

LBC856ALT1G

S-LBC856ALT1G

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.
- Moisture Sensitivity Level: 1
- ESD Rating – Human Body Model: >4000 V
– Machine Model: >400 V

2. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LBC856ALT1G	3A	3000/Tape&Reel
LBC856ALT3G	3A	10000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25°C)

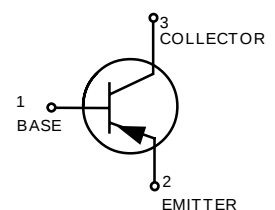
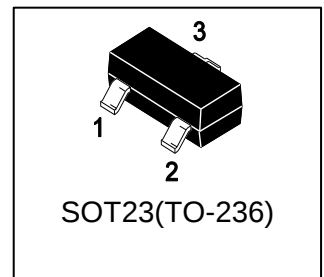
Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	VCEO	-65	V
Collector-Base Voltage	VCBO	-80	V
Emitter-Base Voltage	VEBO	-5	V
Continuous Collector Current	IC	-100	mA

4. THERMAL CHARACTERISTICS

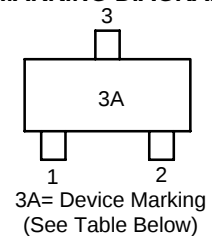
Parameter	Symbol	Limits	Unit
Total Device Dissipation FR- 5 Board, (Note 1) TA = 25°C	PD	225	mW
Derate above 25°C		1.8	mW/°C
Thermal resistance from junction to ambient	RθJA	556	°C/W
Total Device Dissipation Alumina Substrate, (Note 2) TA = 25°C	PD	300	mW
Derate above 25°C		2.4	mW/°C
Thermal resistance from junction to ambient	RθJA	417	°C/W
Junction and Storage Temperature	TJ , Tstg	-55~+150	°C

