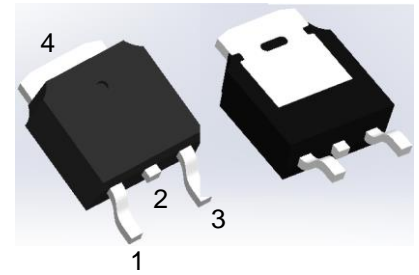


# LBTN880DPTUG

## S-LBTN880DPTUG

### NPN SILICON POWER TRANSISTOR



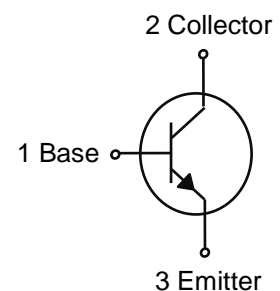
TO-252

#### 1. FEATURES

- Lead Formed for Surface Mount Applications in Plastic Sleeves
- 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
LBTN880DPTUG	N88	2500/Tape&Reel



#### 3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	80	V
Collector–Base Voltage	VCBO	80	V
Emitter–Base Voltage	VEBO	5	V
Collector Current(DC)	IC	8	A
Peak collector current(tp < 5 ms)	ICM	16	A
Total Power Dissipation (Note 1) @ TA = 25°C	PD	1.75	W
Junction Temperature	Tj	150	°C
Storage Temperature Range	Tstg	-55~+150	°C

#### 4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Thermal Resistance, Junction–to–Ambient(Note 1)	RθJA	71.4	°C/W

