

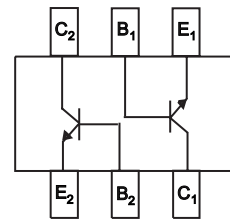
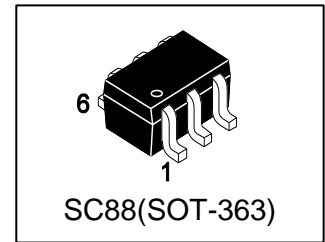
LMBT5551DW1T1G

S-LMBT5551DW1T1G

DUAL NPN SMALL SIGNAL SURFACE MOUNT TRANSISTOR

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
LMBT5551DW1T1G	G1	3000/Tape&Reel
LMBT5551DW1T3G	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 _{EBO}	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

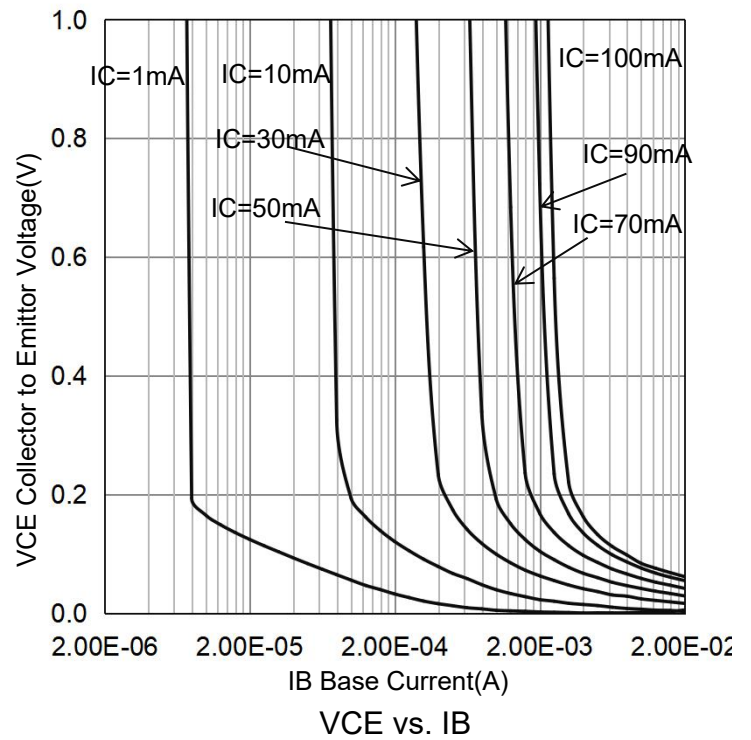