1. FR-5 = 1.0 x 0.75 x 0.062 in.

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



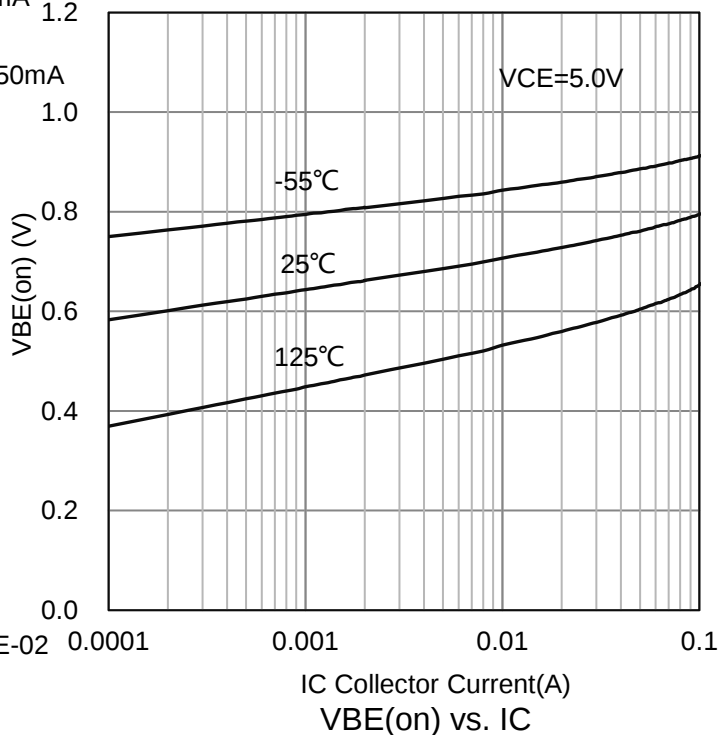
