

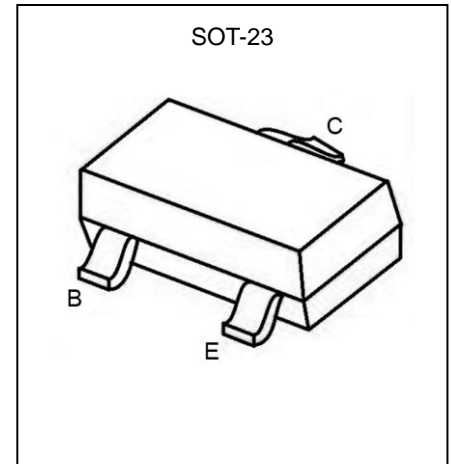


**MMBT4401 Transistor(NPN)**

**Feature**

- Switching Transistor

**Making: 2X**



**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

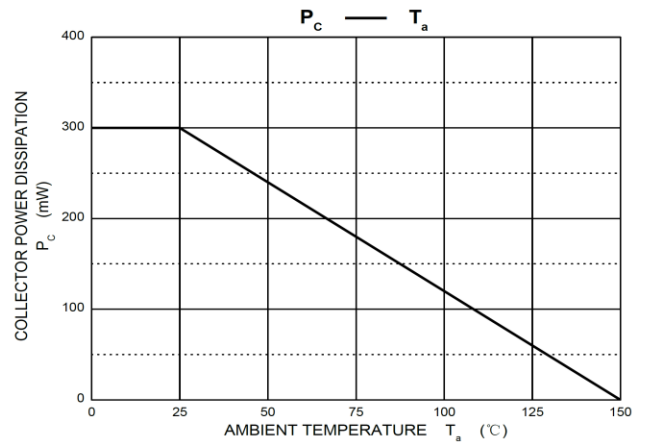
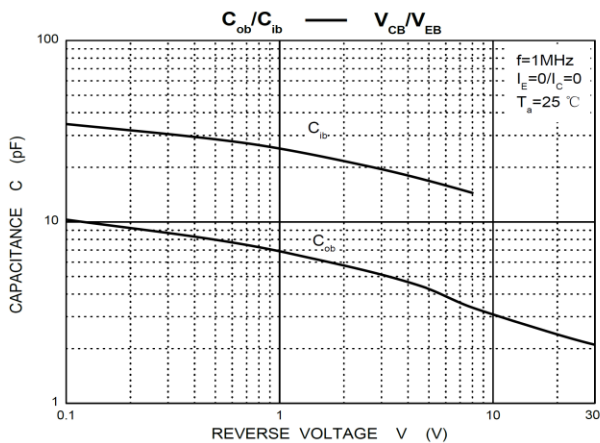
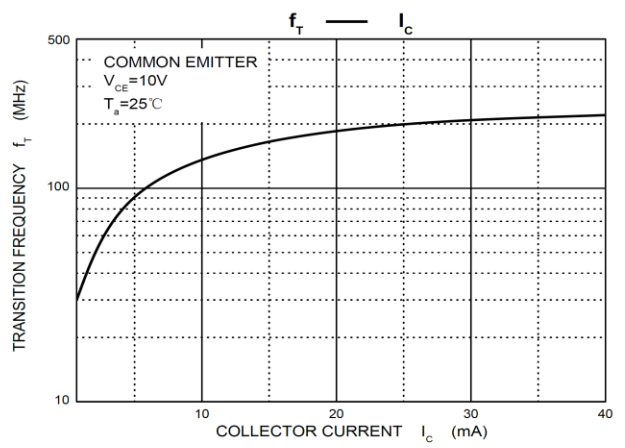
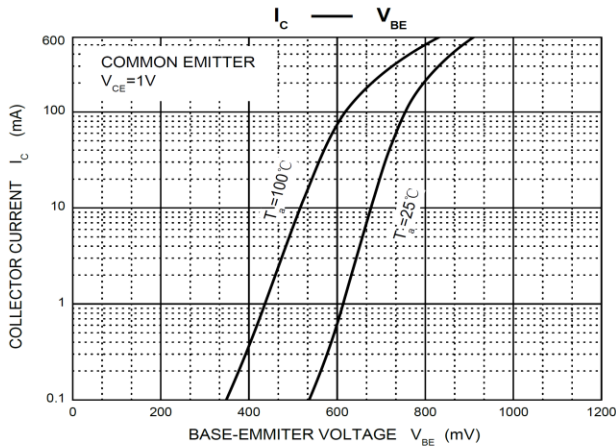
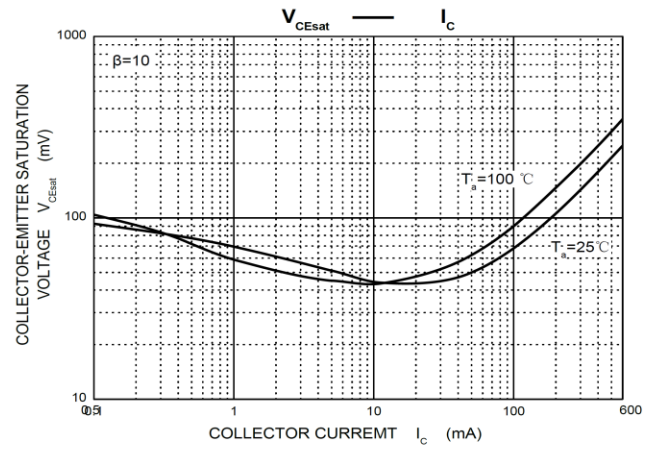
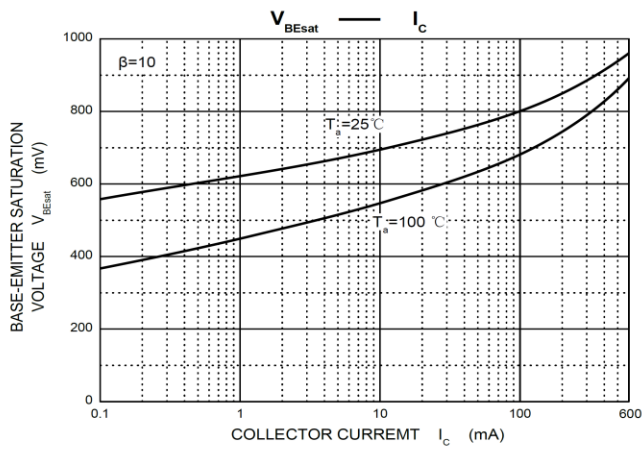
