

S-LMBT2907ALT1G

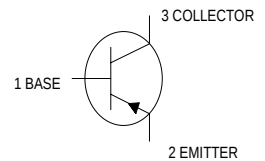
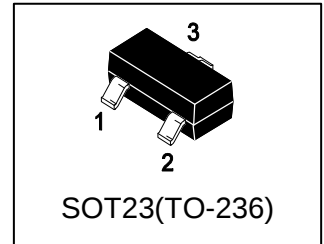
General Purpose Transistors PNP Silicon

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
S-LMBT2907ALT1G	2F	3000/Tape&Reel
S-LMBT2907ALT3G	2F	13000/Tape&Reel



3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	-60	V
Collector–Base Voltage	VCBO	-60	V
Emitter–Base Voltage	VEBO	-5	V
Collector Current — Continuous	IC	-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(Note 1)	RθJA	556	°C/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)	-60	-	-	V
Collector–Base Breakdown Voltage (IC = -10 μ A, IE = 0)	VBR(CBO)	-60	-	-	V
Emitter–Base Breakdown Voltage (IE = -10 μ A, IC = 0)	VBR(EBO)	-5	-	-	V
Collector Cutoff Current (VCE = -30V, VEB = -0.5V)	ICEX	-	-	-50	nA
Collector Cutoff Current (VCB = -50 V, IE = 0) (VCB = -50 V, IE = 0, TA = 125°C)	ICBO	-	-	-0.01 -10	μ A
Base Cutoff Current (VCE = -30V, VEB = -0.5V)	IBL	-	-	-50	nA

ON CHARACTERISTICS (Note 2.)

DC Current Gain (IC = -0.1 mA, VCE = -10 V) (IC = -1.0 mA, VCE = -10 V) (IC = -10 mA, VCE = -10 V) (IC = -150 mA, VCE = -10 V) (IC = -500 mA, VCE = -10 V)	HFE	75 100 100 100 50	- - - - -	- - - 300 -	
Collector–Emitter Saturation Voltage (IC = -150 mA, IB = -15 mA) (IC = -500 mA, IB = -50 mA)	VCE(sat)	- -	- -	-0.4 -1.6	V
Base–Emitter Saturation Voltage (IC = -150 mA, IB = -15 mA) (IC = -500 mA, IB = -50 mA)	VBE(sat)	- -	- -	-1.3 -2.6	V