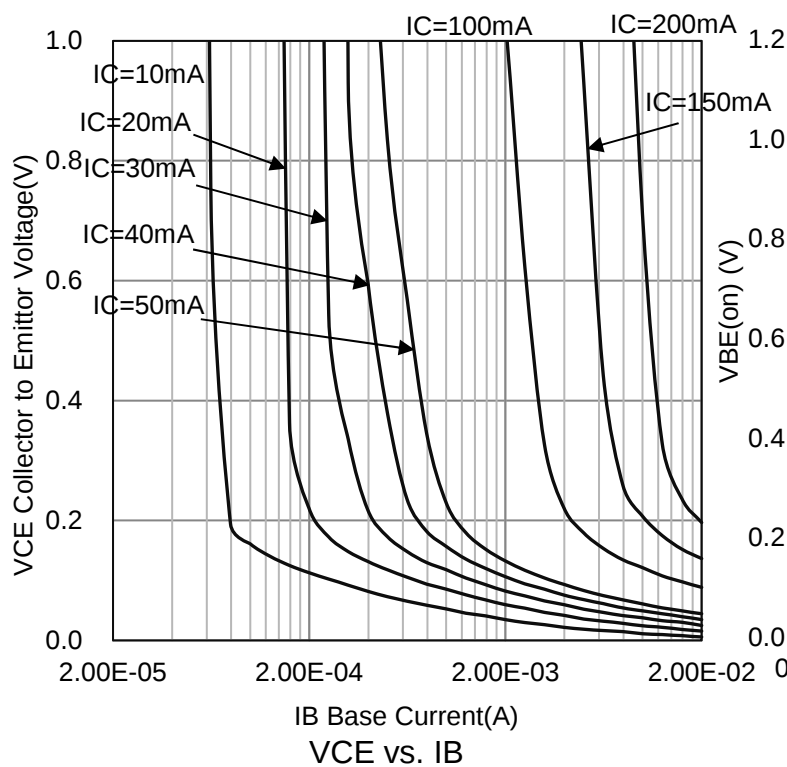
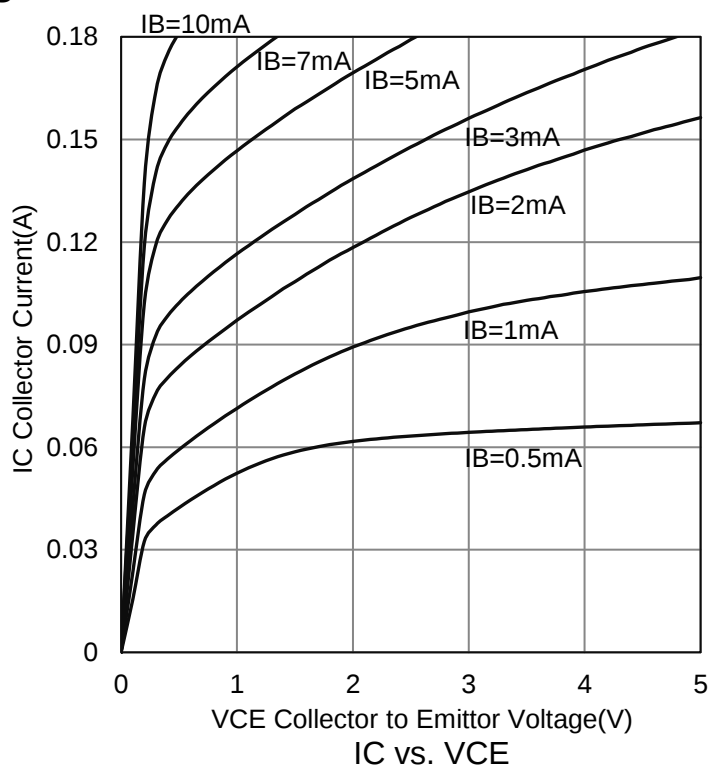
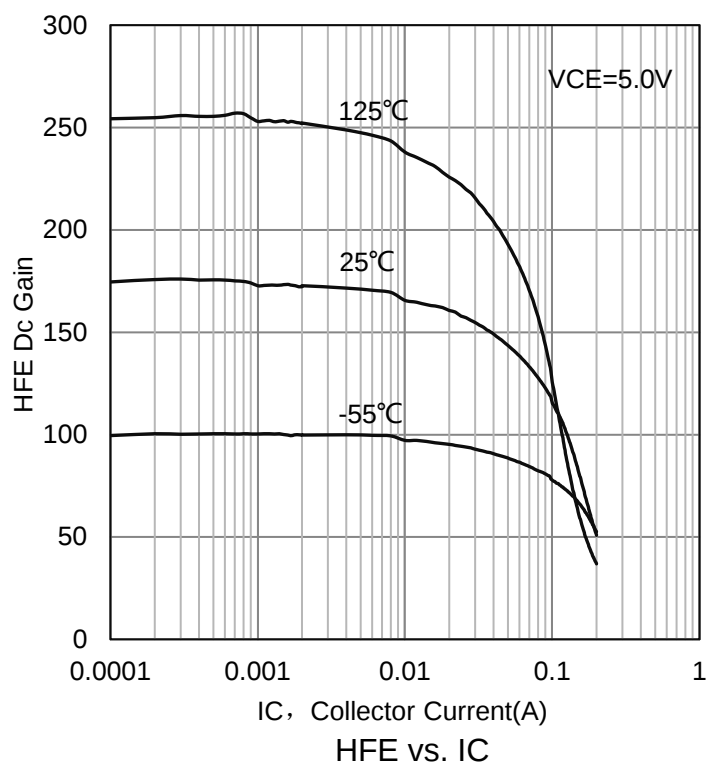
MARKING DIAGRAM



