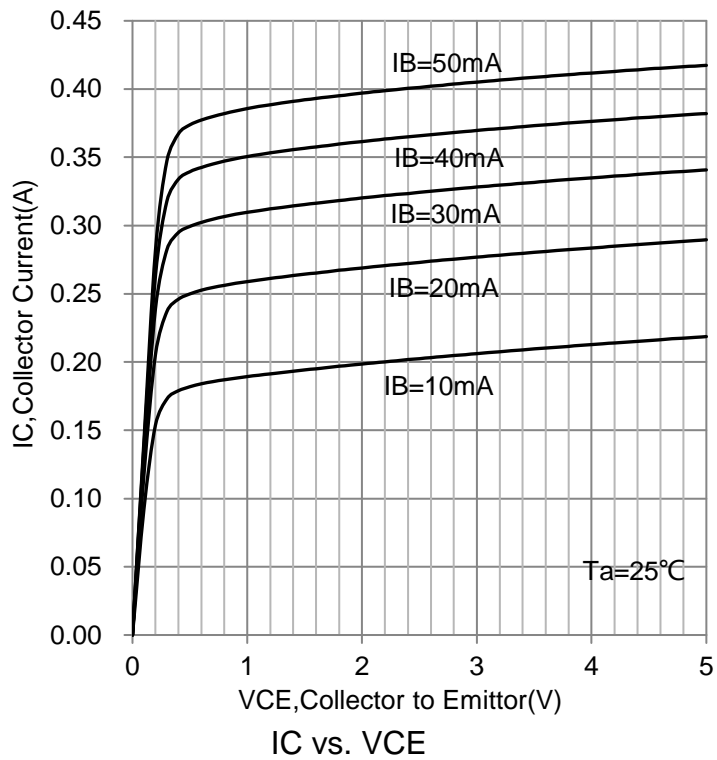
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage (IC = 1.0 mA, IB = 0)	V(BR)CEO	160	-	-	V
Collector-Base Breakdown voltage (IC = 100µA, IE = 0)	V(BR)CBO	180	-	-	V
Emitter-Base Breakdown Voltage (IE = 10 µA, IC = 0)	V(BR)EBO	6	-	-	V
Collector Cutoff Current (VCB = 120 V, IE = 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**

