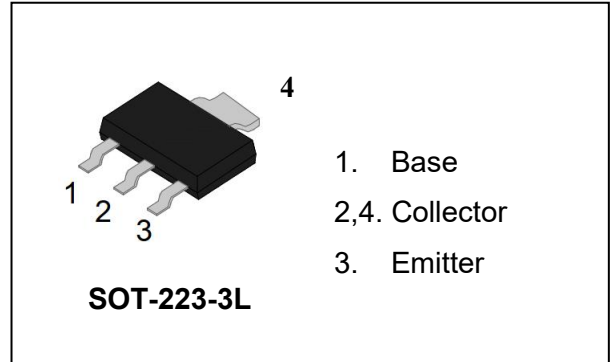




NPN Epitaxial Silicon Transistor

Features

- ◆ High Voltage Transistor



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	500	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	300	mA
Junction temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

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

Symbol	Test Condition	Value	Unit
P_D	Power Dissipation, $T_C=25^\circ\text{C}$	2	W
	Derate Above 25°C	16	mW/°C
$R_{\theta JA}$	Thermal Resistance, junction-to-Ambient	62.5	°C/W

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

Symbol	Parameter	Test Condition	Min	Typ.	Max	Unit
BV_{CBO}	Collector- base breakdown voltage	$I_C=100\mu\text{A}$, $I_E=0$	500			V
BV_{CEO}	Collector-emitter sustaining voltage	$I_C=1\text{mA}$, $I_B=0$	400			V
BV_{EB}	Emitter - base breakdown voltage	$I_E=100\mu\text{A}$, $I_C=0$	6			V
I_{CBO}	Collector-base cut-off current	$V_{CB}=400\text{V}$, $I_E=0$			100	nA

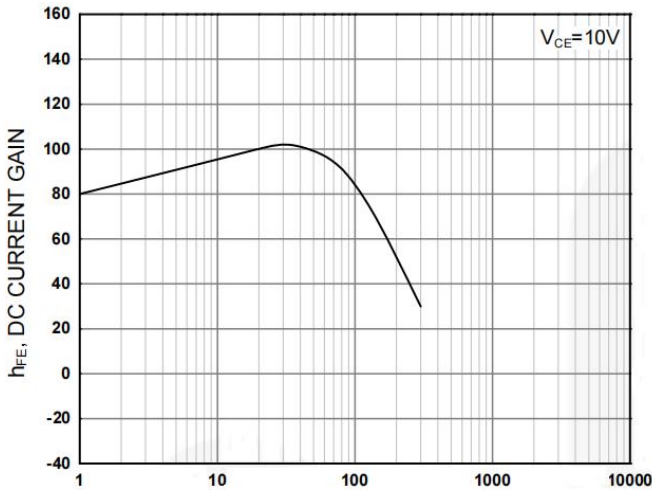


I_{CEO}	Collector- emittercut-off current	$V_{CE}=400V, I_{BE}=0$			500	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V, I_C=0$			100	nA
h_{FE}	DC current gain	$V_{CE}= 10V, I_C=1mA$	40			
		$V_{CE}=10V, I_C=10mA$	50		200	
		$V_{CE}=10V, I_C=50mA$	45			
		$V_{CE}=10V, I_C=100mA$	40			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=1mA, I_B=0.1mA$			0.40	V
		$I_C=10mA, I_B=1mA$			0.50	
		$I_C=50mA, I_B=5mA$			0.75	
$V_{BE(sat)}$	Base - emitter saturation voltage	$I_C=10mA, I_B=1mA$			0.75	V
C_{obo}	Output Capacitance	$V_{CB}=20V, I_E=0$ $f=1.0MHz$			7	pF

Note:

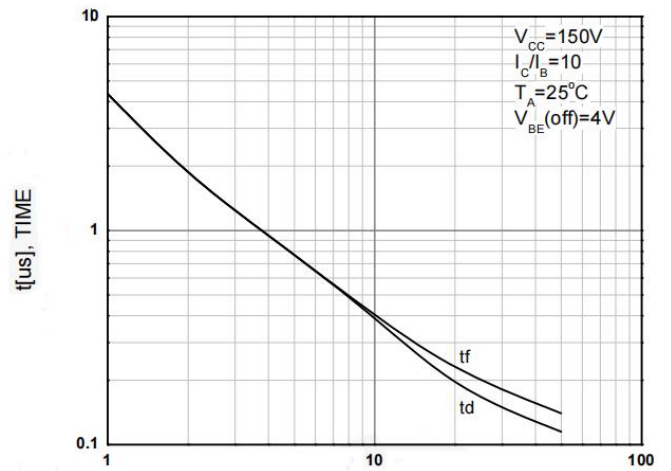
Pulse test:pulse width $\leq 300\mu s$,duth cycle $\leq 2.0\%$

