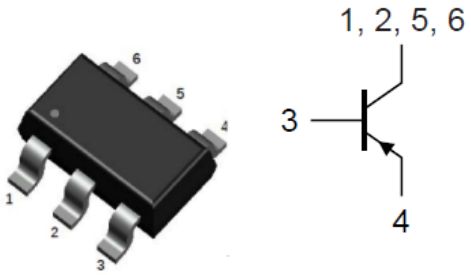
PNP Low VCEsat transistor

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 (T_a=25℃ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				C9
Collector-base voltage	V_{CBO}	V	I_C=-100uA, I_E=0	-40
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	$R_{\theta J-A}$(2)	℃/W		83.33
Thermal resistance, junction-to-case	$R_{\theta J-C}$(2)	℃/W		66.66
Junction temperature	T_J	℃		-55 to +150
Storage temperature	T_{STG}	℃		-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 in^2 pad of 2oz. Copper

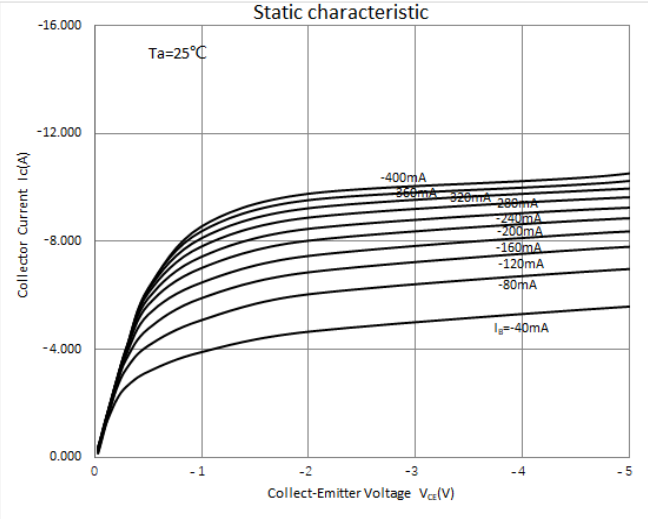
■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

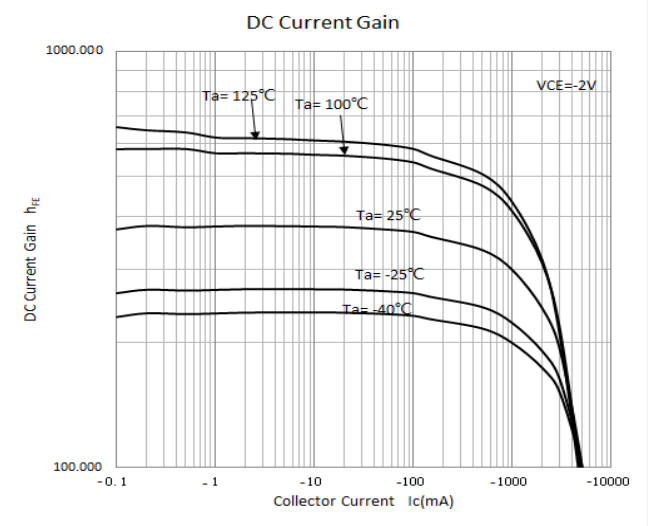
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	I_C=-100uA, I_E=0	-40		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	I_C=-1mA, I_B=0	-40		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	I_E=-100uA, I_C=0	-5		
Collector-base cut-off current	I_{CBO}	nA	V_{CB}=-30V 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	200		
			V_{CE}=-2V I_C=-1A	200		
			V_{CE}=-2V I_C=-2A	175		
			V_{CE}=-2V I_C=-4A	80		
			V_{CE}=-2V I_C=-6A	30		
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

