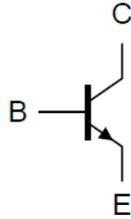
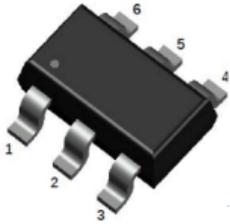


NPN Low VCEsat transistor

SOT-23-6L



Pin	Symbol	Description
1	C	collector
2	C	collector
3	B	base
4	E	emitter
5	C	collector
6	C	collector

Features

- Ultra low collector-emitter saturation voltage VCEsat
- 4 A continuous collector current capability IC
- High efficiency due to less heat generation

Application

- Power management functions
- Charging circuits

Mechanical data

- **Package:** SOT-23-6L
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				C7
Collector-base voltage	V _{CBO}	V	I _C =100uA, I _E =0	60
Collector-emitter voltage	V _{CEO}	V	I _C =1mA, I _B =0	40
Emitter-base voltage	V _{EBO}	V	I _E =100uA, I _C =0	5
Collector current	I _C	A		4
Peak Collector current	I _{CM}	A	single pulse, tp≤1ms	15
Base current	I _B	A		0.8
Power dissipation	P _D ⁽¹⁾	mW		360
	P _D ⁽²⁾	W		1.5
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽²⁾	°C/W		83.33
Thermal resistance, junction-to-case	R _{θJ-C} ⁽²⁾	°C/W		66.66
Junction temperature	T _J	°C		-55 to +150
Storage temperature	T _{STG}	°C		-55 to +150

Note: (1) Device mounted on an FR4 Printed-Circuit Board (PCB), 35 um single-sided copper, tin-plated and standard footprint

(2) Device mounted on the 40mm*40mm*1.1mm single layer FR-4 PCB board with 1 in² pad of 2oz. Copper



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■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