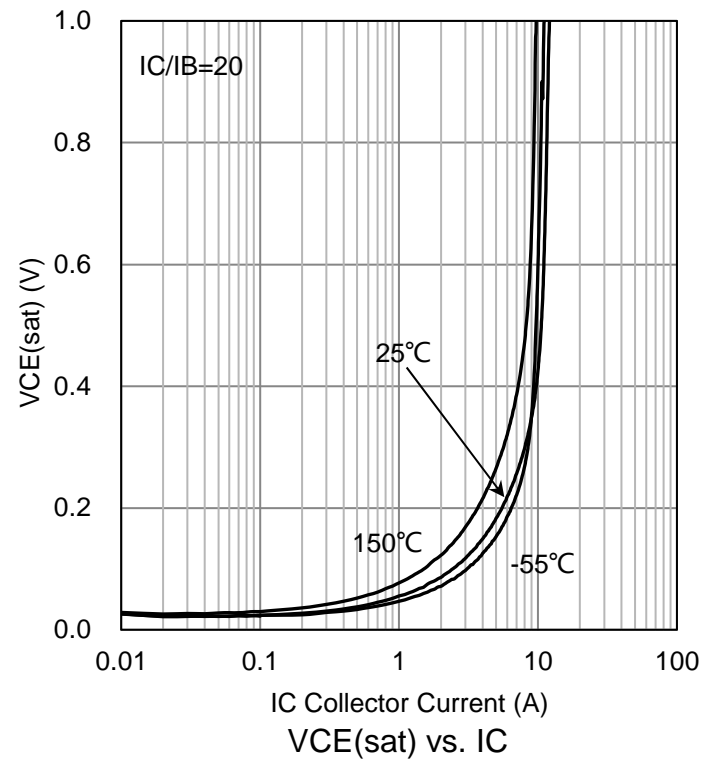
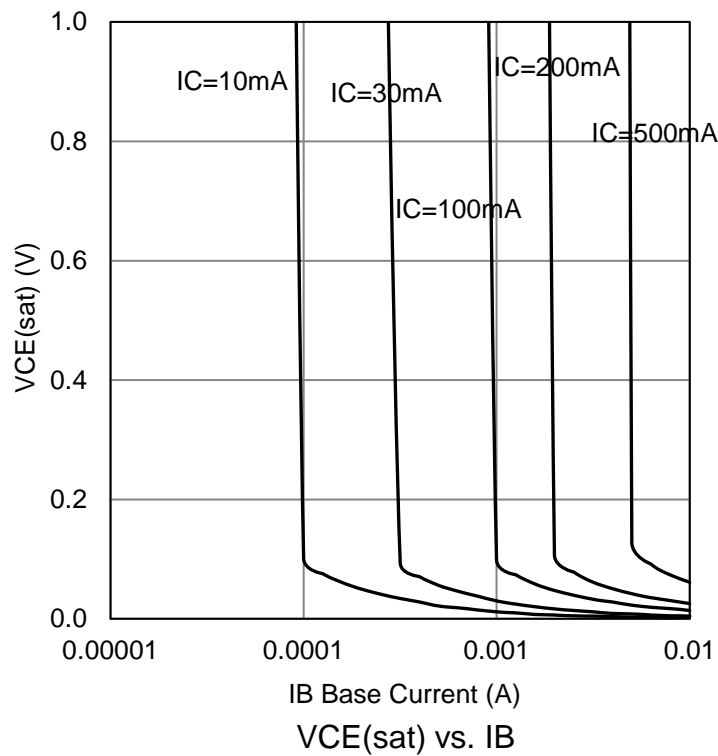
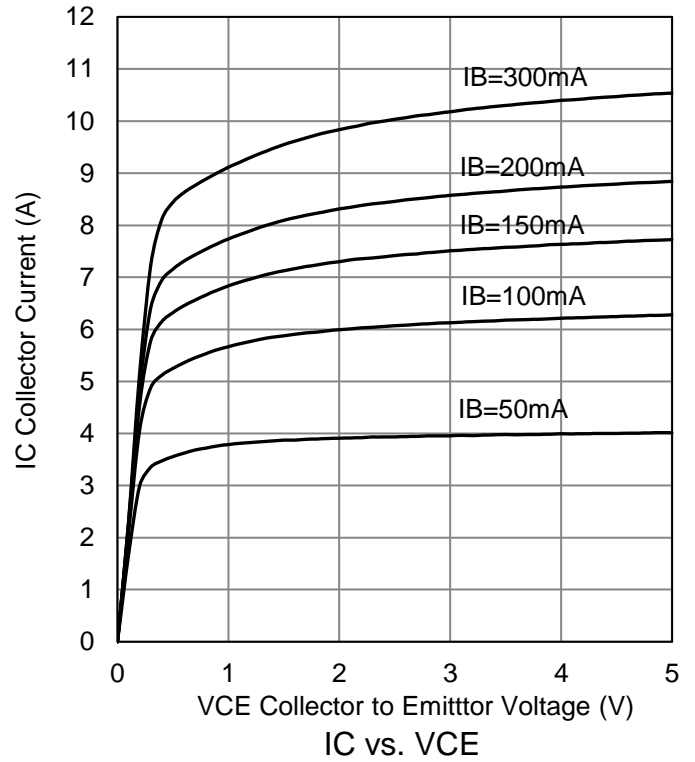