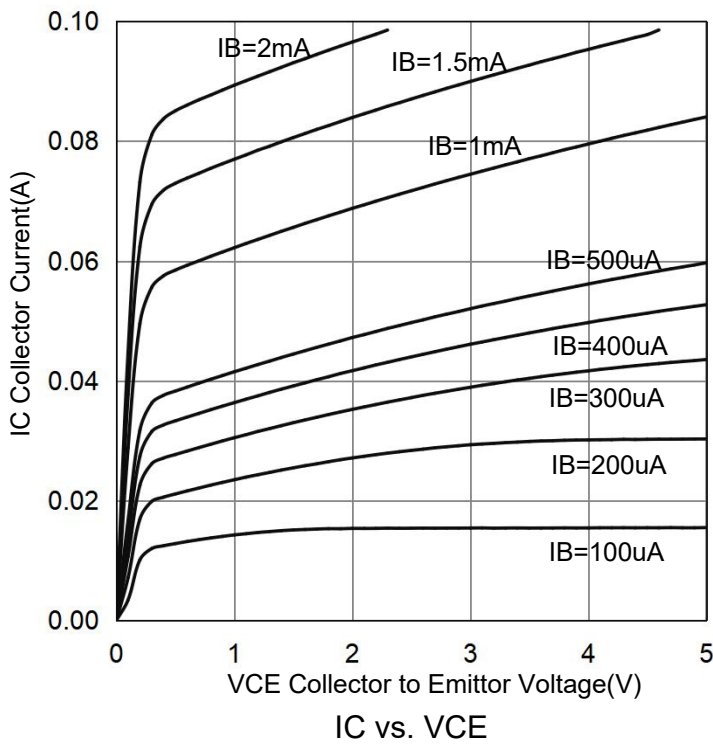
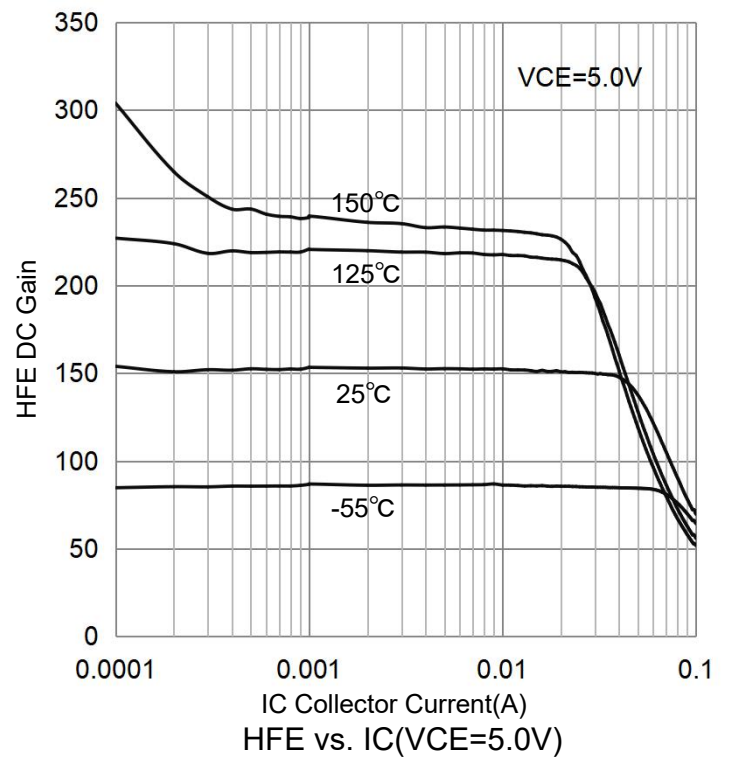
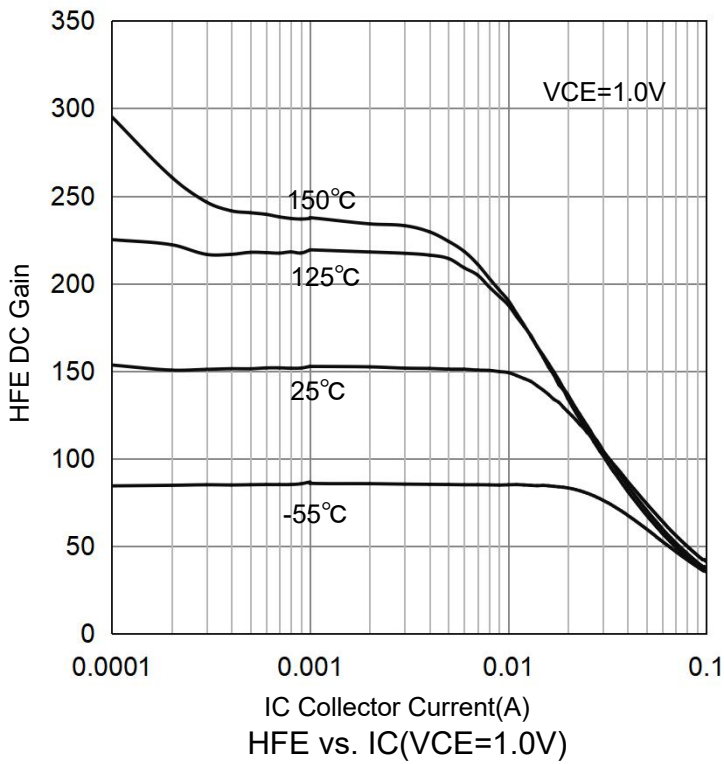
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage (IC = 1.0 mA, IB = 0)	V(BR)CEO	160	-	-	V
Collector-Base Breakdown voltage (IC = 100µA, IE = 0)	V(BR)CBO	180	-	-	V
Emitter-Base Breakdown Voltage (IE = 10 µA, IC = 0)	V(BR)EBO	6	-	-	V
Collector Cutoff Current (VCB = 120 V, IE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

