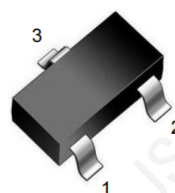
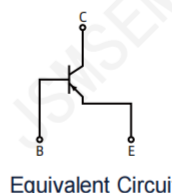


Features

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



SOT-323 top view



Equivalent Circuit

1.BASE
2.EMITTER
3.COLLECTOR

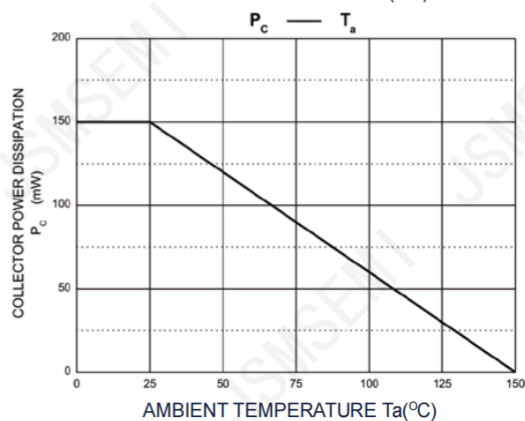
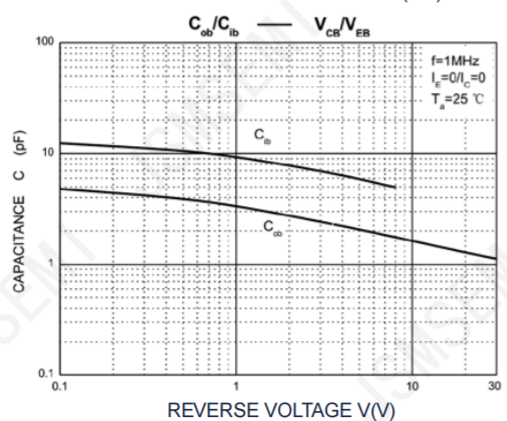
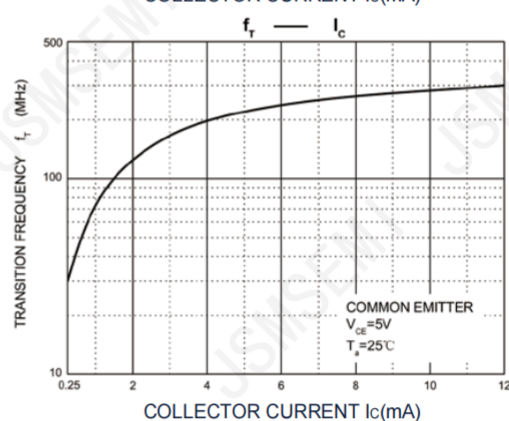
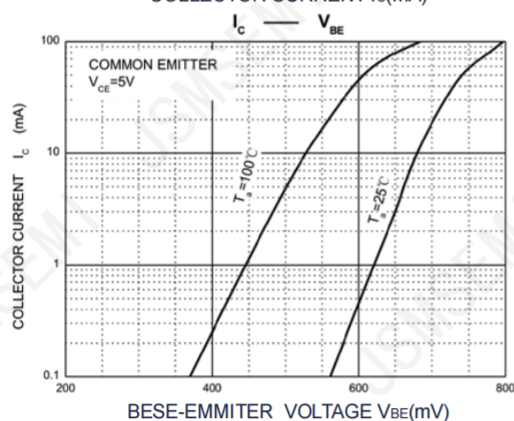
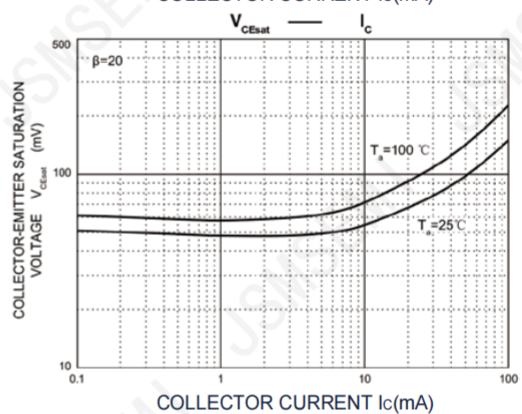
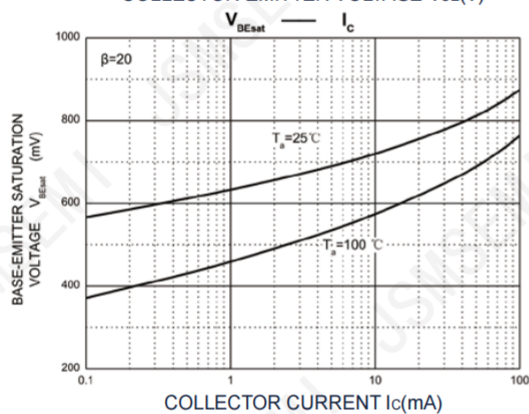
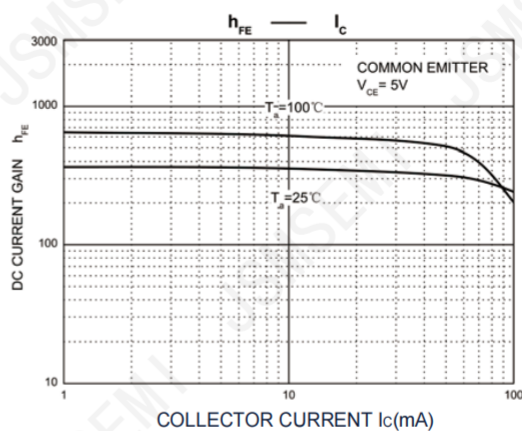
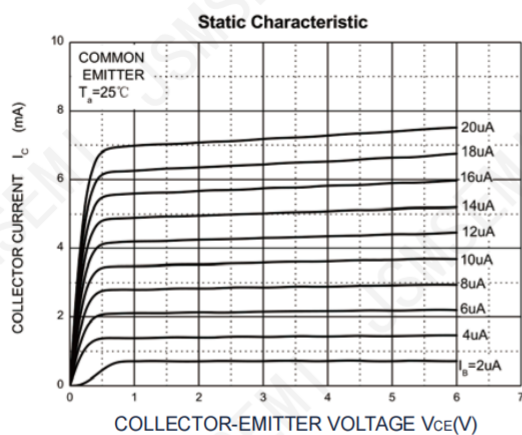
Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.1	A
P_C	Collector Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	833	$^{\circ}\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ 150	$^{\circ}\text{C}$