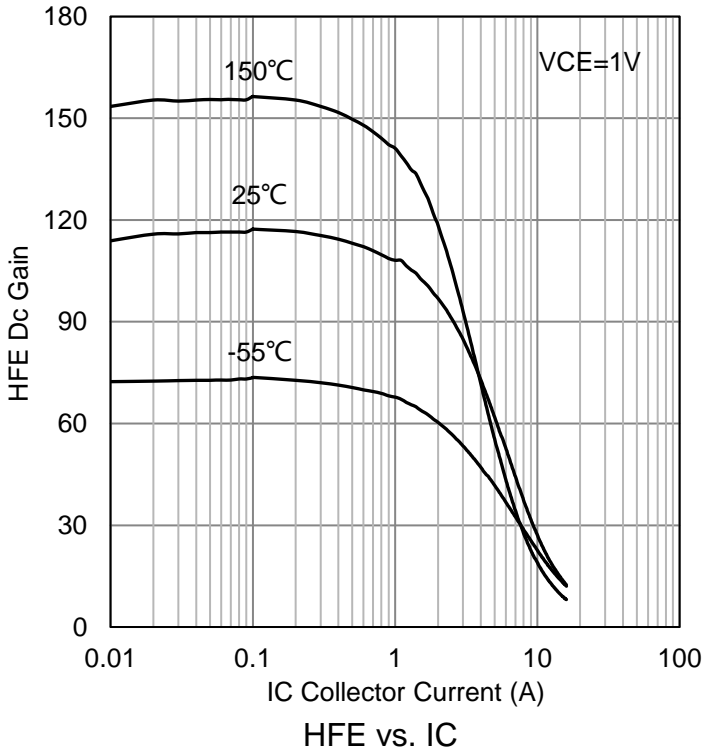
1. These ratings are applicable when surface mounted on the minimum pad sizes recommended.

