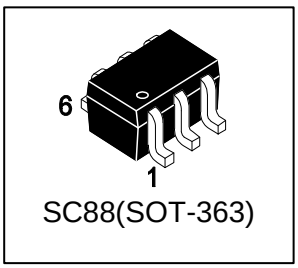
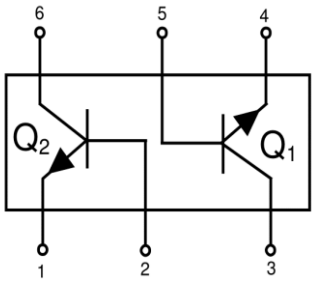
LBC846BDW1T1G
S-LBC846BDW1T1G

Dual General Purpose Transistors
NPN Duals



SC88(SOT-363)



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 RESISTOR VALUES

Device	Marking	Shipping
LBC846BDW1T1G	1B	3000/Tape&Reel
LBC846BDW1T3G	1B	10000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	65	V
Collector–Base Voltage	VCBO	80	V
Emitter–Base Voltage	VEBO	6	V
Collector Current — Continuous	IC	100	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, Per Device FR– 5 Board(Note 1) @ TA = 25ºC Derate above 25ºC	PD	380 250 3	mW mW mW/ºC
Thermal Resistance, Junction–to–Ambient	RΘJA	328	ºC/W
Junction and Storage temperature	TJ,Tstg	−55~+150	°C

1. FR–5 = 1.0 x 0.75 x 0.062 in.

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

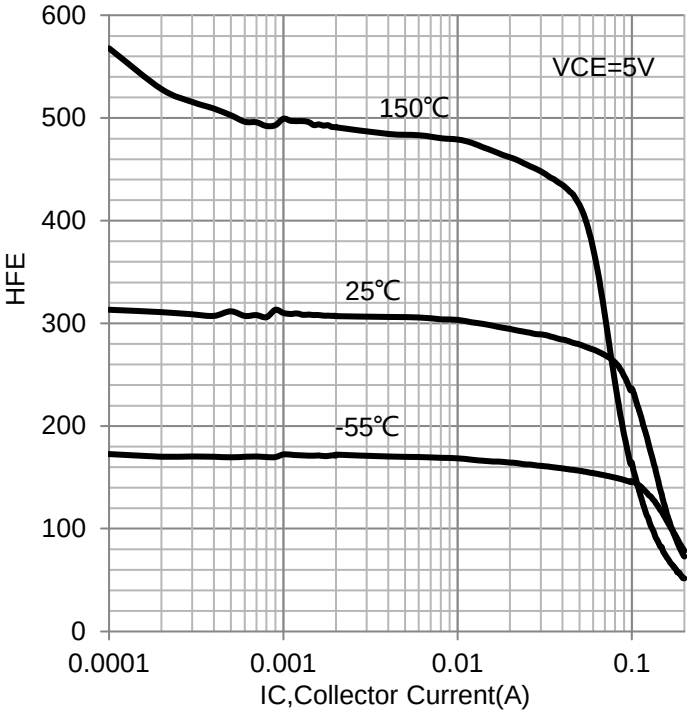
OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = 10 mA)	VBR(CEO)	65	-	-	V
Collector–Emitter Breakdown Voltage (IC = 10 µA, VEB = 0)	VBR(CES)	80	-	-	V
Collector–Base Breakdown Voltage (IC = 10 µA)	VBR(CBO)	80	-	-	V
Emitter–Base Breakdown Voltage (IE = 1.0 µA)	VBR(EBO)	6	-	-	V
Collector-Base Cutoff Current (VCB = 30 V)	ICBO	-	-	15	nA
(VCB = 30 V, TA = 150°C)		-	-	5	µA