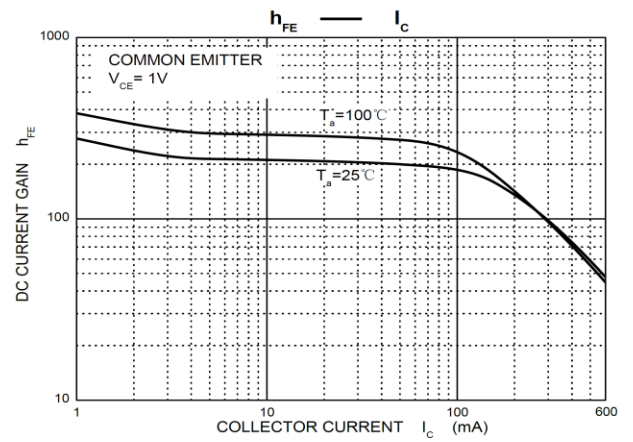
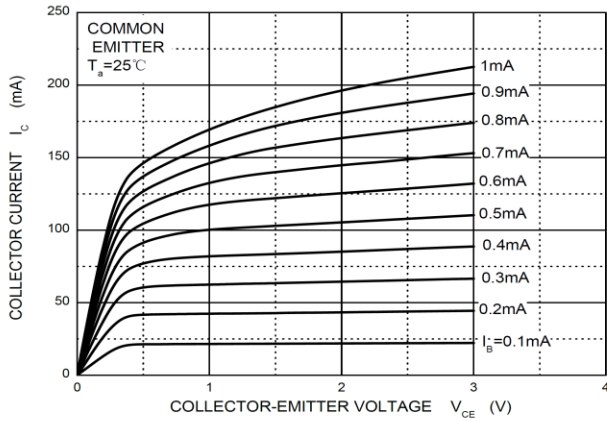
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CBO</sub>	60	V
Collector-Emitter Voltage	V <sub>CEO</sub>	40	V
Emitter-Base Voltage	V <sub>EBO</sub>	6	V
Collector Current -Continuous	I <sub>C</sub>	0.6	A
Power Dissipation	P <sub>d</sub>	0.3	W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55~ +150	°C

**ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise noted)**

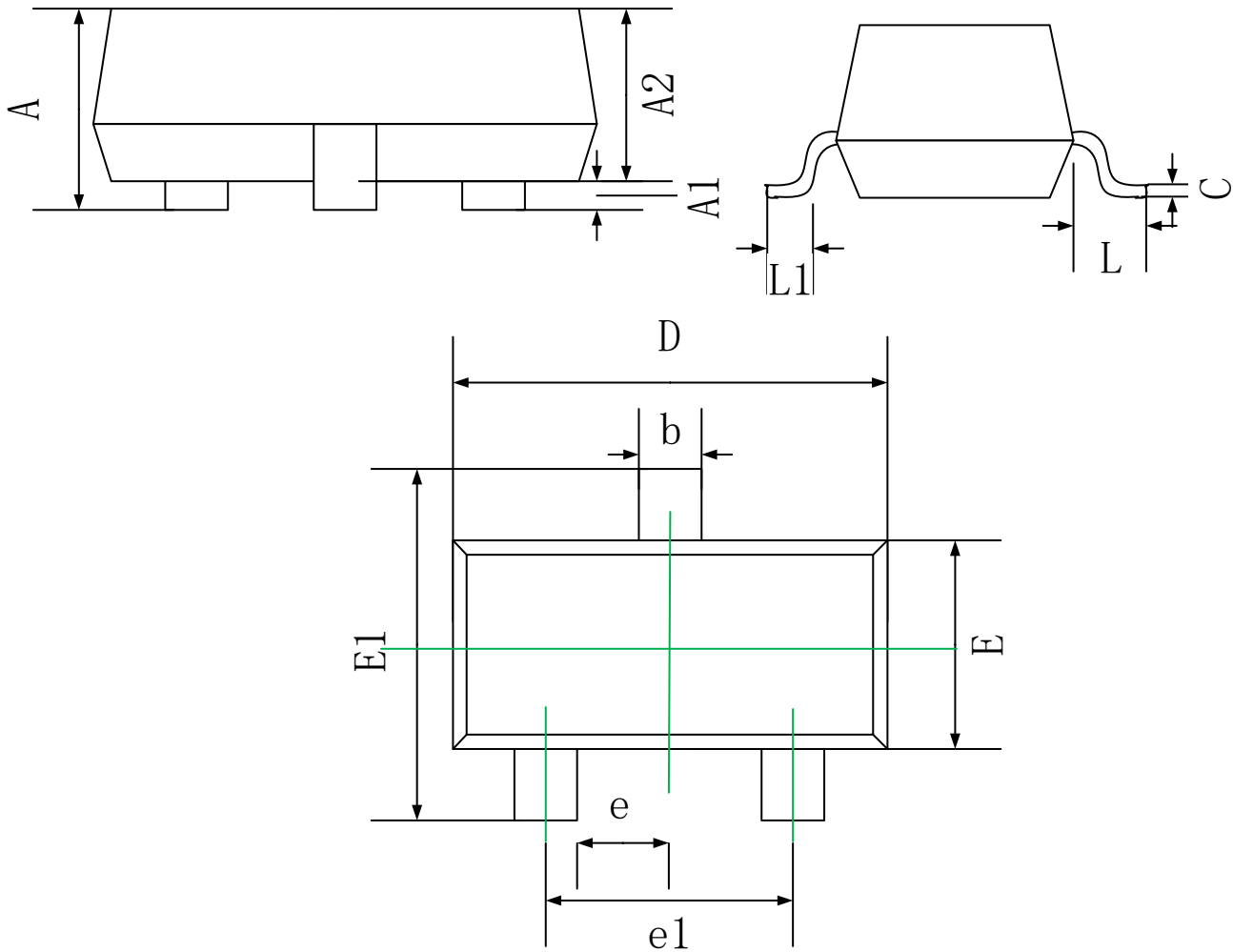
Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	60		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	40		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	6		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =50V, I <sub>E</sub> =0		0.1	μA
Collector cut-off current	I <sub>CEX</sub>	V <sub>CE</sub> =35V, V <sub>EB</sub> =0.4V		0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0		0.1	μA
DC current gain	h <sub>FE1</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =0.1mA	20		
	h <sub>FE2</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =1mA	40		
	h <sub>FE3</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =10mA	80		
	h <sub>FE4</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =150mA	100	300	
	h <sub>FE5</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA	40		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.4	V
		I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		0.75	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.95	V
		I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		1.2	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA, f=100MHz	250		MHZ

**Typical Characteristics**

**Static Characteristic**



## SOT-23 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50