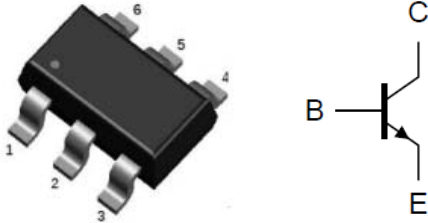


NPN Low VCEsat transistor

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				4440D
Collector-base voltage	V_{CBO}	V	$I_C=100\mu A, I_E=0$	60
Collector-emitter voltage	V_{CEO}	V	$I_C=1mA, I_B=0$	40
Emitter-base voltage	V_{EBO}	V	$I_E=100\mu A, I_C=0$	5
Collector current	I_C	A		4
Peak Collector current	I_{CM}	A	single pulse, $t_p \leq 1ms$	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	$R_{\theta J-A}^{(2)}$	°C/W		83.33
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(2)}$	°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 foolprint

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



YJBS4440D

RoHS
COMPLIANT

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

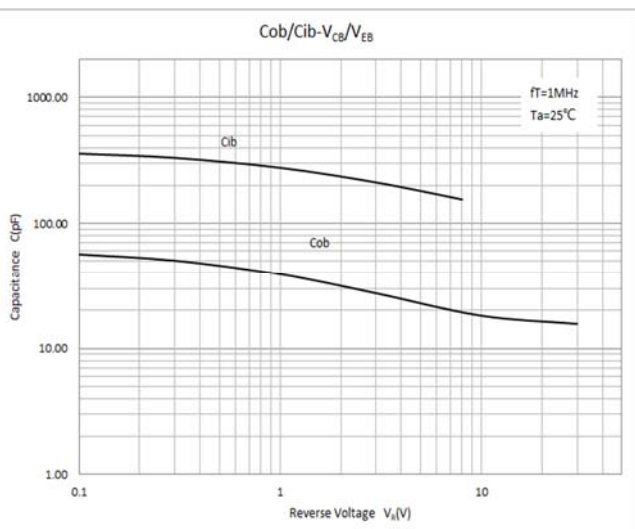
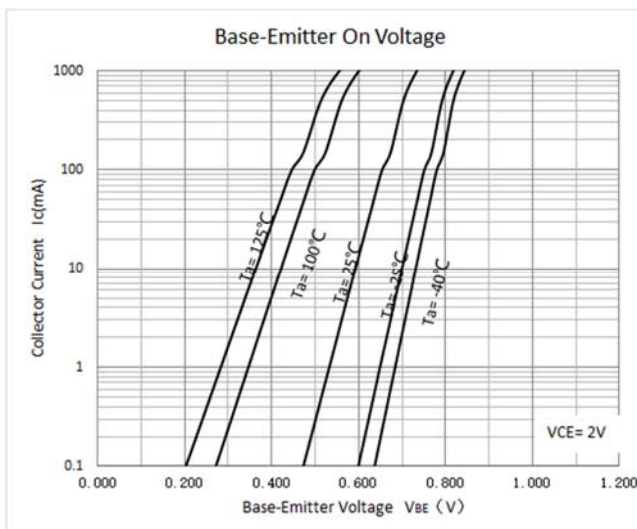
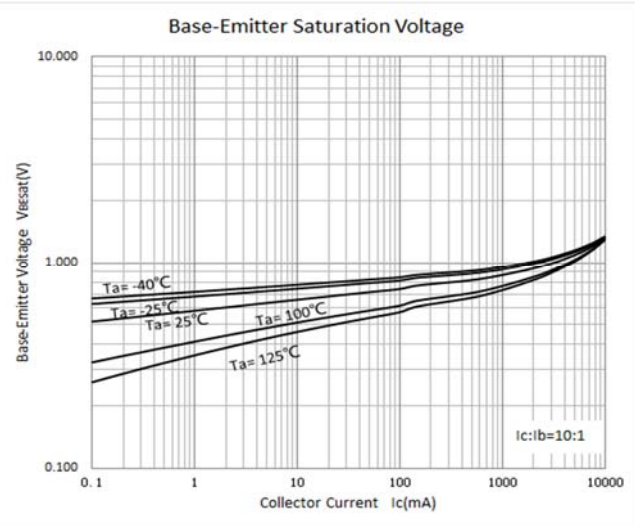
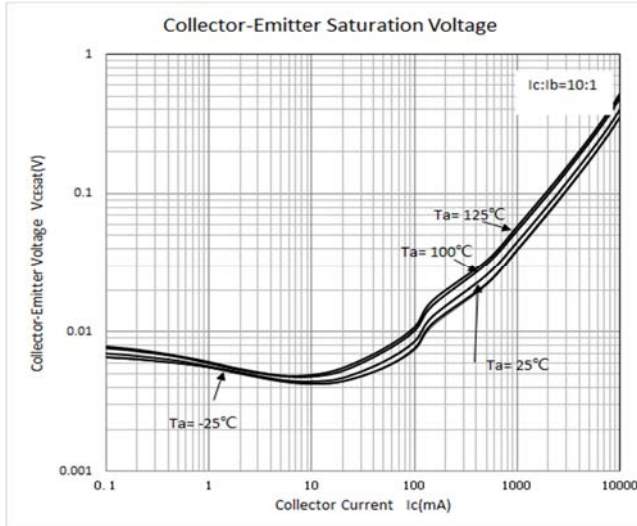
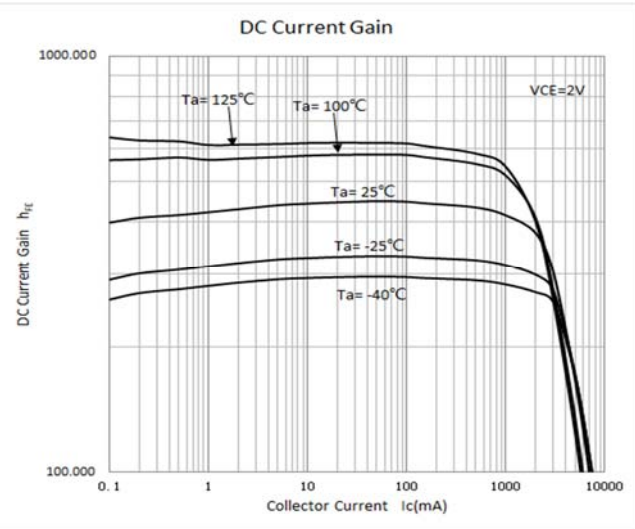
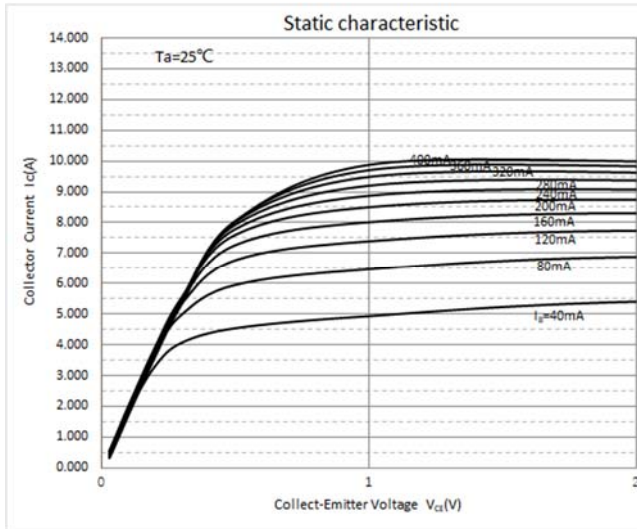
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V _{(BR)CBO}	V	I _C =100uA, I _E =0	60		
Collector-emitter breakdown voltage	V _{(BR)CEO}	V	I _C =1mA, I _B =0	40		
Emitter-base breakdown voltage	V _{(BR)EBO}	V	I _E =100uA, I _C =0	5		
Collector-base cut-off current	I _{CBO}	nA	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
Collector-base output capacitance	Cob	pF	V _{CB} =10V, f=1MHz		30	