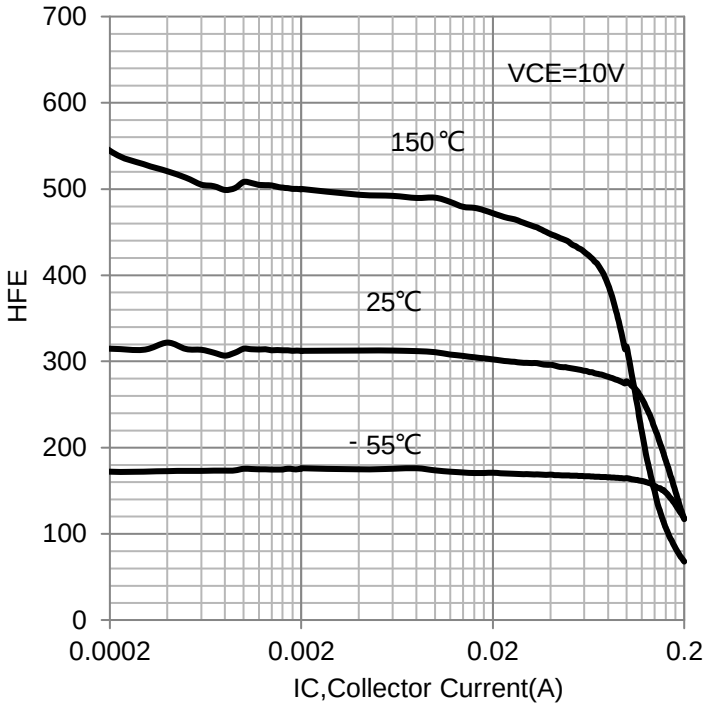
ON CHARACTERISTICS

DC Current Gain (IC = 2.0 mA, VCE = 5 V)	HFE	200	290	450	
Collector–Emitter Saturation Voltage	VCE(sat)				V
(IC = 10 mA, IB = 0.5 mA)		-	-	0.25	
(IC = 100 mA, IB = 5.0 mA)		-	-	0.6	
Base–Emitter Saturation Voltage	VBE(sat)				V
(IC = 10 mA, IB = 0.5 mA)		-	0.7	-	
(IC = 100 mA, IB = 5.0 mA)		-	0.9	-	
Base–Emitter Voltage	VBE(on)				mV
(IC = 2.0 mA, VCE = 5.0 V)		580	660	700	
(IC = 10 mA, VCE = 5.0 V)		-	-	770	
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)	Cobo	-	-	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