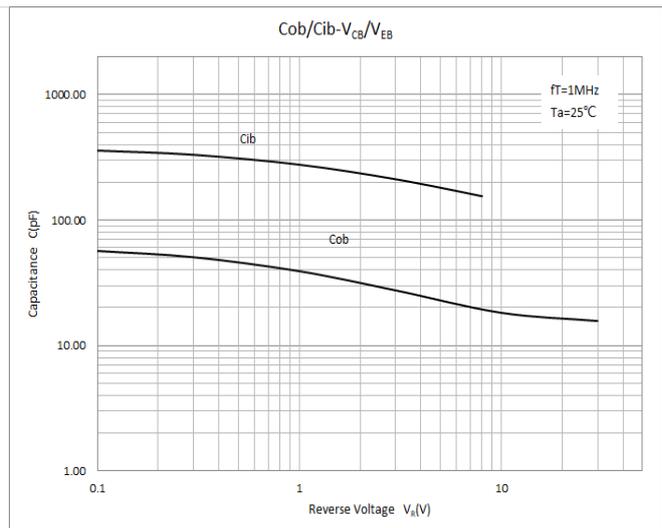
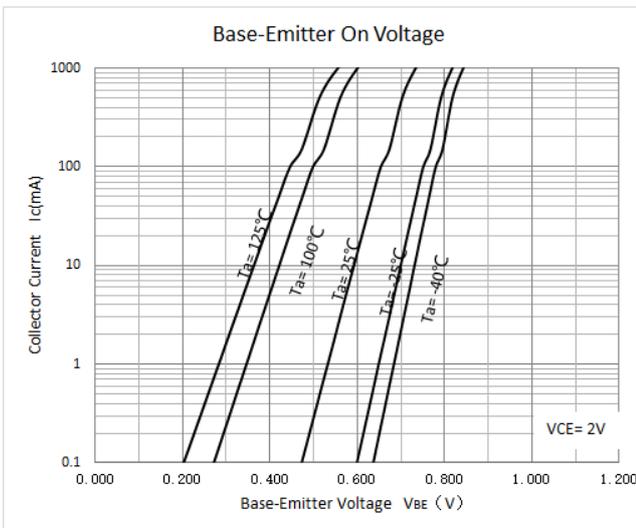
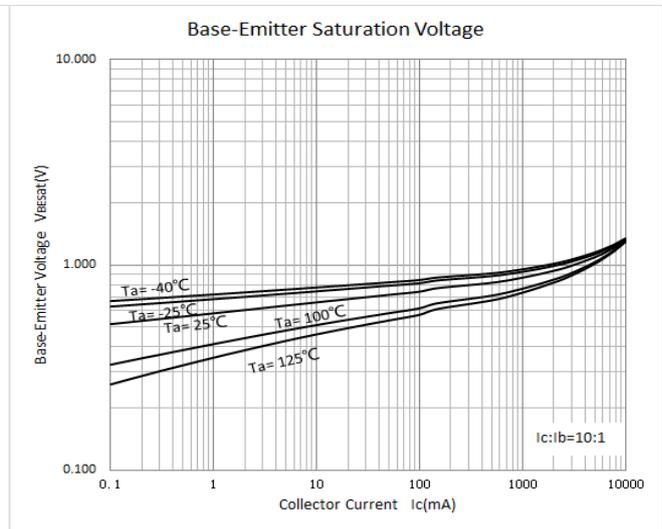
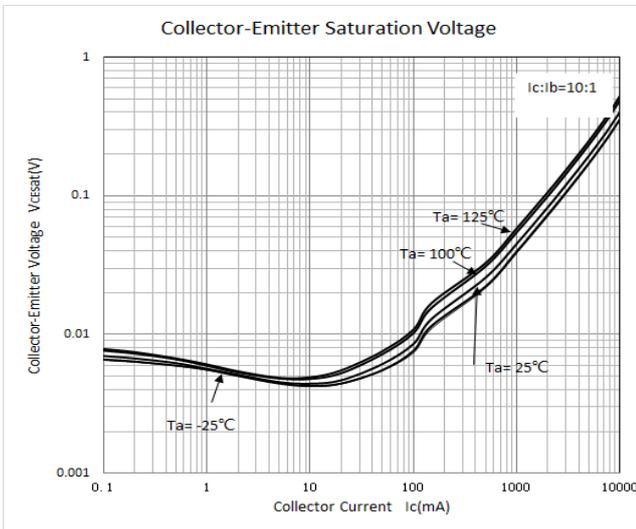
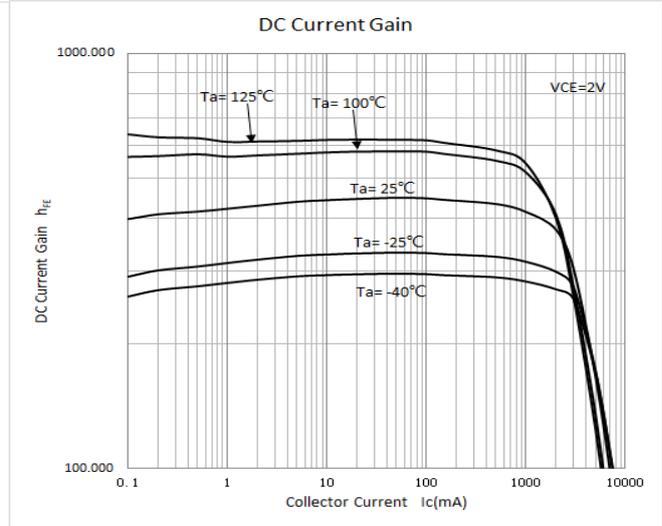
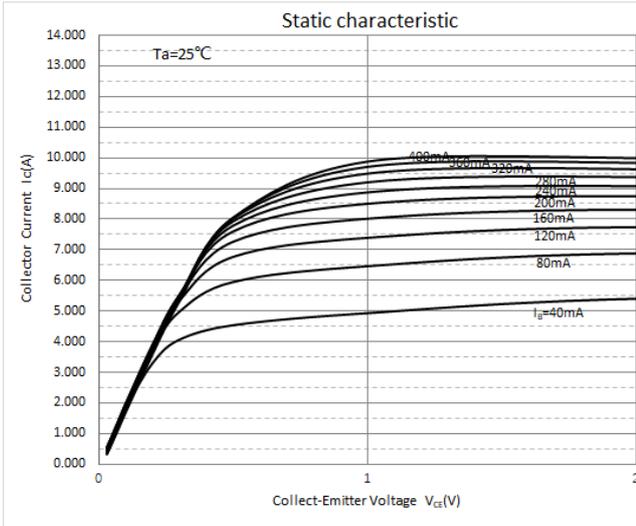
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V _{(BR)CBO}	V	I _C =100uA, I _E =0	60		
Collector-emitter breakdown voltage	V _{(BR)CEO}	V	I _C =1mA, I _B =0	40		
Emitter-base breakdown voltage	V _{(BR)EBO}	V	I _E =100uA, I _C =0	5		
Collector-base cut-off current	I _{CBO}	nA	V _{CB} =40V I _E =0			100
Emitter-base cut-off current	I _{EBO}	nA	V _{EB} =5V I _C =0			100
Collector Cutoff Current	I _{CES}	nA	V _{CE} =30V V _{BE} =0			100
DC current gain	h _{FE}		V _{CE} =2V I _C =0.5A	300		
			V _{CE} =2V I _C =1A	300		
			V _{CE} =2V I _C =2A	250		
			V _{CE} =2V I _C =4A	100		
			V _{CE} =2V I _C =6A	50		
Collector-emitter saturation voltage	V _{CE(sat)}	mV	I _C =0.5A I _B =50mA			60
			I _C =1A I _B =50mA			110
			I _C =2A I _B =200mA			180
			I _C =4A I _B =400mA			300
			I _C =6A I _B =600mA			450
Collector-emitter saturation resistance	R _{CE(sat)}	mΩ	I _C =6A I _B =600mA			75
Base-emitter saturation voltage	V _{BE(sat)}	V	I _C =0.5A I _B =50mA			0.85
			I _C =1A I _B =50mA			0.9
			I _C =1A I _B =100mA			1
			I _C =4A I _B =400mA			1.1
Base-emitter turn-on voltage	V _{BE}	V	V _{CE} =2V I _C =2A			1

