

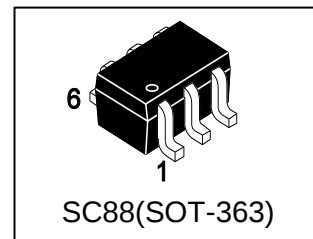
LBC857BDW1T1G

S-LBC857BDW1T1G

Dual General Purpose Transistors

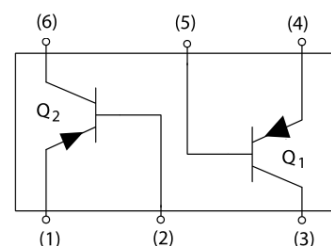
1. FEATURES

- 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
LBC857BDW1T1G	3F	3000/Tape&Reel



3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	-45	V
Collector–Base Voltage	VCBO	-50	V
Emitter–Base Voltage	VEBO	-5	V
Collector Current — Continuous	IC	-100	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-4 Board (Note 1) Derate Above 25°C	PD	250 2.0	mW mW/°C
Thermal Resistance, Junction–to–Ambient Junction–to–Case	RθJA RθJC	500 370	°C/W
Junction and Storage temperature	TJ,Tstg	-55~+150	°C

1.30.0mm×25.0mm×1.6mm(FR4)

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)	-45	-	-	V
Collector–Emitter Breakdown Voltage (IC = -10 μ A, VEB = 0)	VBR(CES)	-50	-	-	V
Collector–Base Breakdown Voltage (IC = -10 μ A, IE = 0)	VBR(CBO)	-50	-	-	V
Emitter–Base Breakdown Voltage (IE = -1.0 μ A, IC = 0)	VBR(EBO)	-5	-	-	V
Collector Cutoff Current (VCB = -30 V) (VCB = -30 V, TA = 150°C)	ICBO	-	-	-15 -4	nA μ A
Emitter-Base cut-off current (VBE = - 5 V, IC = 0)	IEBO	-	-	-100	nA
Collector-Emitter cutoff Current (VCE= -45V, IB=0)	ICEO	-	-	-1	mA