ON CHARACTERISTICS

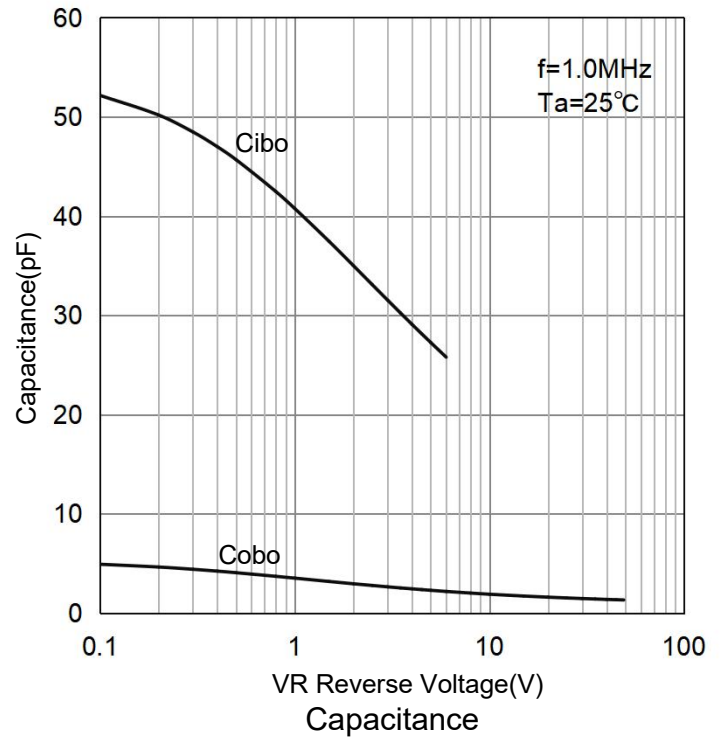
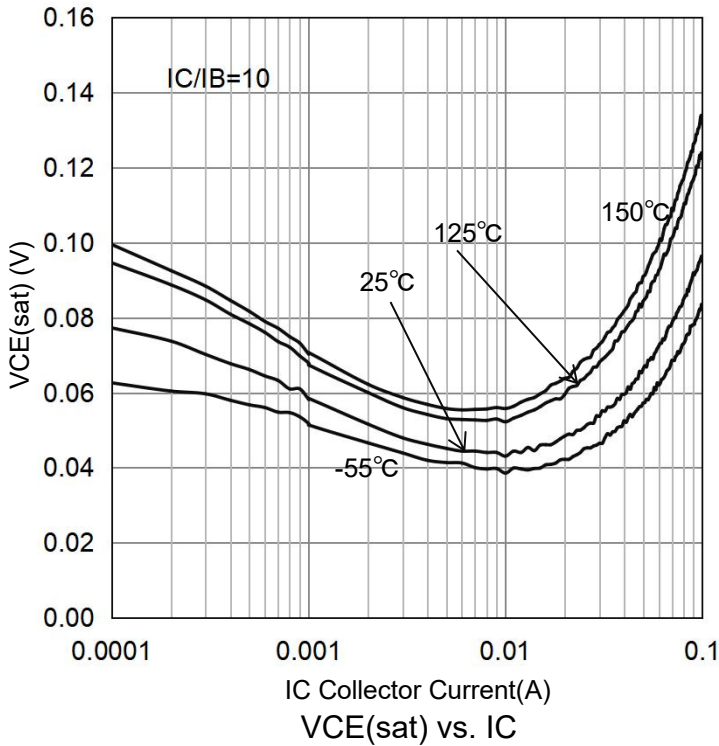
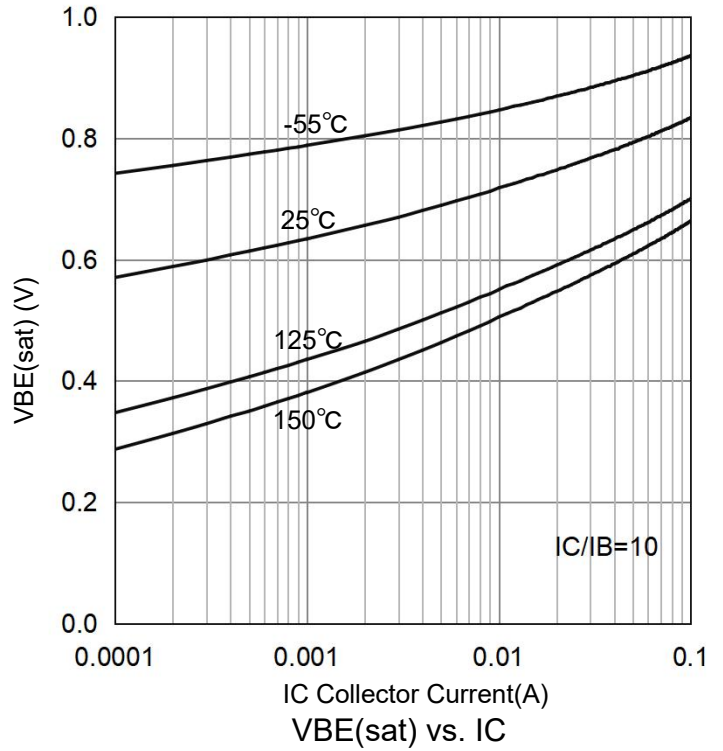
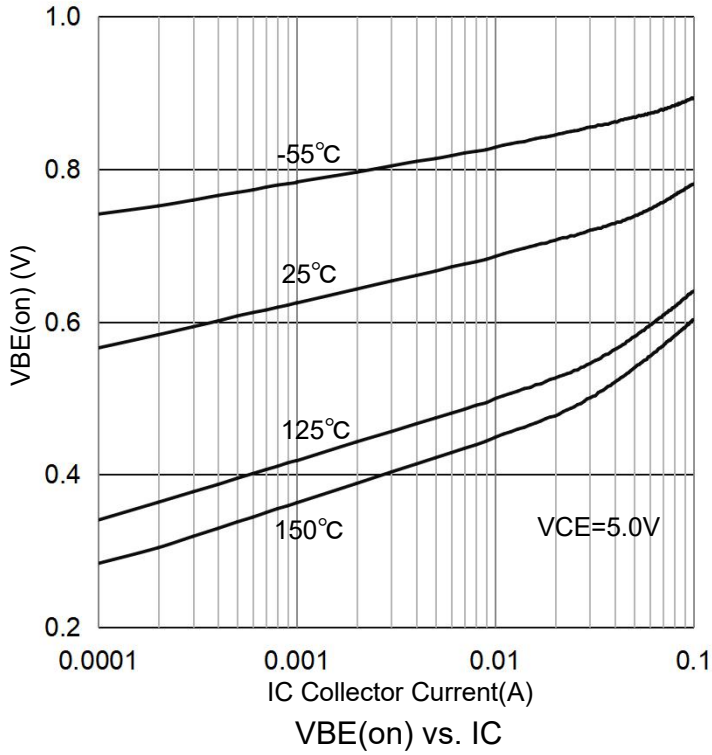
DC Current Gain (IC = 1.0 mA, VCE = 5.0 V)	HFE	80	-	-	
(IC = 10 mA, VCE = 5.0 V)		80	-	250	
(IC = 50 mA, VCE = 5.0 V)		30	-	-	
Collector-Emitter Saturation Voltage (IC = 10 mA, IB = 1.0 mA)	VCE(S)	-	-	0.15	V
(IC = 50 mA, IB = 5.0 mA)		-	-	0.2	
Base-Emitter Saturation Voltage (IC = 10 mA, IB = 1.0 mA)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