Typical Performance Characteristics



I_C (mA) ,COLLECTOR CURRENT

Figure 1. DC Current Gain



I_C (mA) ,COLLECTOR CURRENT

Figure 2. Turn-On Switching Times

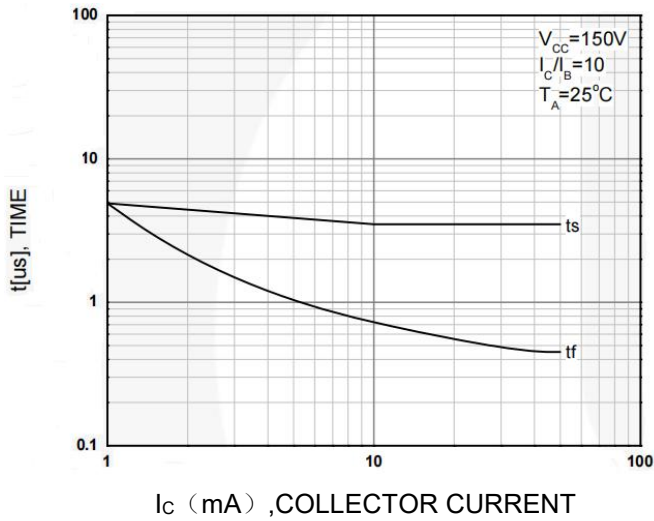


Figure 3. Turn-Off Switching Times

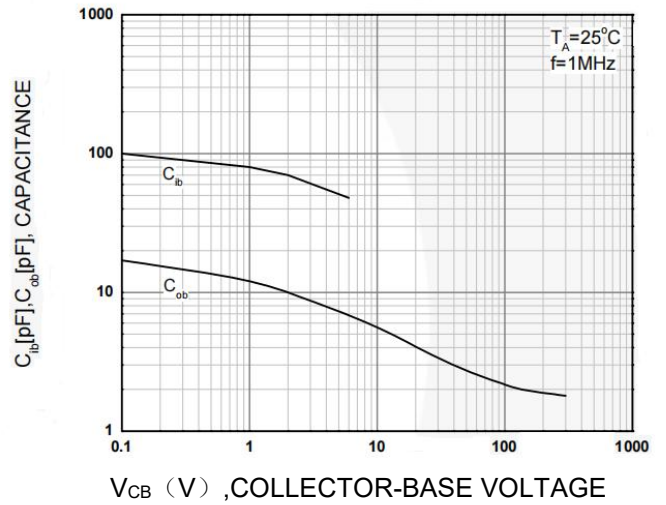


Figure 4. Capacitance

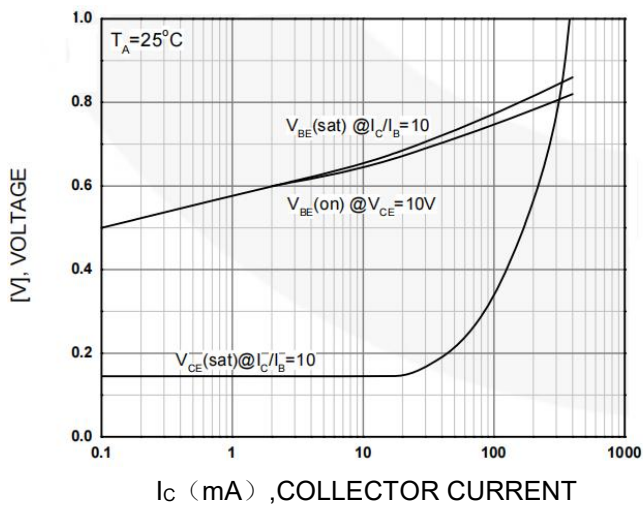


Figure 5. On Voltage

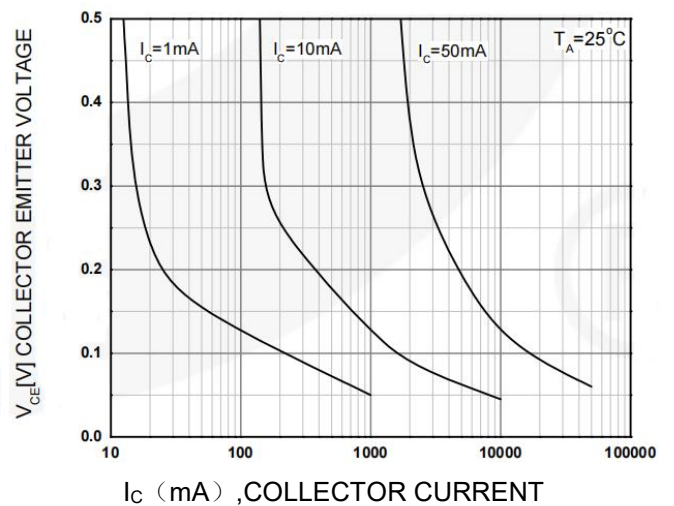


Figure 6. Collector Saturation Region

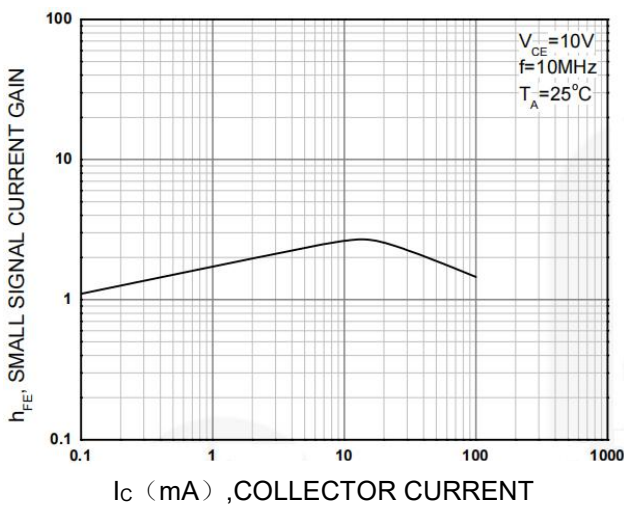
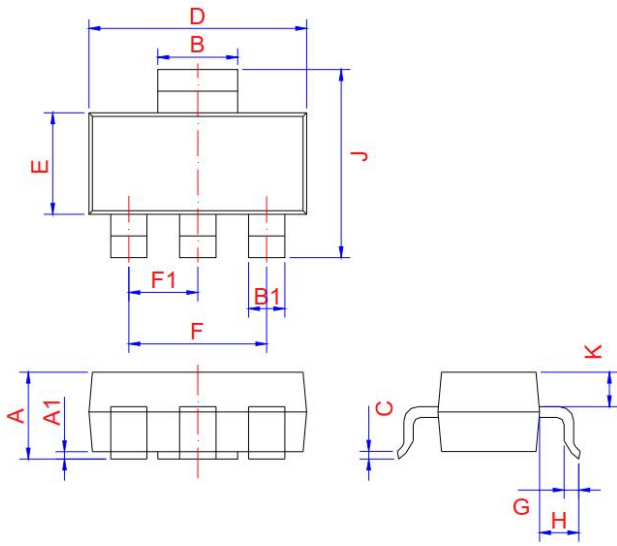


Figure 7. High Frequency Current Gain



Package Mechanical Data



SOT-223-3L

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.25	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	0.146
F		4.6	6.8	0.252	0.181	
F1		2.3			0.091	
G	0.7	0.9	1.1	0.028	0.035	0.043
H	1.5	1.75	2.0	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K	0.8	0.9	1.0	0.031	0.035	0.039

Ordering Information

Part Number	Marking	Package	Packing Method,Size
FJT44TF	FJT44	SOT-223-3L	Tape and Reel,4000 pcs
FJT44KTF	FJT44	SOT-223-3L	Tape and Reel,4000 pcs

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu Weida Semiconductor Co., Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it.

Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu Weida Semiconductor Co., Ltd complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu Weida Semiconductor Co., Ltd assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.