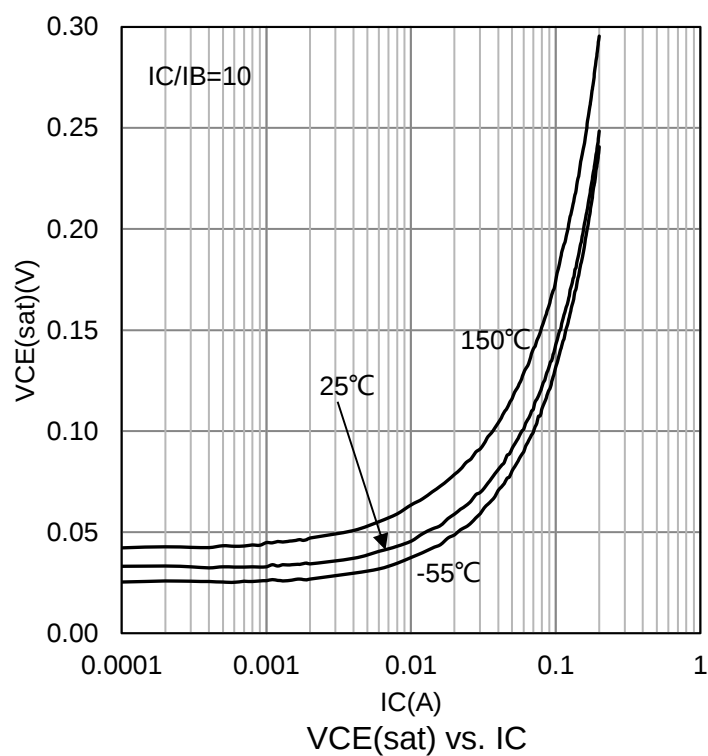
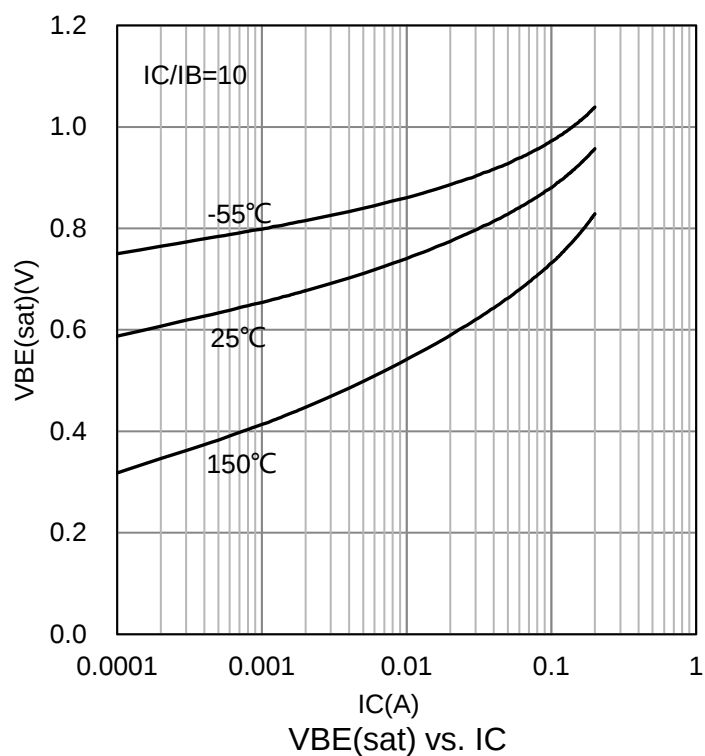
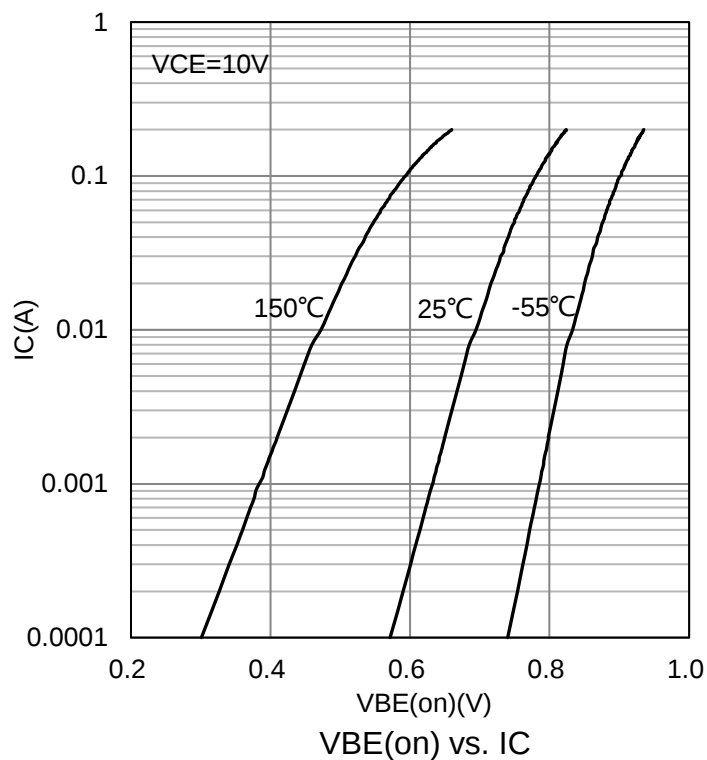
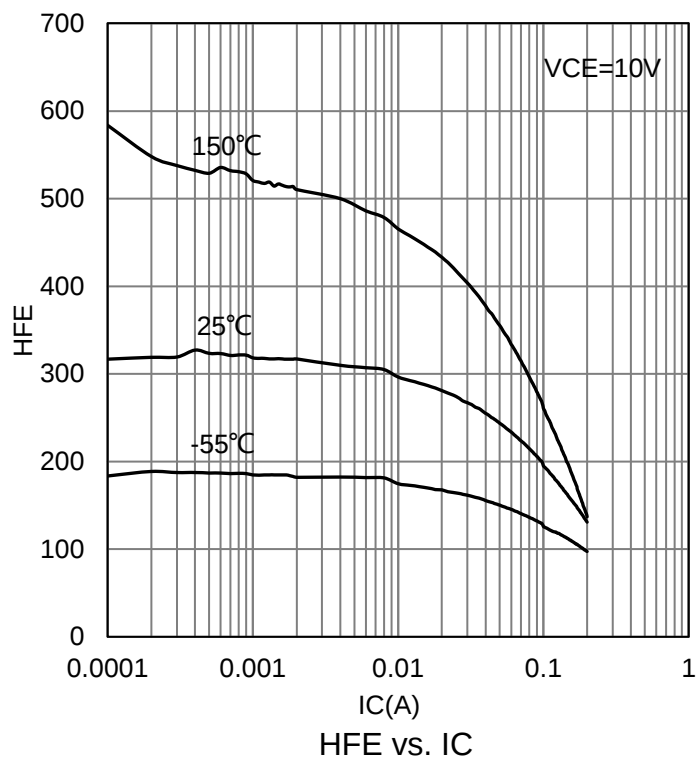
ON CHARACTERISTICS

