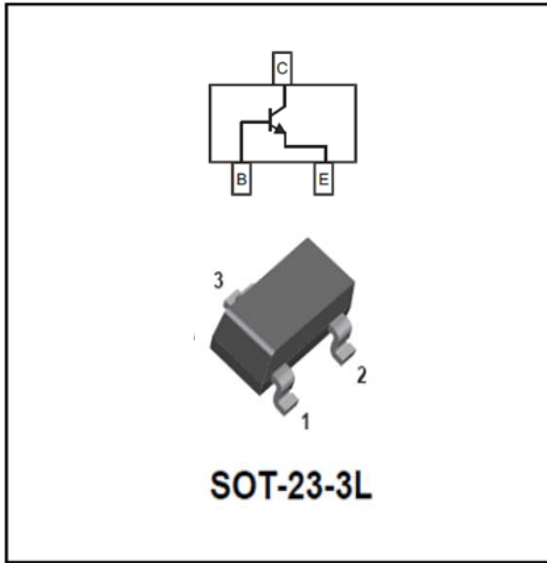


NPN Low VCEsat Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating
- Low collector-emitter saturation voltage VCEsat
- High collector current capability
- High collector current gain

Mechanical Data

- **Package:** SOT-23-3L
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 4320T

■ Thermal Characteristics(Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	V_{CBO}	V	$I_C=100\mu A, I_E=0$	20
Collector-Emitter Voltage	V_{CEO}	V	$I_C=10mA, I_B=0$	20
Emitter-Base Voltage	V_{EBO}	V	$I_E=100\mu A, I_C=0$	5
Collector Current -Continuous	I_C	A		2
Peak Collector current	I_{CM}	A	single pulse, $t_p \leq 1ms$	3
Base current	I_B	A		0.5
Power dissipation	$P_D^{(1)}$	mW		300
	$P_D^{(2)}$			480
	$P_D^{(3)}$			540
Thermal resistance, junction-to-ambient	$R_{\theta JA}^{(1)}$	°C/W		417
	$R_{\theta JA}^{(2)}$			260
	$R_{\theta JA}^{(3)}$			230
Thermal resistance, junction-to-case	$R_{\theta JC}^{(1)}$	°C/W		333
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 μm single-sided copper, tin-plated and standard footprint

(2) Device mounted on an FR4 Printed-Circuit Board (PCB), 35 μm single-sided copper, tin-plated and mounting pad for collector 1 cm^2

(3) Device mounted on an FR4 Printed-Circuit Board (PCB), 35 μm single-sided copper, tin-plated and mounting pad for collector 6 cm^2



YJBS4320T

■ Electrical Characteristics (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	V_{CBO}	V	$I_C=100\mu A, I_E=0$	20		
Collector-emitter breakdown voltage	V_{CEO}	V	$I_C=10mA, I_B=0$	20		
Emitter-base breakdown voltage	V_{EBO}	V	$I_E=100\mu A, I_C=0$	5		
Collector-Base Cut-Off Current	I_{CBO}	nA	$V_{CB}=20V, I_E=0$			100
Emitter-Base Cut-Off Current	I_{EBO}	nA	$V_{EB}=5V, I_C=0$			100
DC current gain	h_{FE}^1		$V_{CE}=2V, I_C=100mA$	220		
	h_{FE}^2		$V_{CE}=2V, I_C=500mA$	220		
	h_{FE}^3		$V_{CE}=2V, I_C=1A$	220		
	h_{FE}^4		$V_{CE}=2V, I_C=2A$	200		
	h_{FE}^5		$V_{CE}=2V, I_C=3A$	150		
Collector-emitter saturation voltage	$V_{CE(sat)}^1$	mV	$I_C=500mA, I_B=50mA$			70
	$V_{CE(sat)}^2$		$I_C=1A, I_B=50mA$			120
	$V_{CE(sat)}^3$		$I_C=2A, I_B=40mA$			230
	$V_{CE(sat)}^4$		$I_C=2A, I_B=200mA$			210
	$V_{CE(sat)}^5$		$I_C=3A, I_B=300mA$			310
Collector-emitter saturation resistance	$R_{CE(sat)}$	mΩ	$I_C=2A, I_B=200mA$			105
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=2A, I_B=40mA$			1.1
	$V_{BE(sat)}$	V	$I_C=3A, I_B=300mA$			1.2
Base-emitter turn-on voltage	$V_{BE(on)}$	V	$V_{CE}=2V, I_C=1A$			1.2
Collector Capacitance	C_{ob}	pF	$V_{CB}=10V, I_E=0A, f=1MHz$		18	