SMALL–SIGNAL CHARACTERISTICS

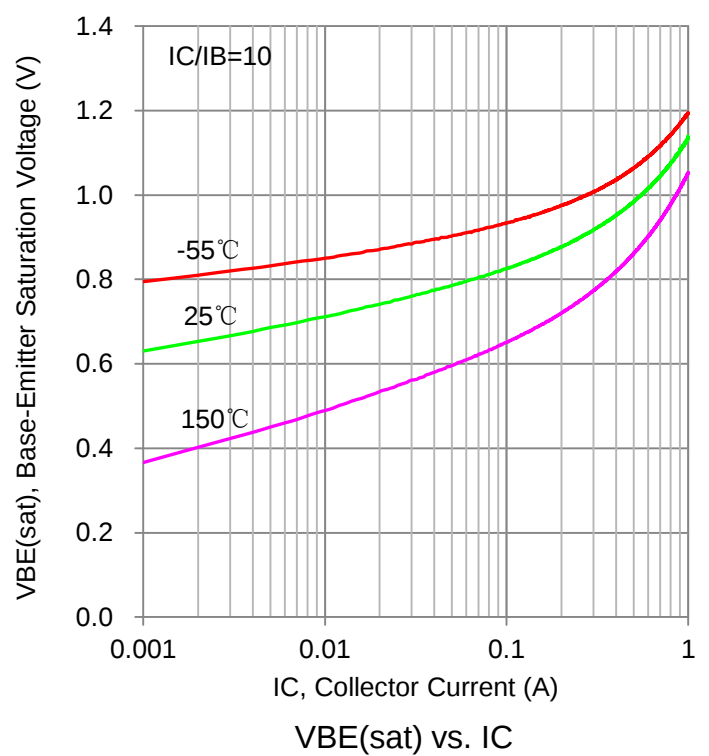
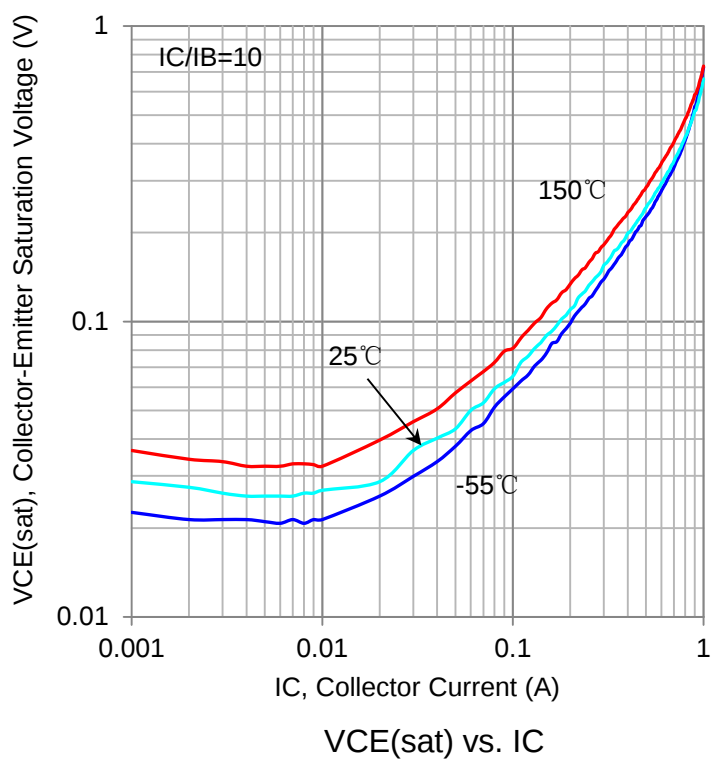
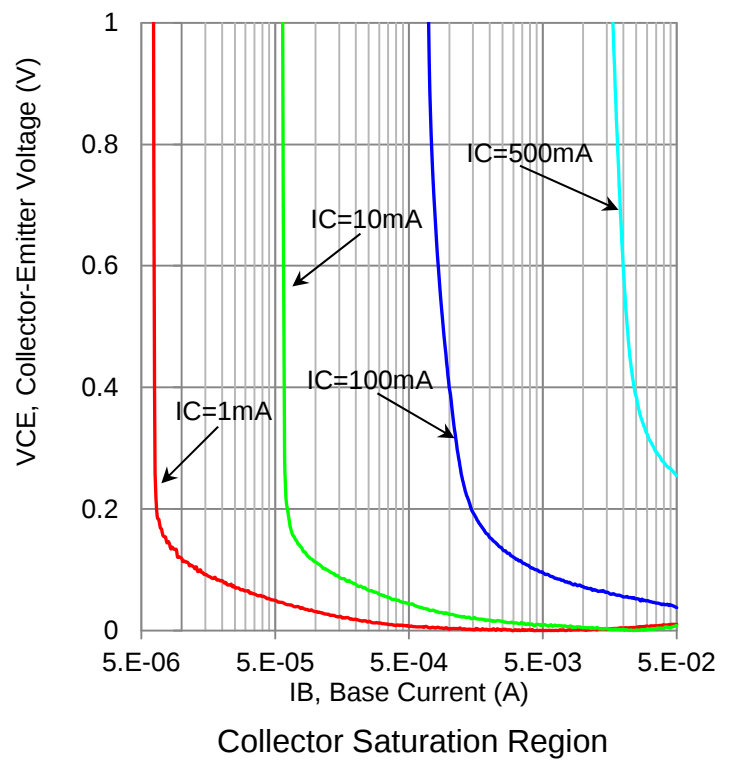
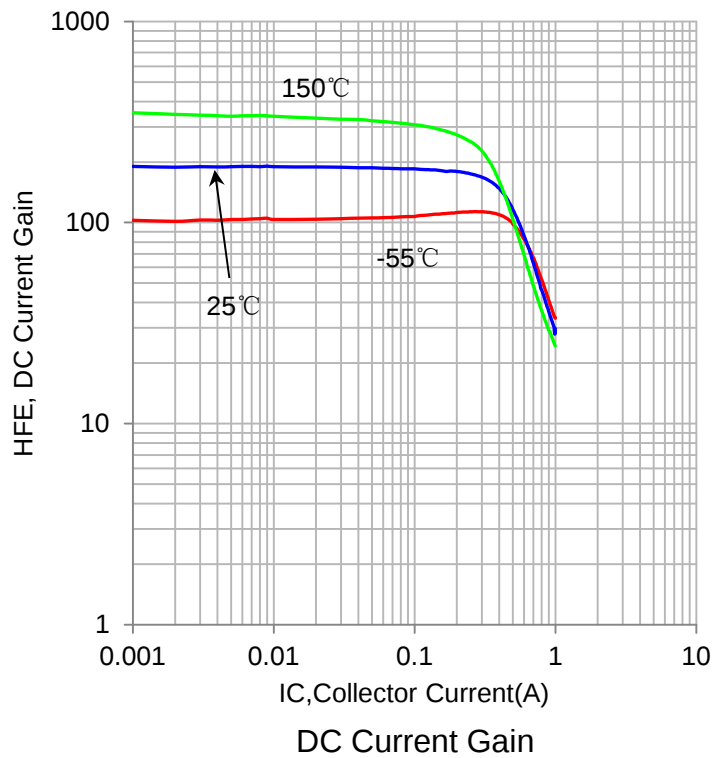
Current–Gain — Bandwidth Product (IC = -50mA, VCE= -20V, f = 100MHz)	fT	200	-	-	MHz
Output Capacitance (VCB = -10 V, IE = 0, f = 1.0 MHz)	Cobo	-	-	8	pF
Input Capacitance (VEB = -2 V, IC = 0, f = 1.0 MHz)	Cibo	-	-	30	pF