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

6.ELECTRICAL CHARACTERISTICS CURVES



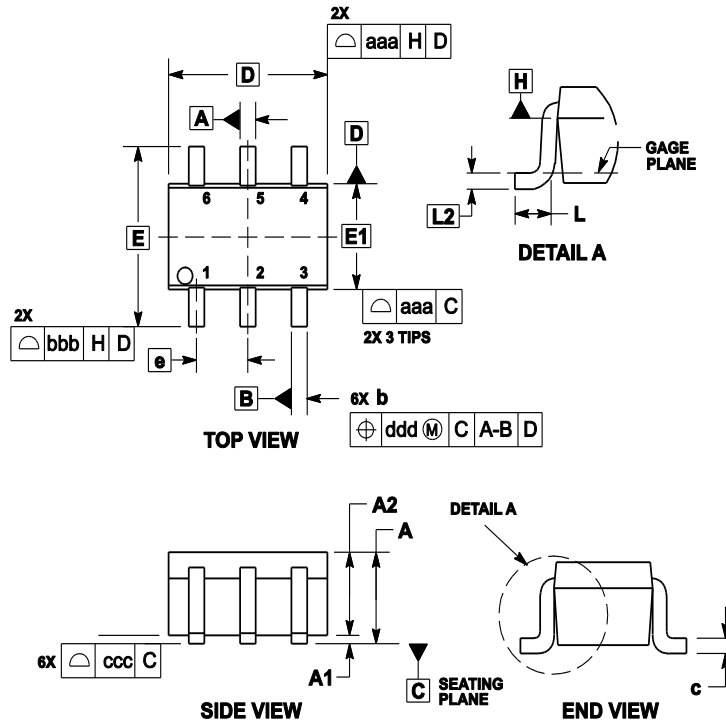
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. OUTLINE AND DIMENSIONS

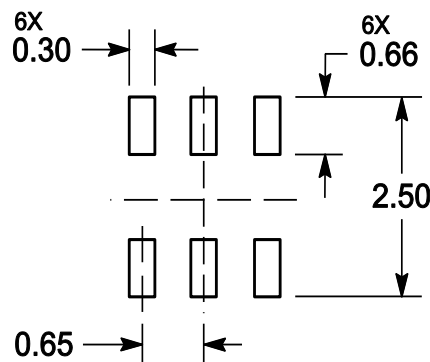
Notes:

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	---	---	1.10	---	---	0.043
A1	0.00	---	0.10	0	---	0.004
A2	0.70	0.90	1.00	0.027	0.035	0.039
b	0.15	0.20	0.25	0.006	0.008	0.01
C	0.08	0.15	0.22	0.003	0.006	0.009
D	1.80	2.00	2.20	0.07	0.078	0.086
E	2.00	2.10	2.20	0.078	0.082	0.086
E1	1.15	1.25	1.35	0.045	0.049	0.053
e	0.65 BSC			0.026 BSC		
L	0.26	0.36	0.46	0.010	0.014	0.018
L2	0.15 BSC			0.006 BSC		
aaa	0.15			0.01		
bbb	0.30			0.01		
ccc	0.10			0.00		
ddd	0.10			0.00		

8. SOLDERING FOOTPRINT



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