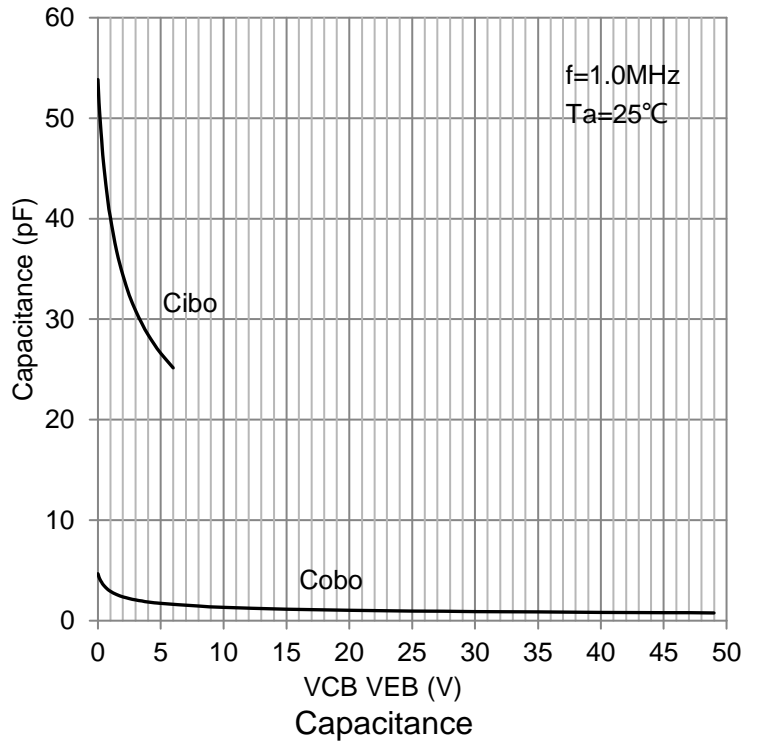
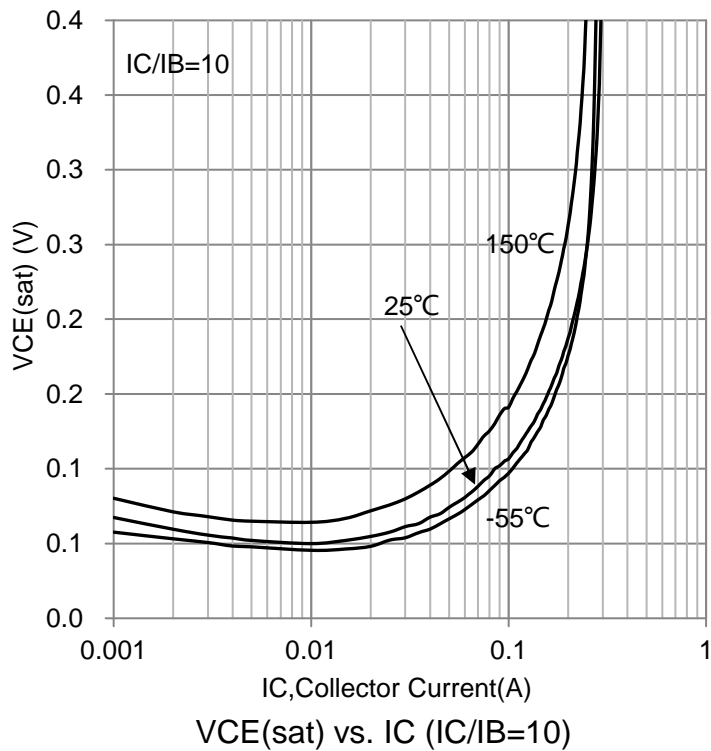
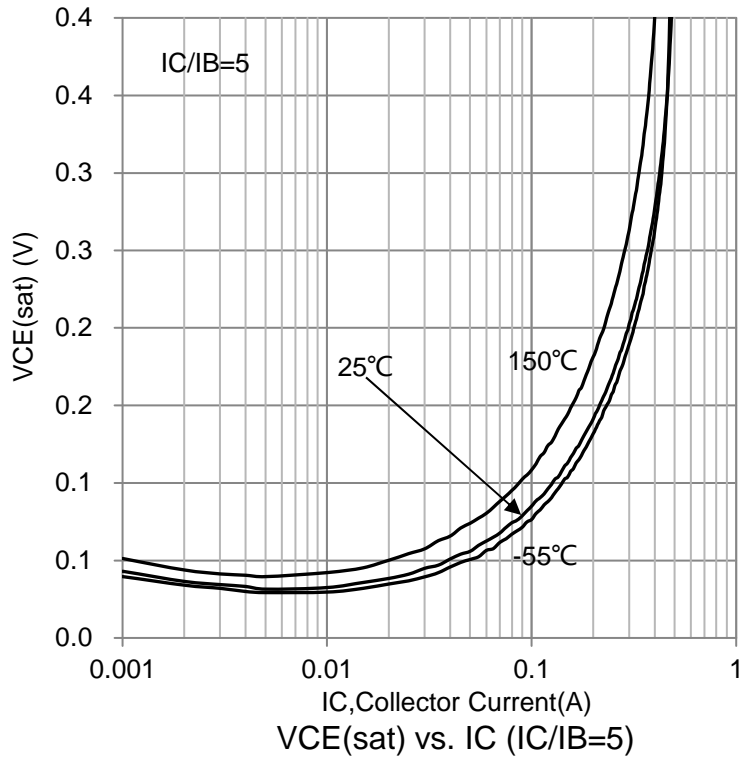
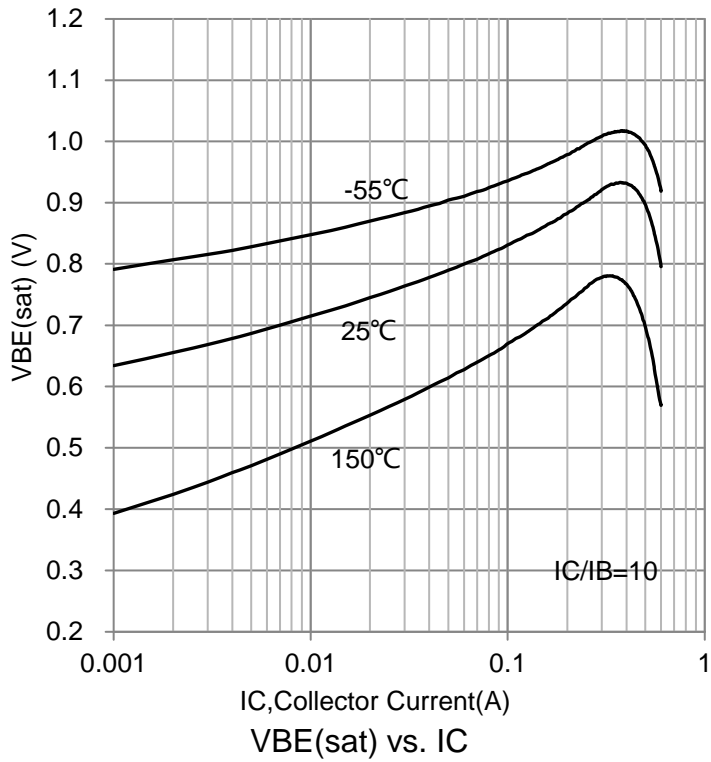
DC Current Gain (IC = 1.0 mA, VCE = 5.0 V)	HFE	80	-	-	
(IC = 10 mA, VCE = 5.0 V)		80	-	250	
(IC = 50 mA, VCE = 5.0 V)		30	-	-	
Collector-Emitter Saturation Voltage (IC = 10 mA, IB = 1.0 mA)	VCE(S)	-	-	0.15	V
(IC = 50 mA, IB = 5.0 mA)		-	-	0.2	
Base-Emitter Saturation Voltage (IC = 10 mA, IB = 1.0 mA)	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