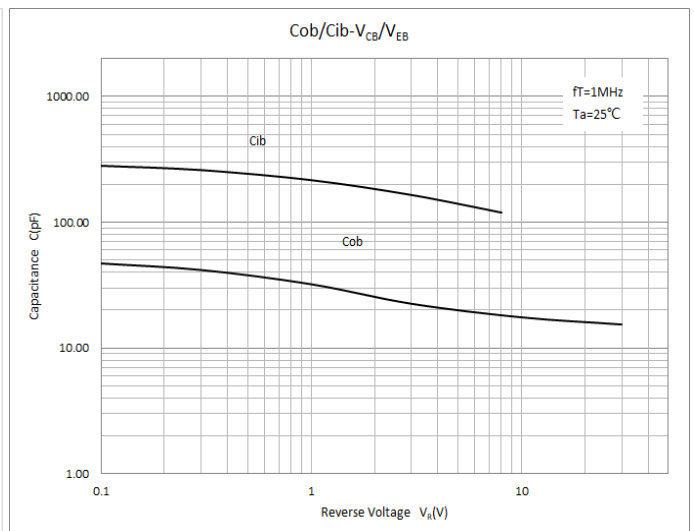
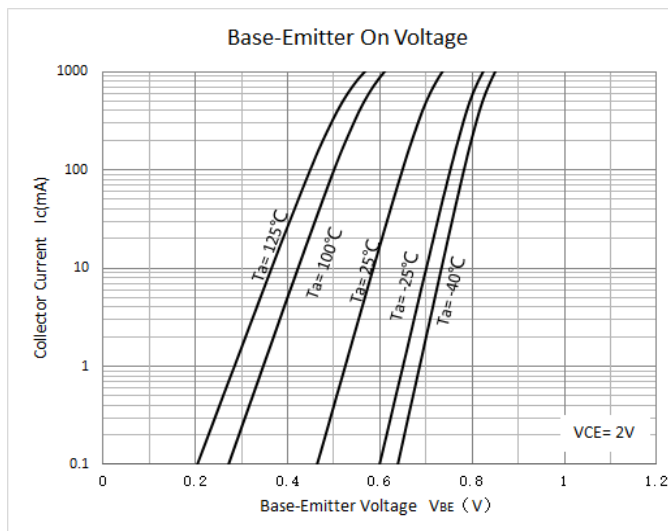
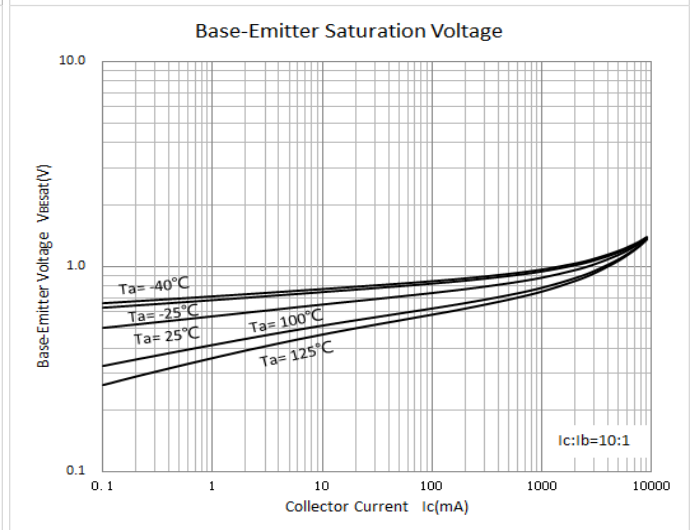
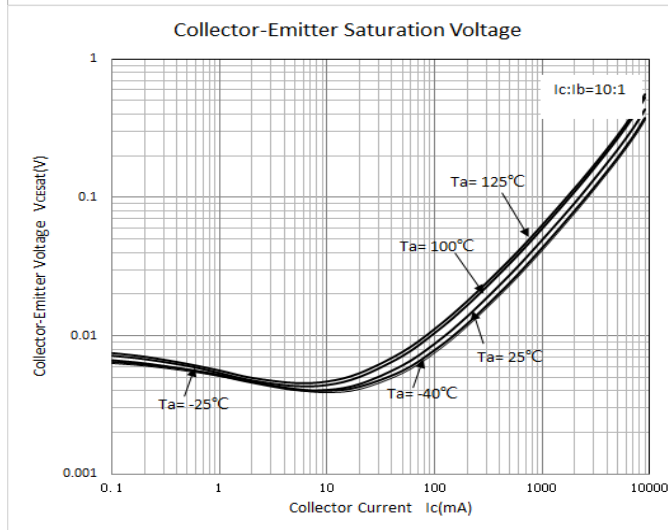
