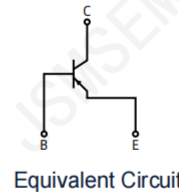


SOT-323 top view



Equivalent Circuit

 1.BASE  
 2.EMITTER  
 3.COLLECTOR

## Features

- ◆ Ideally suited for automatic insertion
- ◆ For Switching and AF Amplifier Applications

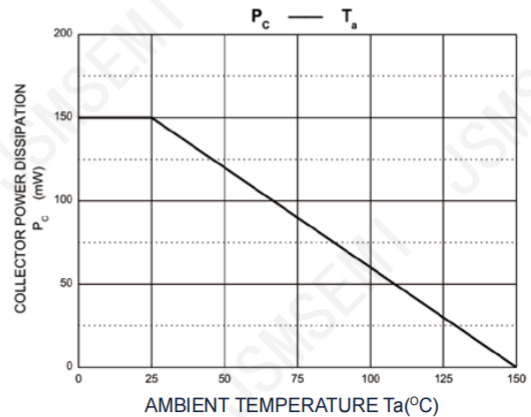
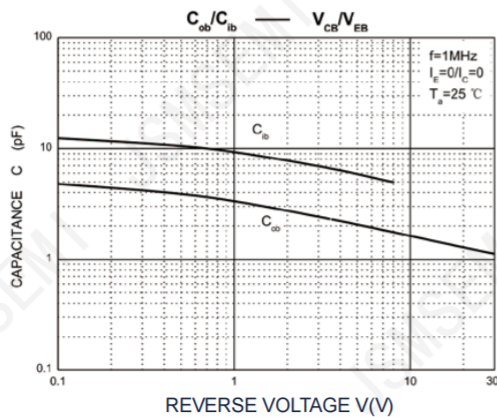
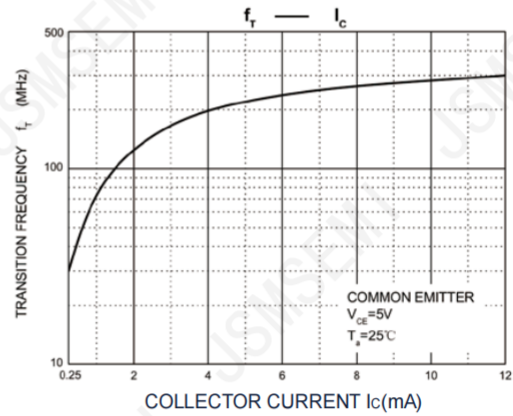
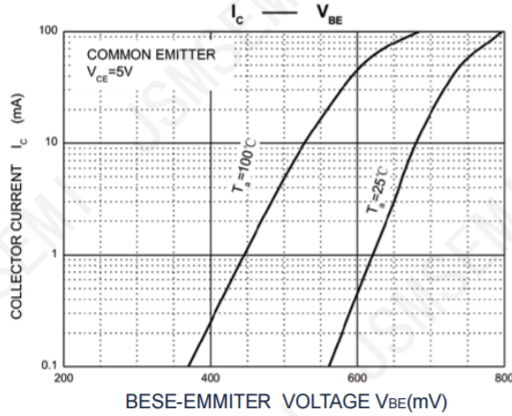
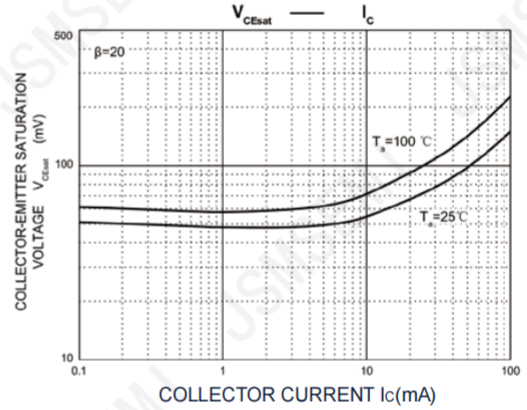
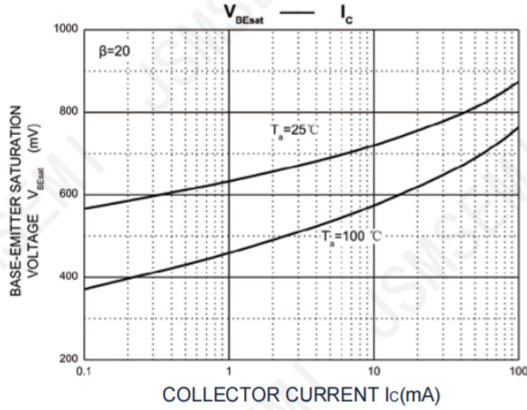
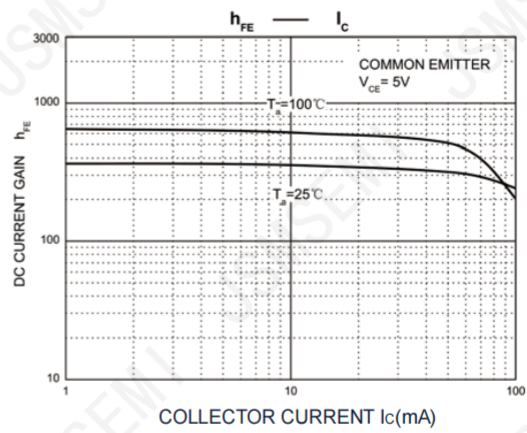
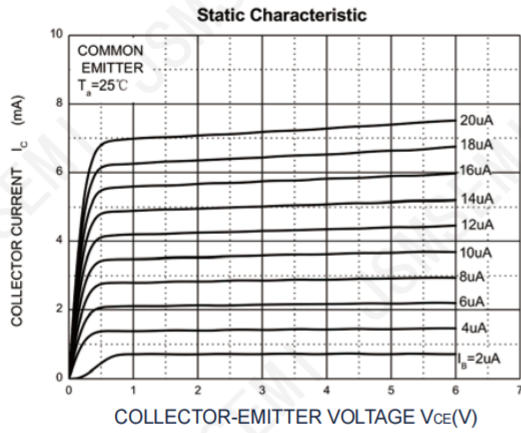
## Absolute Maximum Ratings (TA=25°C)