SWITCHING CHARACTERISTICS

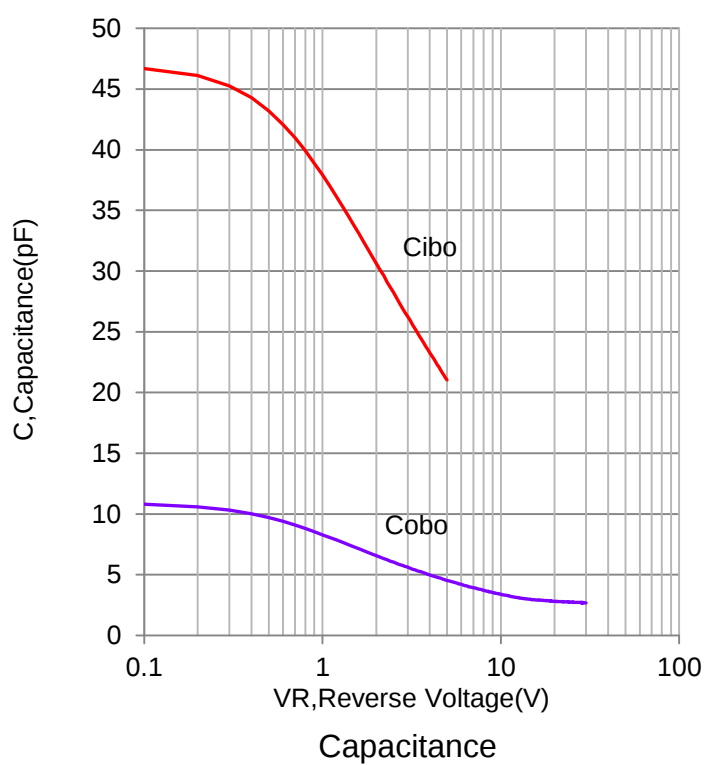
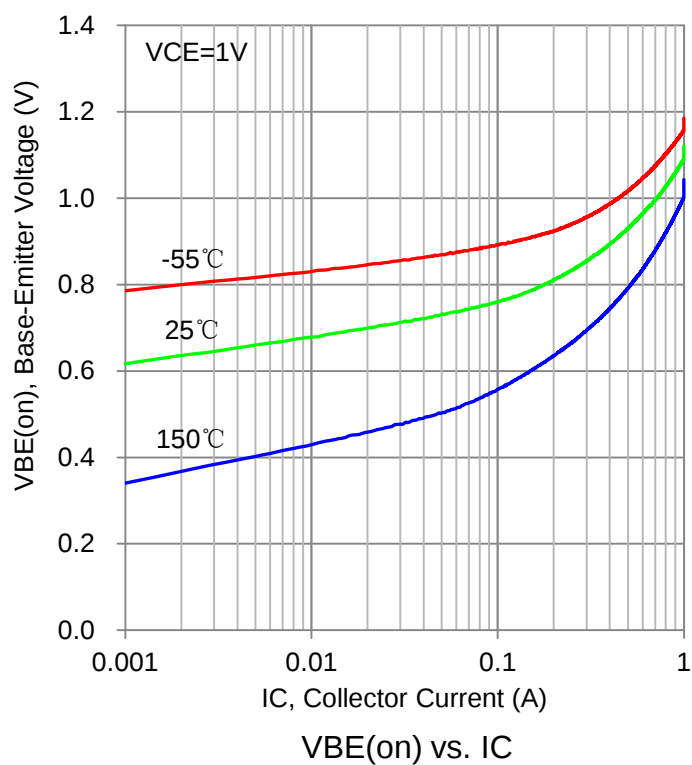
Turn–On Time	(VCC = -30 V, IC = -150 mA, IB1 = -15 mA)	ton	-	-	45	ns
Delay Time		td	-	-	10	
Rise Time		tr	-	-	40	
Storage Time	(VCC = -6 V, IC = -150 mA, IB1 = IB2 = -15 mA)	ts	-	-	225	
Fall Time		tf	-	-	60	
Turn–Off Time		toff	-	-	280	