**5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

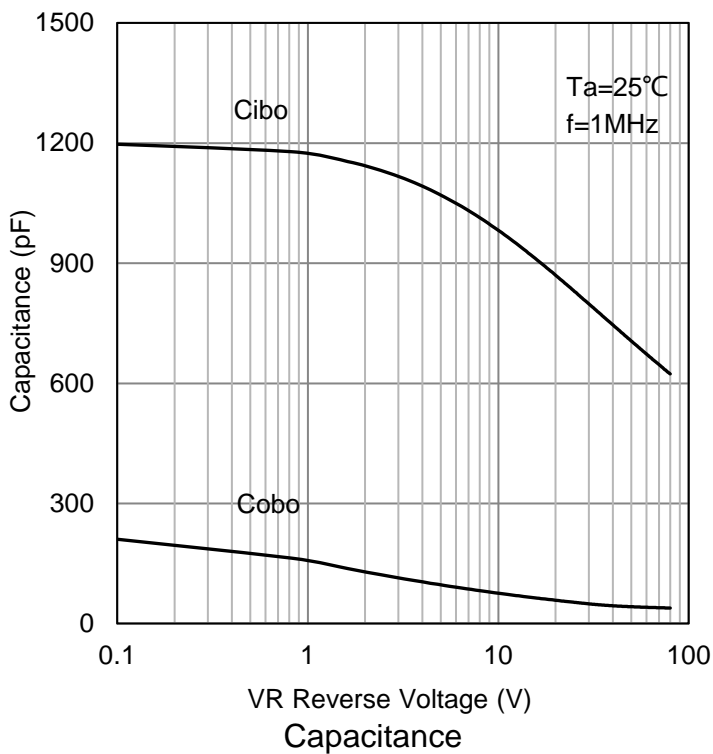
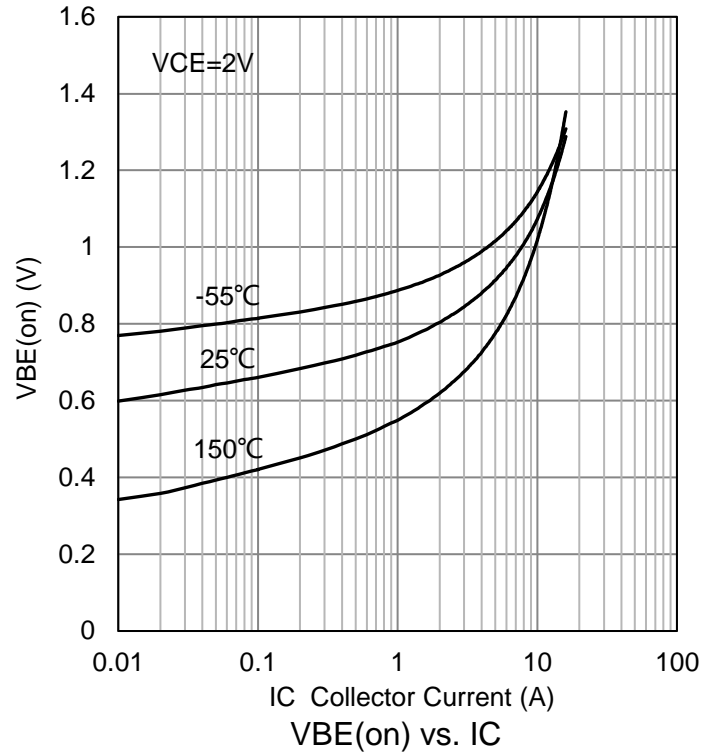
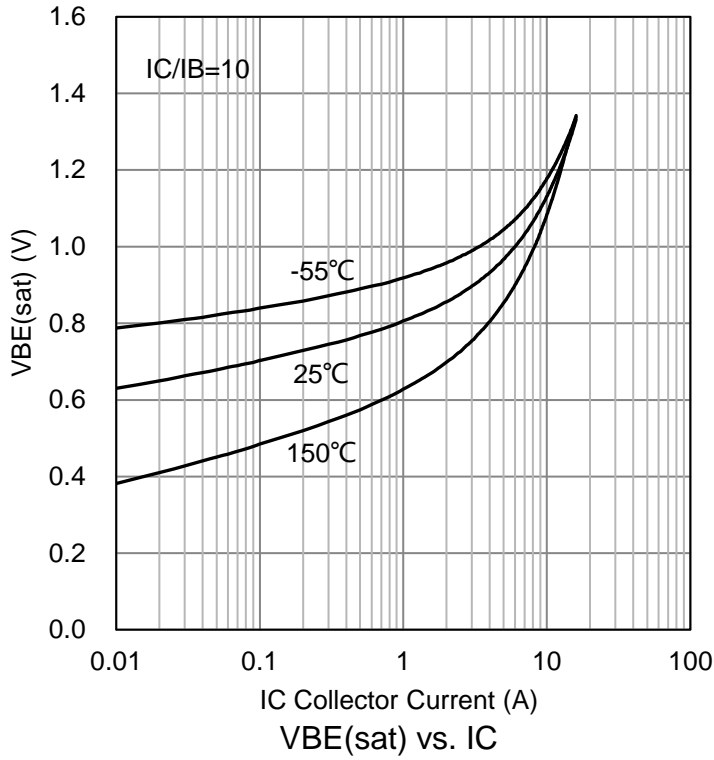
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Collector–Emitter Breakdown Voltage (IC = 1 mA, IB = 0)	VBR(CEO)	80	-	-	V	
Collector–Base Breakdown Voltage (IC = 100μA, IE = 0)	VBR(CBO)	80	-	-	V	
Emitter–Base Breakdown Voltage (IE = 100μA, IC = 0)	VBR(EBO)	5	-	-	V	
Collector–Base Cutoff Current (VCB=80V,IE=0)	ICBO	-	-	200	nA	
Emitter–Base CutOff Current (VEB=5V,IC=0)	IEBO	-	-	200	nA	
Collector-Emitter Cutoff Current (VCE=80V,IB=0)	ICEO	-	-	10	μA	
DC Current Gain (VCE =1V,IC =2A) (VCE =1V,IC =4A)	HFE	60 40	- -	200 -		
Collector–Emitter Saturation Voltage (IC =8A,IB =400mA)	VCE(sat)	-	-	1	V	
Base-Emitter saturation voltage (IC =8A, IB =800 mA)	VBE(sat)	-	-	1.5	V	
Delay Time	(VCC=15V,IC=1A, VBE=-2V,IB1=0.1A)	td	-	46.5	-	ns
Rise Time		tr	-	83	-	
Storage Time	(VCC=15V,IC=1A, IB1=IB2=0.1A)	ts	-	1573	-	
Fall Time		tf	-	112	-	