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	50	V
V <sub>CE0</sub>	Collector-Emitter Voltage	45	V
V <sub>EB0</sub>	Emitter-Base Voltage	6	V
I <sub>c</sub>	Collector Current	0.1	A
P <sub>c</sub>	Collector Power Dissipation	150	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	833	°C/W
T <sub>J</sub> ,T <sub>stg</sub>	Operation Junction And Storage Temperature Range	-55 ~ 150	°C

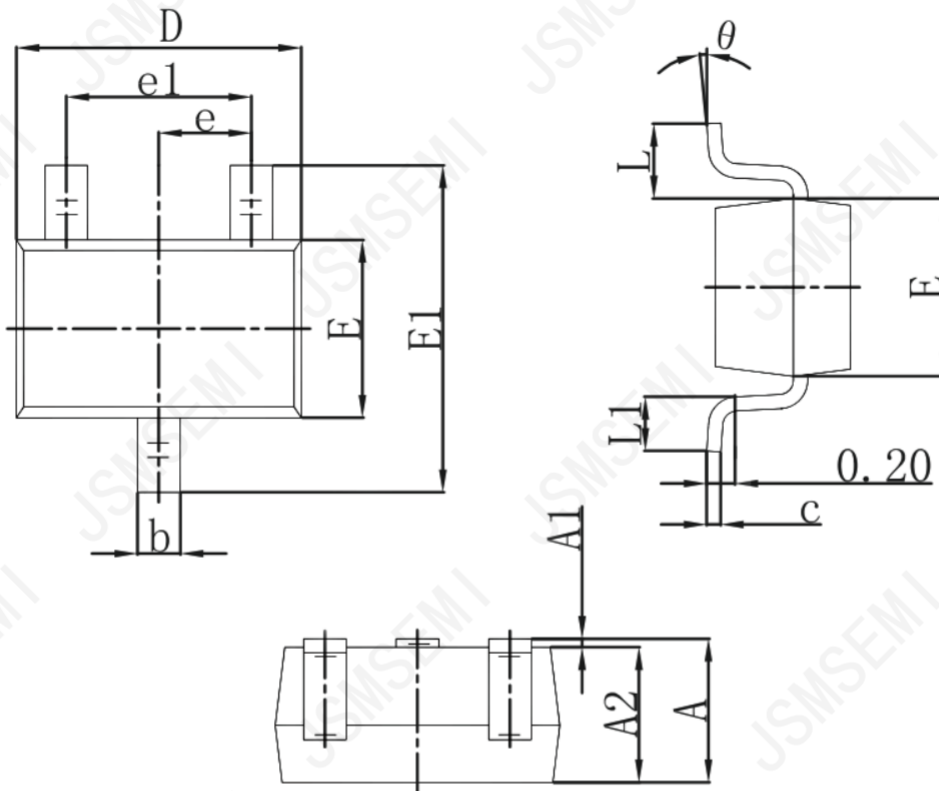
## Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>c</sub> =10μA, I <sub>E</sub> =0	50			V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>c</sub> =10mA, I <sub>B</sub> =0	45			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1μA, I <sub>c</sub> =0	6			V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =30V			15	nA
h <sub>FE</sub>	DC current gain	V <sub>CE</sub> =5V, I <sub>c</sub> =10μA		270		
		V <sub>CE</sub> =5V, I <sub>c</sub> =2mA	420		800	
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>c</sub> =10mA, I <sub>B</sub> =0.5mA			0.25	V
		I <sub>c</sub> =100mA, I <sub>B</sub> =5mA			0.6	
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>c</sub> =10mA, I <sub>B</sub> =0.5mA		0.7		V
		I <sub>c</sub> =100mA, I <sub>B</sub> =5mA		0.9		
V <sub>BE(on)</sub>	Base-emitter voltage	V <sub>CE</sub> =5V, I <sub>c</sub> =2mA	580	660	700	V
		V <sub>CE</sub> =5V, I <sub>c</sub> =10mA			770	
f <sub>T</sub>	Transition frequency	V <sub>CE</sub> =5V, I <sub>c</sub> =10mA, f=100MHz	100			MHz
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =10V, f=1MHz			4.5	pF
NF	Noise figure	V <sub>CE</sub> =5V, I <sub>c</sub> =0.2mA, f=1KHz, R <sub>s</sub> =2KΩ BW=200Hz			4	dB

### Typical Characteristics



**SOT-323 Package Outline Dimensions**



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	1.350	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

## Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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