DC Current Gain (IC = -10 μ A, VCE = -5.0 V) (IC = -2.0 mA, VCE = -5.0 V)	HFE	- 220	150 290	- 475	
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

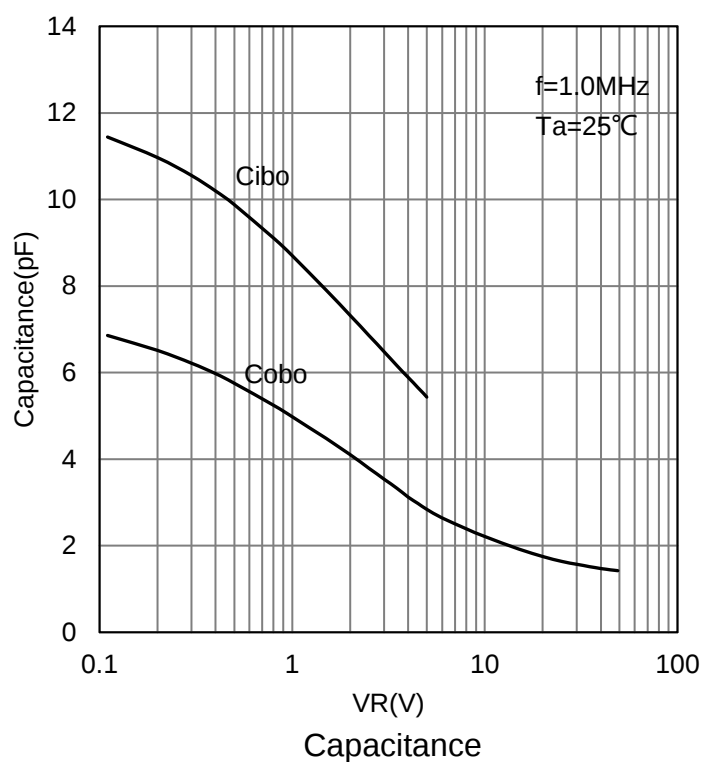
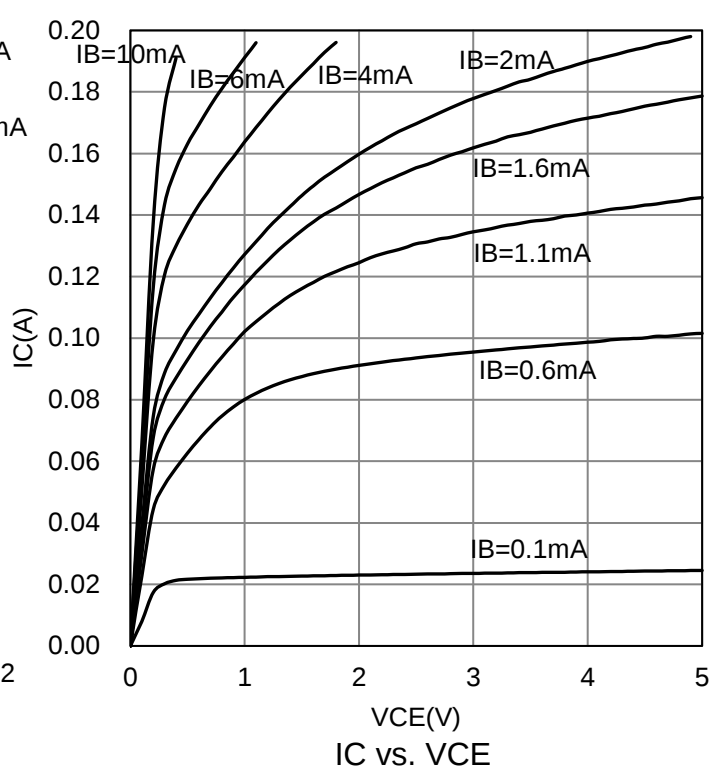
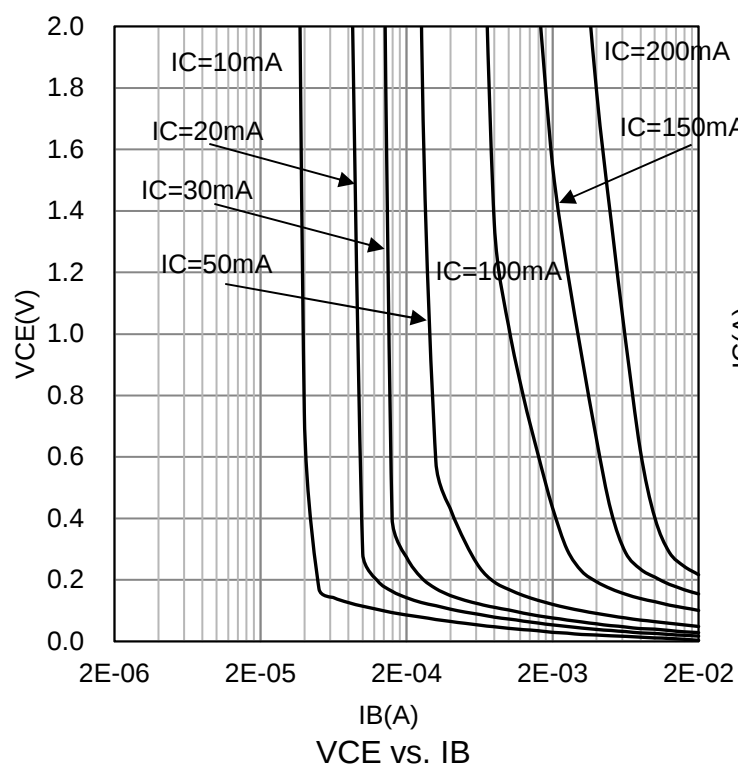
SMALL–SIGNAL CHARACTERISTICS