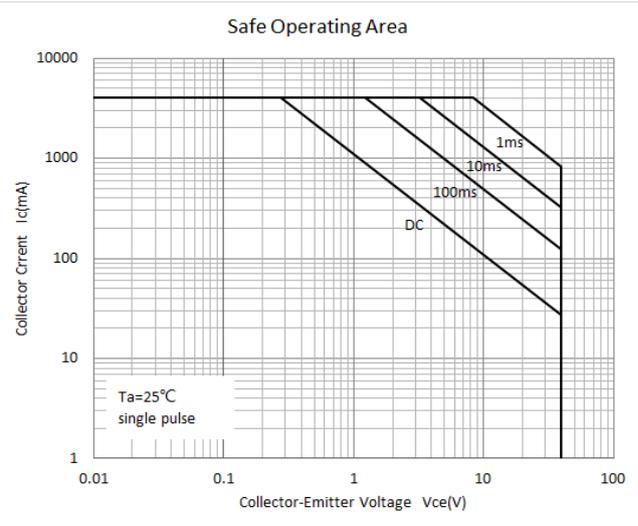
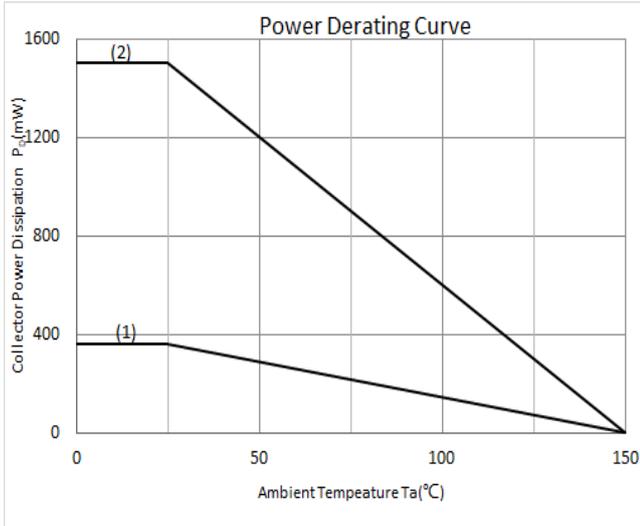
■ Ordering Information

Preferred P/N	Packing code	Unit weight(mg)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
YJBS302ND	F2	Approximate 15.6	3000	30000	120000	7" reel



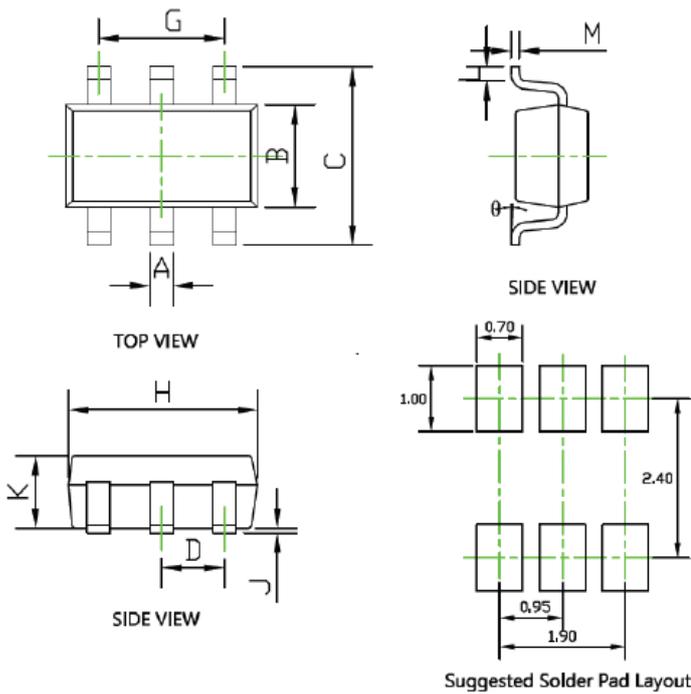
Characteristics





Outline Dimensions

SOT-23-6L



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.012	0.020	0.300	0.500
B	0.059	0.067	1.500	1.700
C	0.104	0.116	2.650	2.950
D	0.037BSC		0.950BSC	
G	0.075BSC		1.900BSC	
H	0.111	0.119	2.820	3.020
J	0.000	0.004	0.000	0.100
K	0.041	0.045	1.050	1.150
L	0.012	0.024	0.300	0.600
M	0.004	0.008	0.100	0.200
θ	0°	8°	0°	8°

Note:
 1. Controlling dimension in millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.



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