2.Pulse Test: Pulse Width $\leq 300 \mu$ s, Duty Cycle $\leq 2.0\%$.

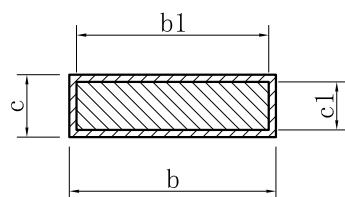
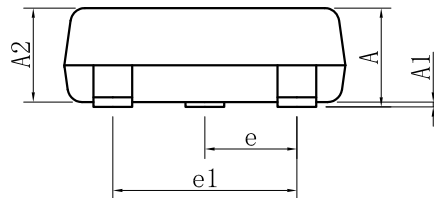
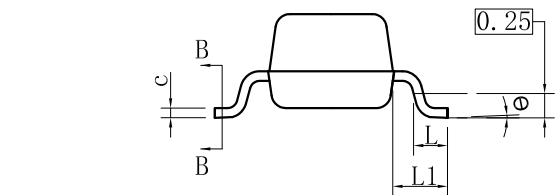
6. ELECTRICAL CHARACTERISTICS CURVES



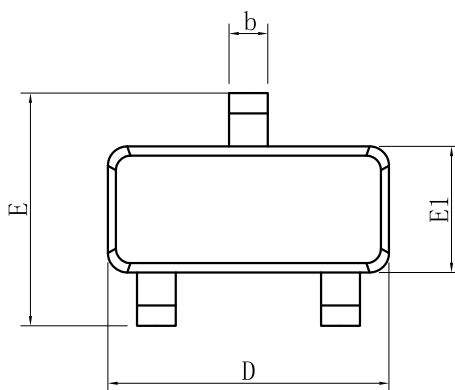
6. ELECTRICAL CHARACTERISTICS CURVES(Con.)



7.OUTLINE AND DIMENSIONS



SECTION B-B

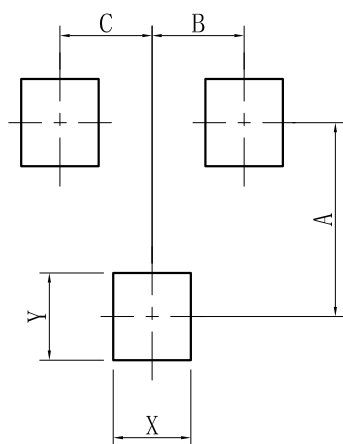


SOT23			
DIM	MIN	NOR	MAX
A	0.89	—	1.12
A1	0.01	—	0.10
A2	0.88	0.95	1.02
b	0.30	—	0.50
b1	0.30	0.40	0.45
c	0.08	—	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	—	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	—	8°
All Dimensions in mm			

GENERAL NOTES

- 1.Top package surface finish $Ra0.4\pm0.2\mu m$
- 2.Bottom package surface finish $Ra0.7\pm0.2\mu m$
- 3.Side package surface finish $Ra0.4\pm0.2\mu m$

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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