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)	Cobo	-	-	4.5	pF
Noise Figure (IC = -0.2 mA, VCE = -5.0 V, RS = 2.0 k Ω f = 1.0 kHz, BW = 200 Hz)	NF	-	-	10	dB

6.ELECTRICAL CHARACTERISTICS CURVES



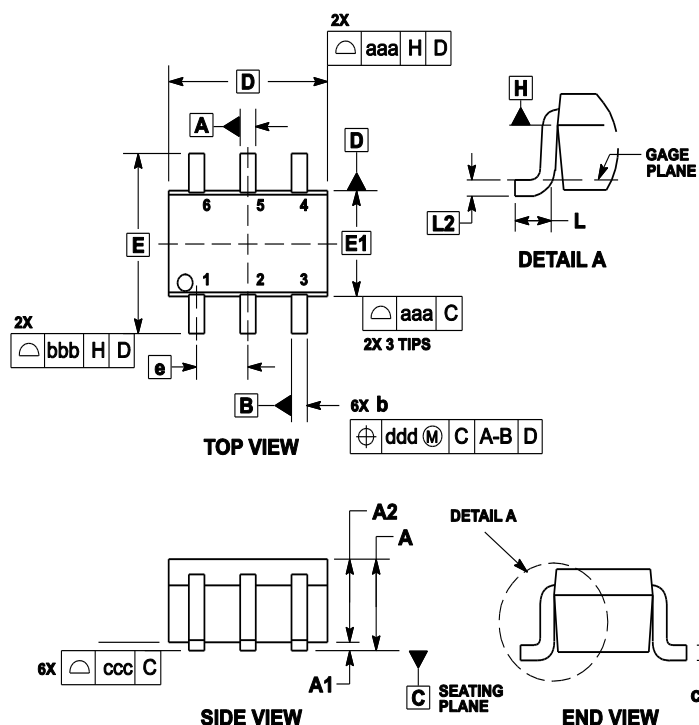
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7.OUTLINE AND DIMENSIONS

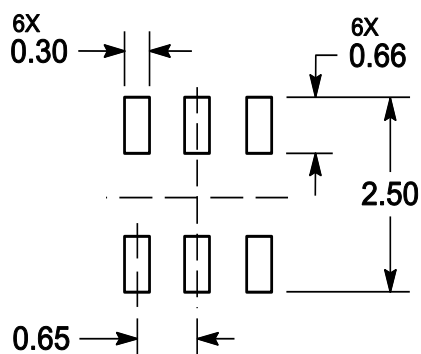
Notes:

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 E1 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



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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