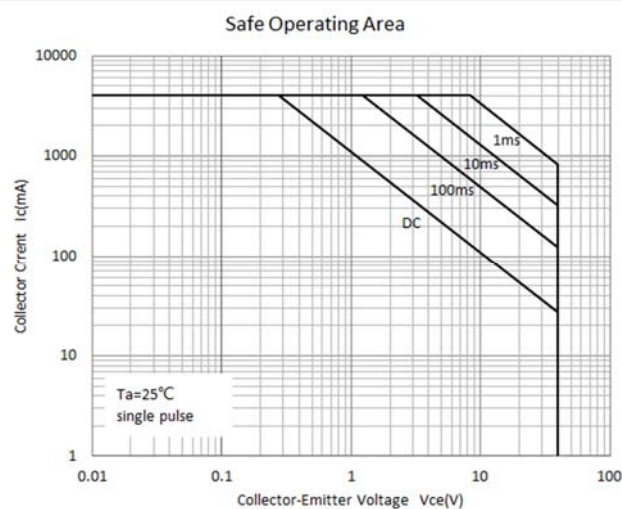
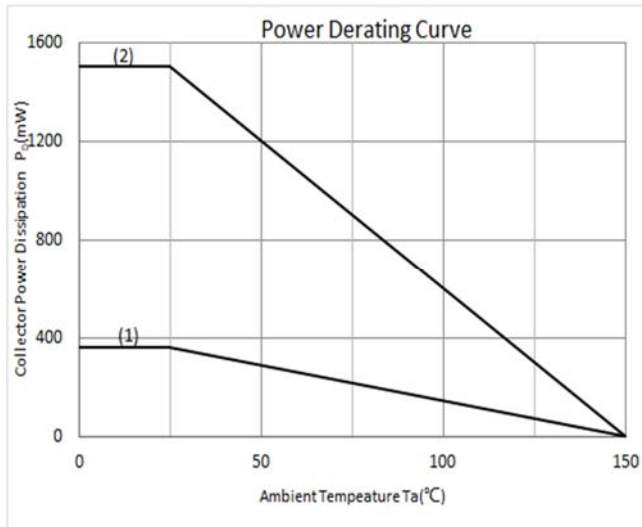
■ Ordering Information

Preferred P/N	Packing code	Unit weight(mg)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
YJBS4440D	F2	Approximate 15.6	3000	30000	120000	7" reel



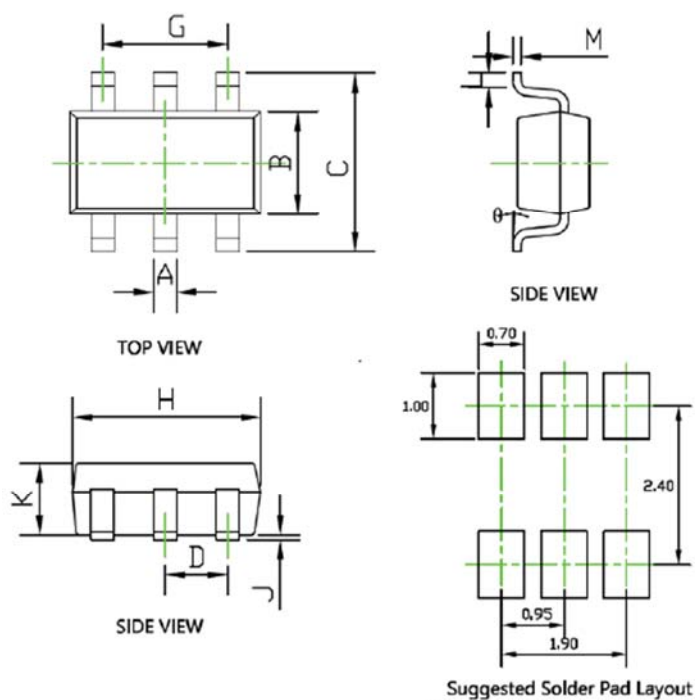
■ Characteristics





■ Outline Dimensions

SOT-23-6L



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

DIMENSIONS				
SYMBOL	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°



YJBS4440D

RoHS
COMPLIANT

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function, or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.