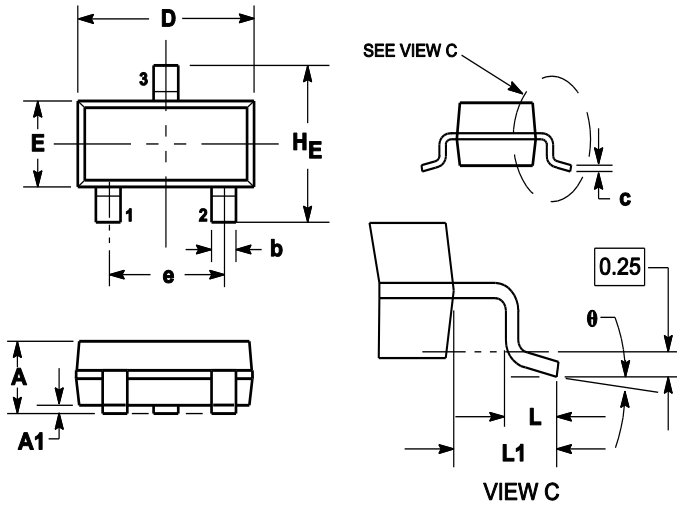
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



### 7. OUTLINE AND DIMENSIONS

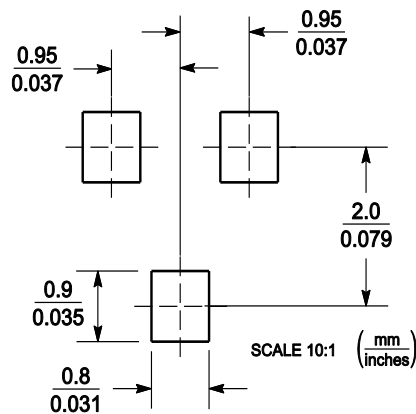
Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1	1.11	0.035	0.04	0.044
A1	0.01	0.06	0.1	0.001	0.002	0.004
b	0.37	0.44	0.5	0.015	0.018	0.02
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.9	3.04	0.11	0.114	0.12
E	1.20	1.3	1.4	0.047	0.051	0.055
e	1.78	1.9	2.04	0.07	0.075	0.081
L	0.10	0.2	0.3	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

### 8. SOLDERING FOOTPRINT



## **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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