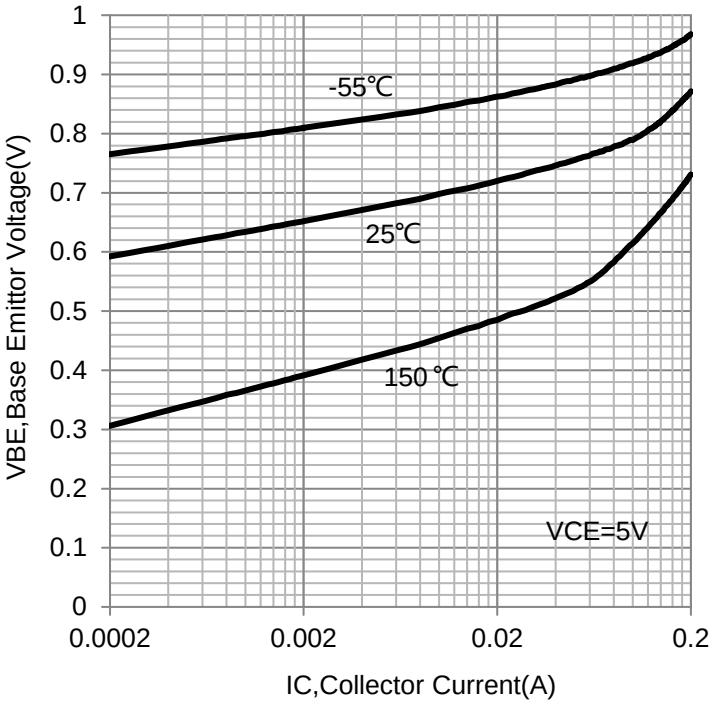
6.ELECTRICAL CHARACTERISTICS CURVES



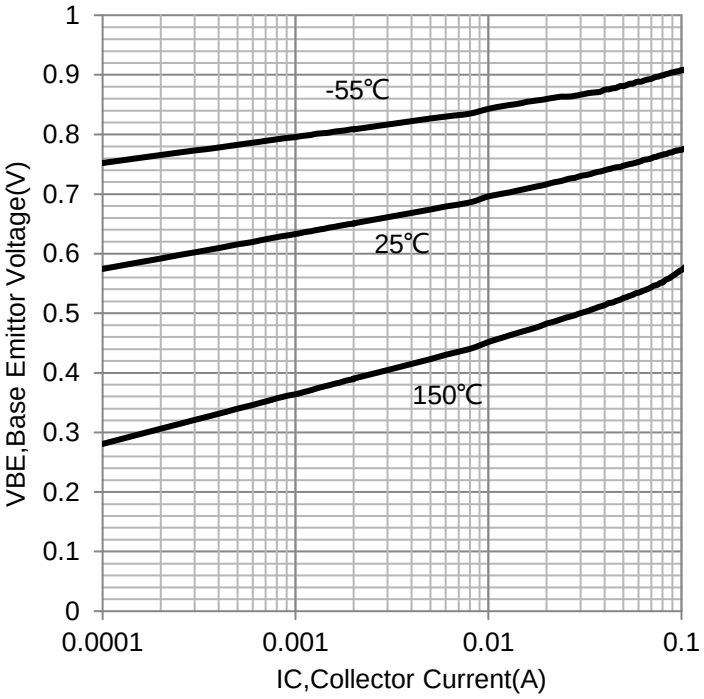
HFE vs. IC



HFE vs. IC (VCE=10V)