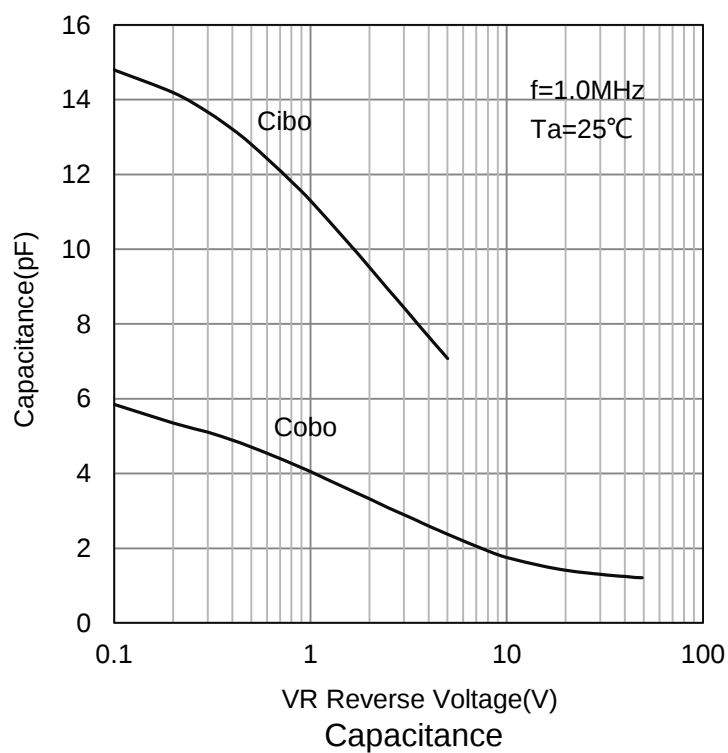
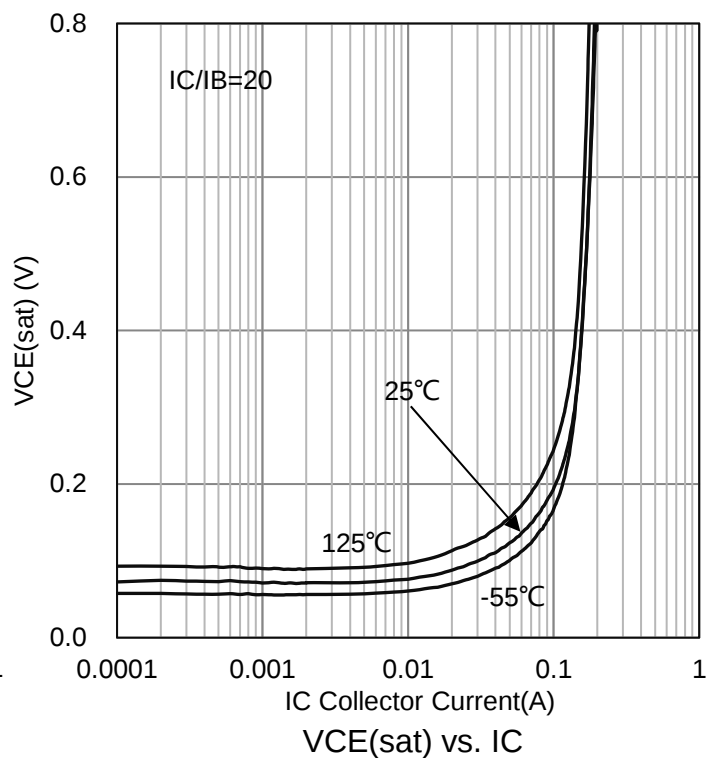
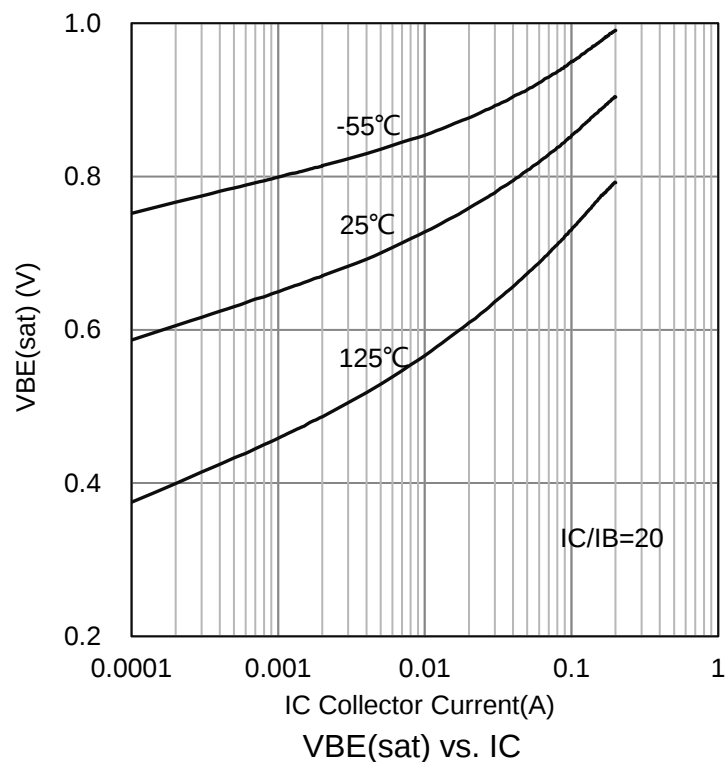
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (IC = -10mA)	BVCEO	-65	-	-	V
Collector-Emitter Breakdown Voltage (IC = -10μA, VEB = 0)	BVCES	-80	-	-	
Collector-Base Breakdown Voltage (IC = -10μA)	BVCBO	-80	-	-	
Emitter-Base Breakdown Voltage (IE = -1μA)	BVEBO	-5	-	-	
Collector Cut-off Current (VCB = -30V) (VCB = -30 V, TA = 150°C)	ICBO	-	-	-15 -4	nA μA
ON CHARACTERISTICS					
DC Current Gain (IC = -2.0 mA, VCE = -5.0 V)	hFE	125	180	250	
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	- -	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)	Cob	-	-	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



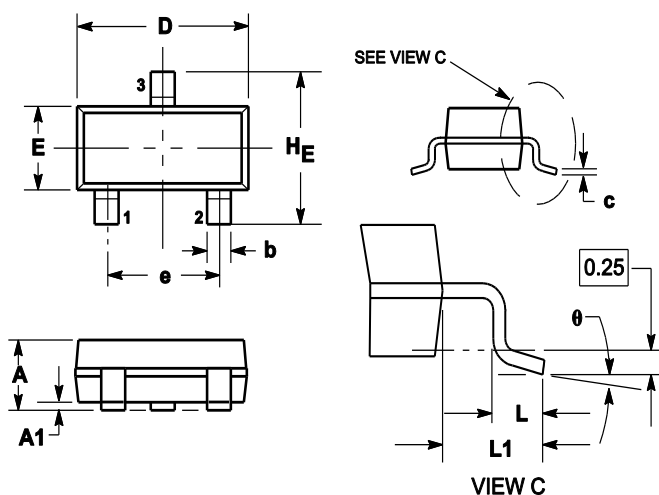
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



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
H _E	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

8.SOLDERING FOOTPRINT