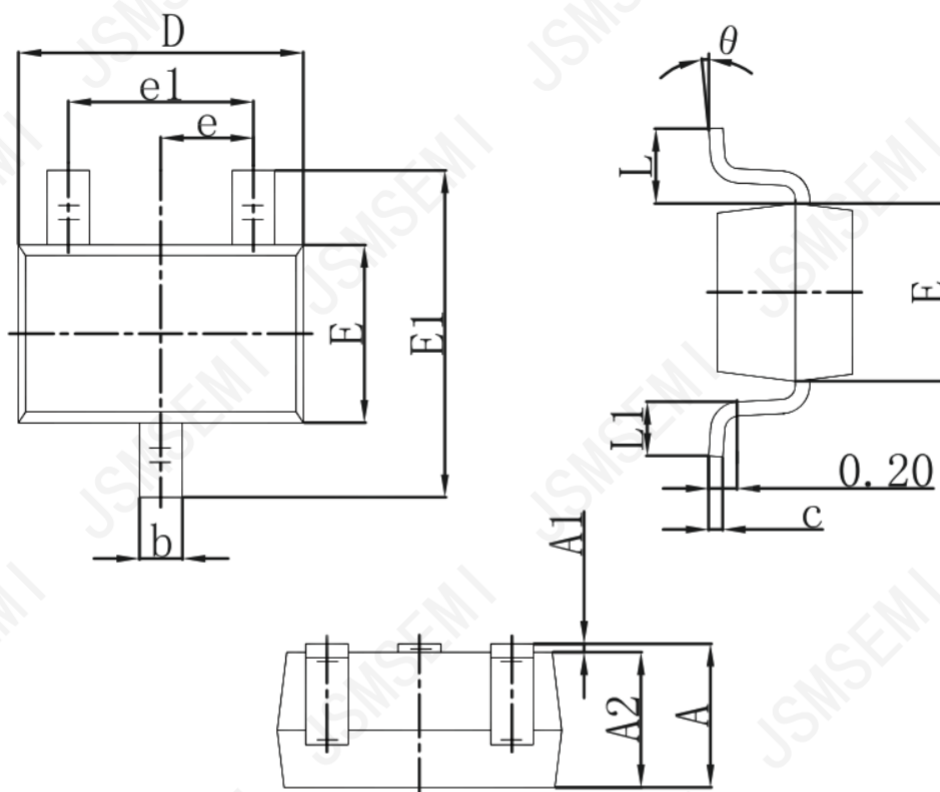
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=10\mu\text{A}, I_E=0$	50			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}, I_B=0$	45			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\mu\text{A}, I_C=0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB}=30\text{V}$			15	nA
h_{FE}	DC current gain	$V_{CE}=5\text{V}, I_C=10\mu\text{A}$		150		
		$V_{CE}=5\text{V}, I_C=2\text{mA}$	200		450	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.25	V
		$I_C=100\text{mA}, I_B=5\text{mA}$			0.6	
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=10\text{mA}, I_B=0.5\text{mA}$		0.7		V
		$I_C=100\text{mA}, I_B=5\text{mA}$		0.9		
$V_{BE(on)}$	Base-emitter voltage	$V_{CE}=5\text{V}, I_C=2\text{mA}$	580	660	700	V
		$V_{CE}=5\text{V}, I_C=10\text{mA}$			770	
f_T	Transition frequency	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100			MHz
C_{ob}	Collector output capacitance	$V_{CB}=10\text{V}, f=1\text{MHz}$			4.5	pF
NF	Noise figure	$V_{CE}=5\text{V}, I_C=0.2\text{mA}, f=1\text{KHz}, R_s=2\text{K}\Omega$ BW=200Hz			10	dB

Typical Characteristics



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

Important Notice

JSMSEMI Semiconductor (JSMSEMI) PRODUCTS ARE NEITHER DESIGNED NOR INTENDED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS UNLESS THE SPECIFIC JSMSEMI PRODUCTS ARE SPECIFICALLY DESIGNATED BY JSMSEMI FOR SUCH USE. BUYERS ACKNOWLEDGE AND AGREE THAT ANY SUCH USE OF JSMSEMI PRODUCTS WHICH JSMSEMI HAS NOT DESIGNATED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS IS SOLELY AT THE BUYER' S RISK.

JSMSEMI assumes no liability for application assistance or customer product design. Customers are responsible for their products and applications using JSMSEMI products.

Resale of JSMSEMI products or services with statements diferent from or beyond the parameters stated by JSMSEMI for that product or service voids all express and any implied warranties for the associated JSMSEMI product or s ervice. JSMSEMI is not responsible or liable for any such statements.

JSMSEMI All Rights Reserved. Information and data in this document are owned by JSMSEMI wholly and may not be edited, reproduced, or redistributed in any way without the express written consent from JSMSEMI.

Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the JSMSEMI product that you intend to use.

For additional information please contact Kevin@jsmsemi.com or visit www.jsmsemi.com