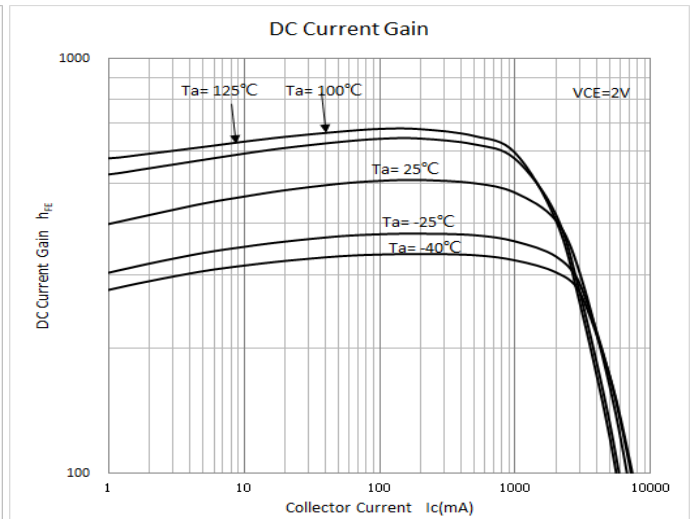
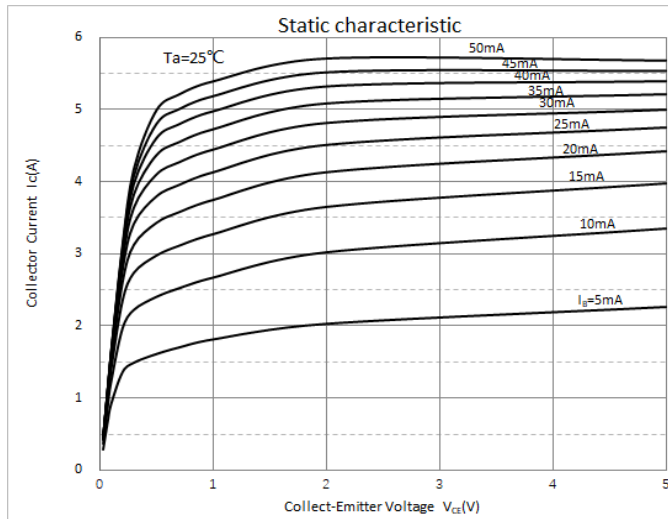
■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJBS4320T	F2	Approximate 0.014	3000	30000	120000	7" reel