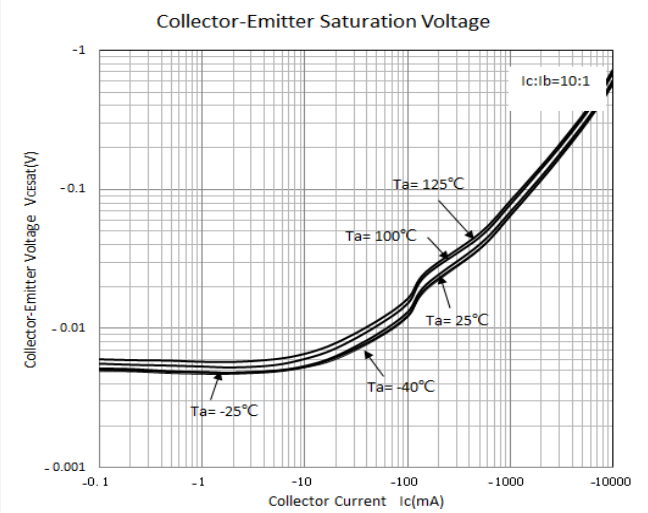
■Ordering Information

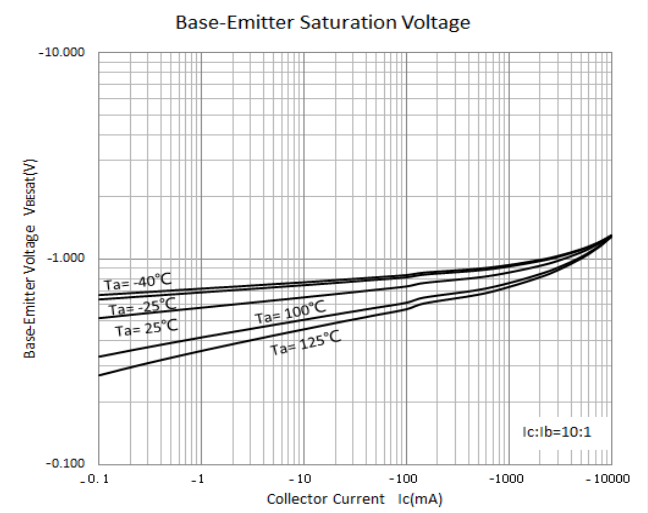
Preferred P/N	Packing code	Unit weight(mg)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
YJBS302PD	F2	Approximate 15.6	3000	30000	120000	7” reel