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

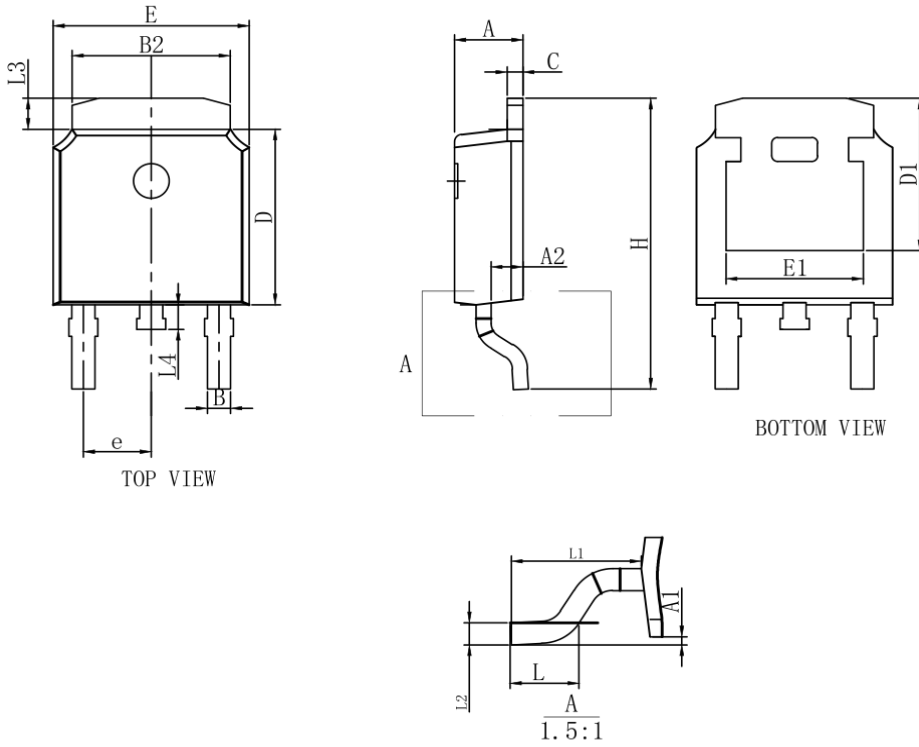
**6.ELECTRICAL CHARACTERISTICS CURVES**



**6.ELECTRICAL CHARACTERISTICS CURVES(Con.)**

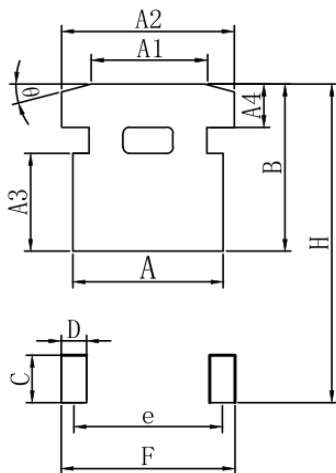


**7.OUTLINE AND DIMENSIONS**



DIM	MILLIMETERS		
	MIN	NOM	MAX
A	2.15	2.30	2.45
A1	-	-	0.20
A2	0.90	1.07	1.17
B	0.68	0.78	0.88
B2	5.20	5.33	5.46
D	5.90	6.10	6.30
D1	5.30REF		
E	6.40	6.60	6.80
E1	4.63	4.83	5.03
e	2.286BSC		
H	9.85	10.10	10.35
L	1.30	1.50	1.70
L1	2.90REF		
L2	0.51BSC		
L3	0.88	1.08	1.28
L4	0.55	0.80	1.05

**8.SOLDERING FOOTPRINT**



DIM	MIN(mm)
A	6.03
A1	4.50
A2	6.46
A3	4.10
A4	2.37
B	6.50
C	2.50
D	1.68
e	4.80
H	12.35
F	5.95

## **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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