■ Characteristics

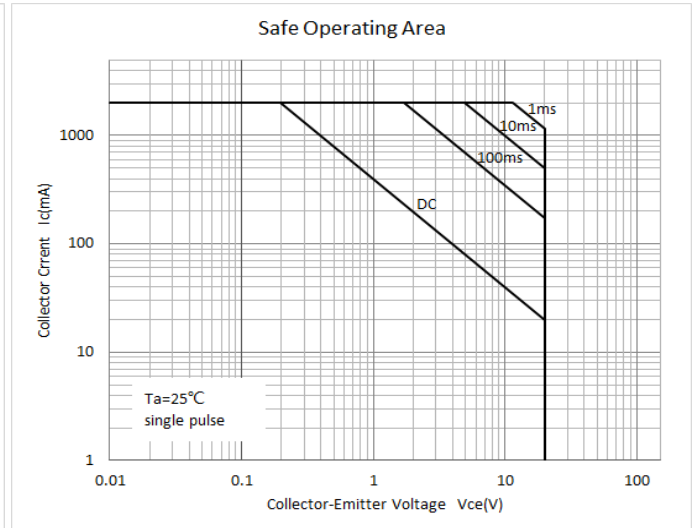
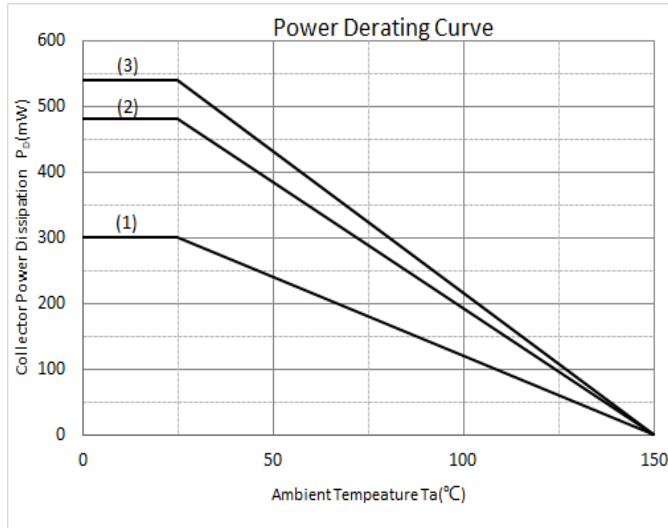


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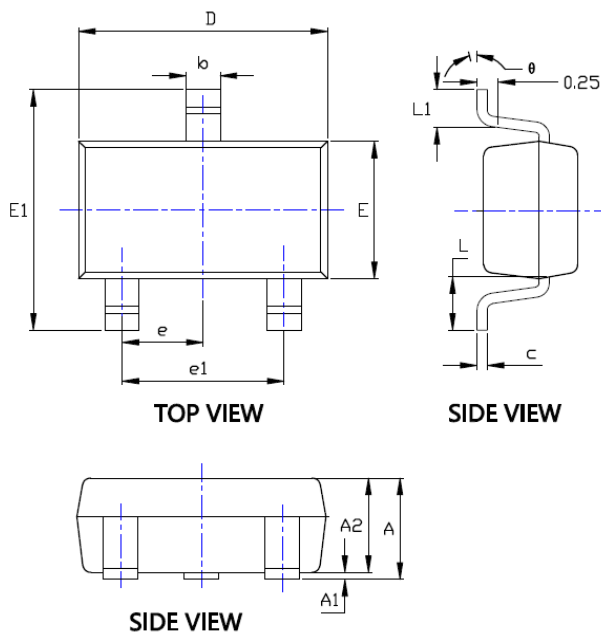




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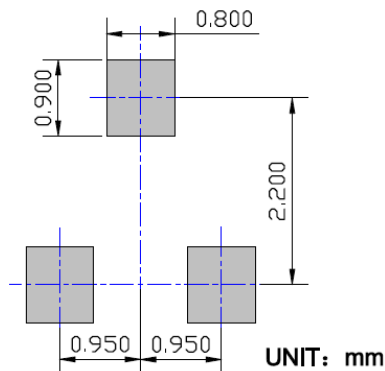


■ SOT-23-3L Package information



DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.041	0.049	1.050	1.250
A1	0.000	0.008	0.000	0.200
A2	0.041	0.045	1.050	1.150
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.111	0.119	2.820	3.020
E	0.059	0.067	1.500	1.700
E1	0.104	0.116	2.650	2.950
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.024REF		0.600REF	
L1	0.012	0.024	0.300	0.600
∅	0°	8°	0°	8°

■ Suggested Pad Layout





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