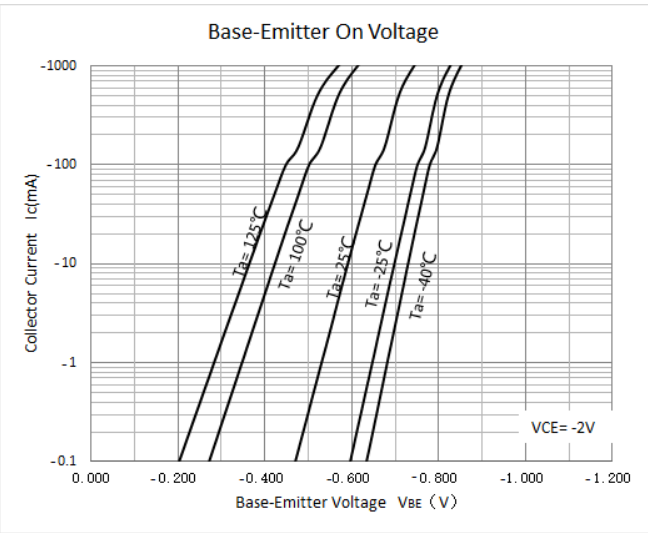
■Characteristics

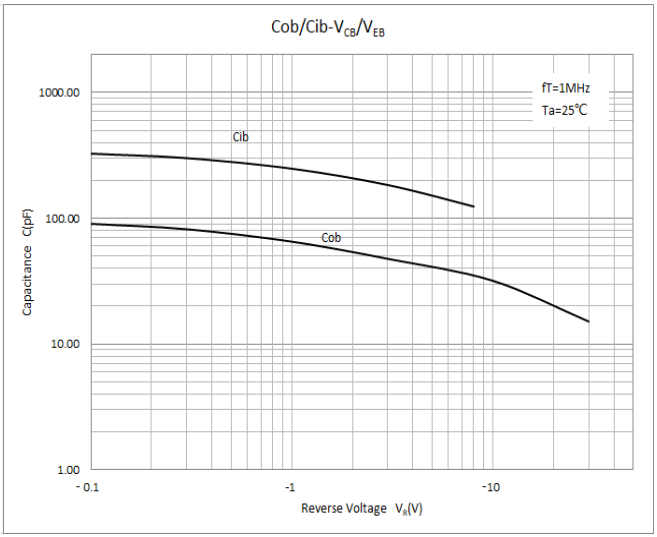


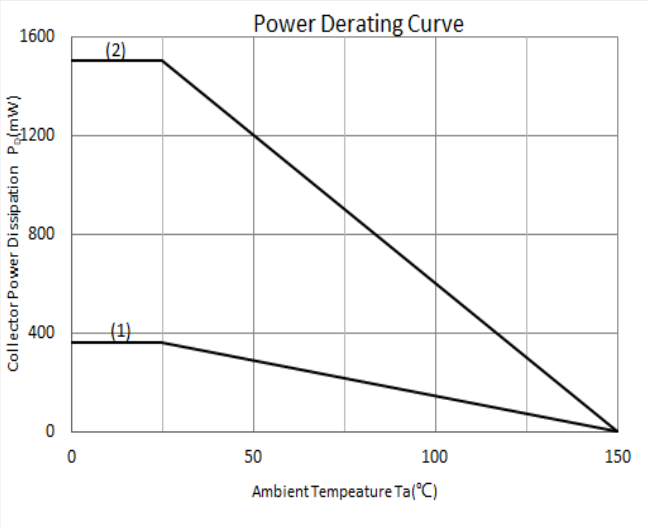


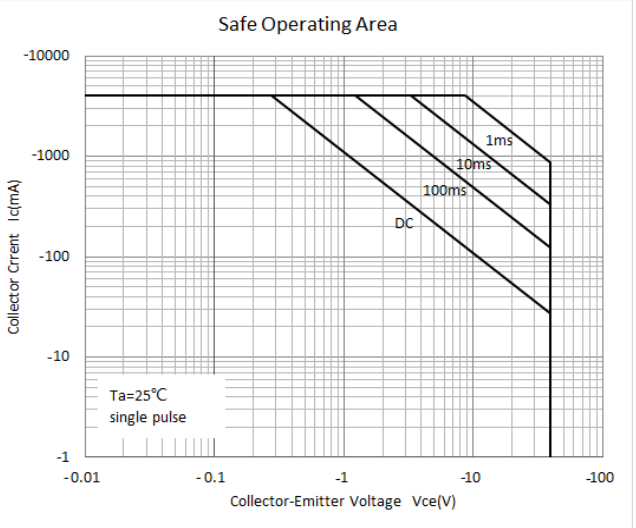






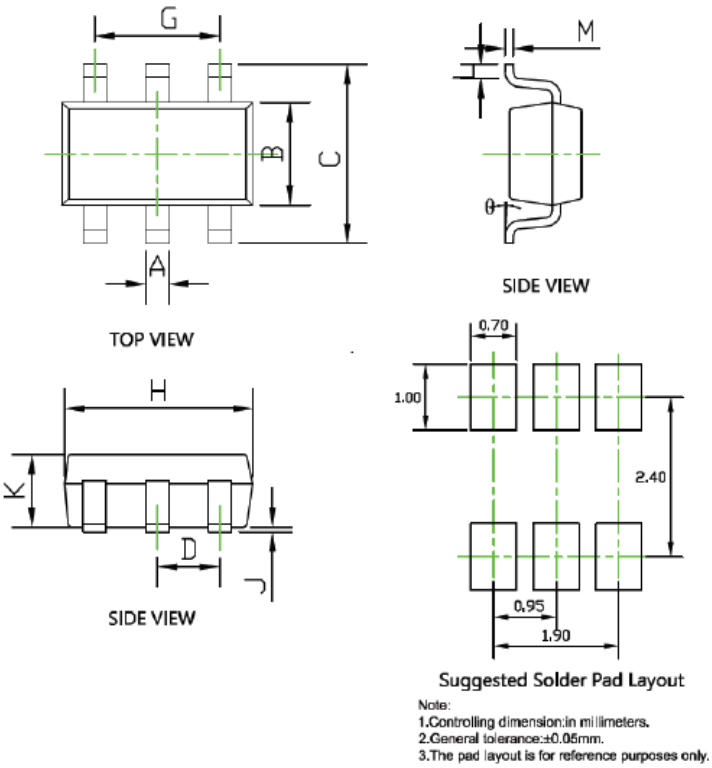






■ Outline Dimensions

SOT-23-6L



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
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°

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