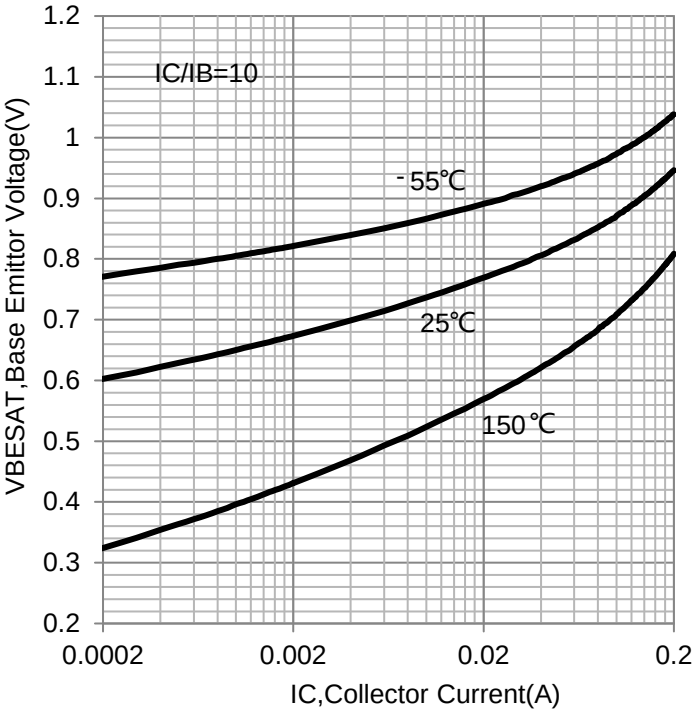


VBE(on) vs. IC

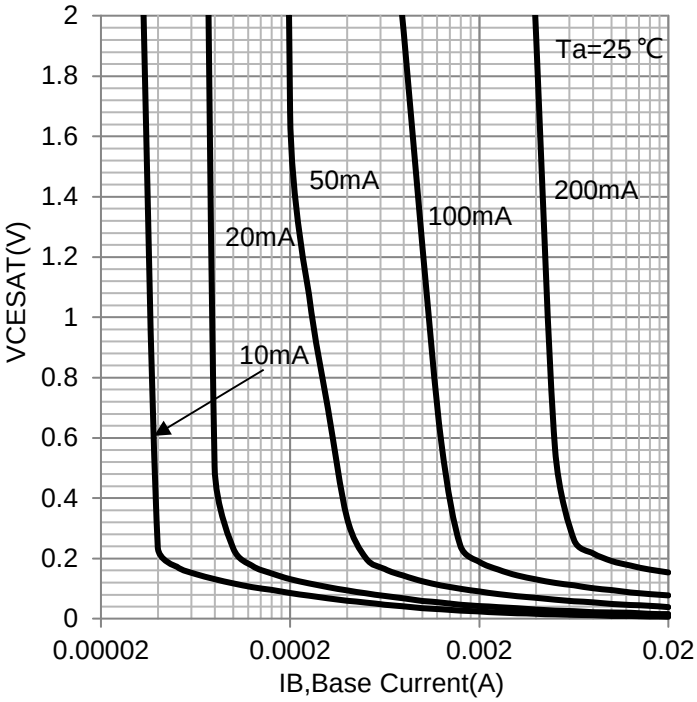


VBE(on) vs. IC

6.ELECTRICAL CHARACTERISTICS CURVES(Con.)

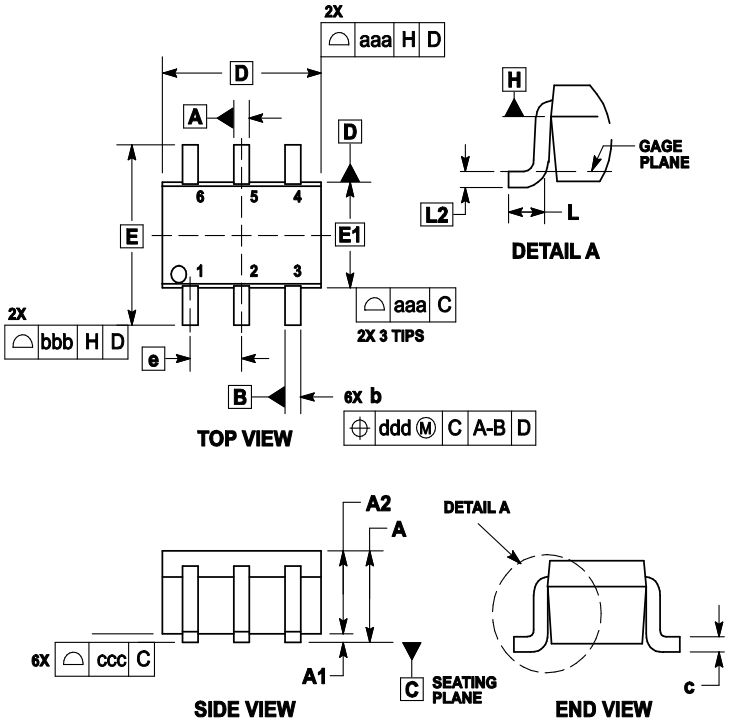


VBESAT vs. IC



VCESAT vs. IB

7.OUTLINE AND DIMENSIONS

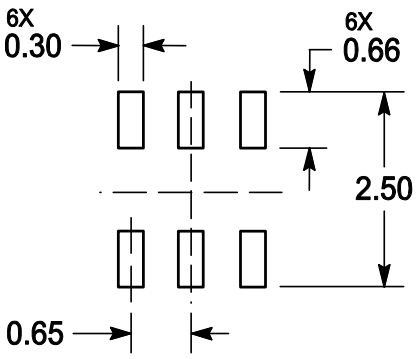


Notes:

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 E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

	MILLIMETERS			INCHES		
DIM	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



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.

- Before you use our Products for new Project, you are requested to carefully read this document and fully under--stand its contents. LRC shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any LRC’s Products against warning, caution or note contained in this document.

- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products,please confirm the latest information with a LRC sales represe--ntative.