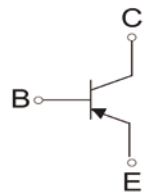


Features

- Collector currents up to 600 mA.
- General purpose amplifier and switch requiring.



SOT23



Equivalent Circuit

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

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	-40	V
V_{CE0}	Collector-Emitter Voltage	-40	V
V_{EB0}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.6	A
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	400	$^{\circ}\text{C}/\text{W}$
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	$I_C=-100\mu\text{A}, I_E=0$	-40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-1\text{mA}, I_B=0$	-40			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=-100\mu\text{A}, I_C=0$	-5			V
I_{CBO}	Collector cut-off current	$V_{CB}=-120\text{V}, I_E=0$			-100	nA
I_{CEX}	Collector cut-off current	$V_{CE}=-35\text{V}, V_{BE}=0.4$			-100	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=-4\text{V}, I_C=0$			-100	nA
$h_{FE(1)}$	DC current gain	$V_{CE}=-1\text{V}, I_C=-0.1\text{mA}$	30			
$h_{FE(2)}$		$V_{CE}=-1\text{V}, I_C=-1\text{mA}$	60			
$h_{FE(3)}$		$V_{CE}=-1\text{V}, I_C=-10\text{mA}$	100			
$h_{FE(4)}$		$V_{CE}=-1\text{V}, I_C=-150\text{mA}$	100		300	
$h_{FE(5)}$		$V_{CE}=-2\text{V}, I_C=-500\text{mA}$	20			
$V_{CE(sat)1}$	Collector-emitter saturation voltage	$I_C=-150\text{mA}, I_B=-15\text{mA}$			-0.4	V
$V_{BE(sat)1}$	Base-emitter saturation voltage				-0.95	V
$V_{CE(sat)2}$	Collector-emitter saturation voltage	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-0.75	V
$V_{BE(sat)2}$	Base-emitter saturation voltage				-1.3	V
f_T	Transition frequency	$V_{CE}=-10\text{V}, I_C=-20\text{mA}, f=100\text{MHz}$	200			MHz
t_d	Delay time	$V_{CC}=-30\text{V}, V_{BE(off)}=-0.5\text{V}, I_C=-150\text{mA}, I_{B1}=-15\text{mA}$			15	ns
t_r	Rise time				20	ns
t_s	Storage time	$V_{CC}=-30\text{V}, I_C=-150\text{mA}, I_{B1}=I_{B2}=-15\text{mA}$			225	ns
t_f	Fall time				60	ns

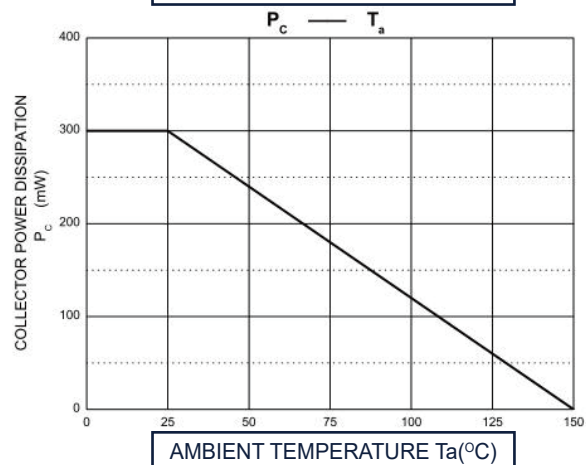
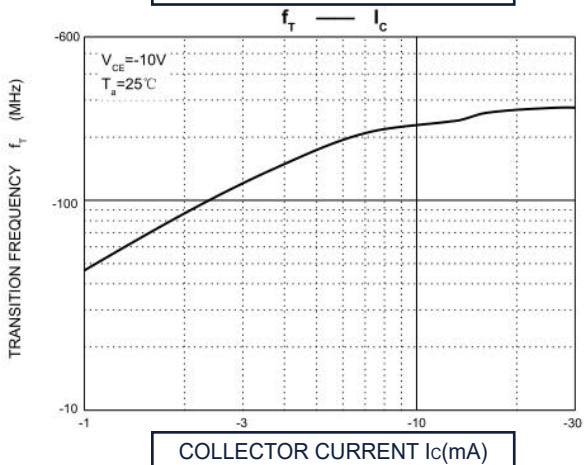
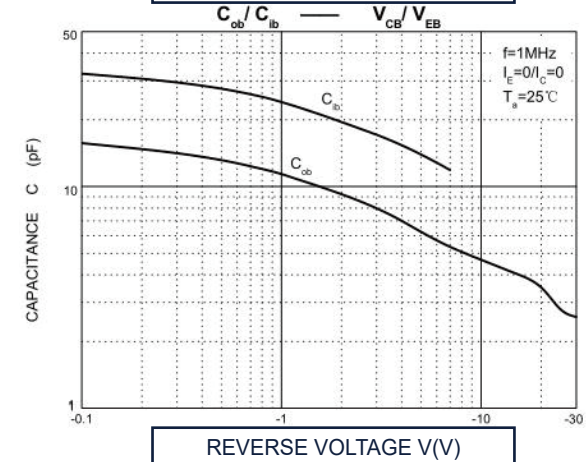
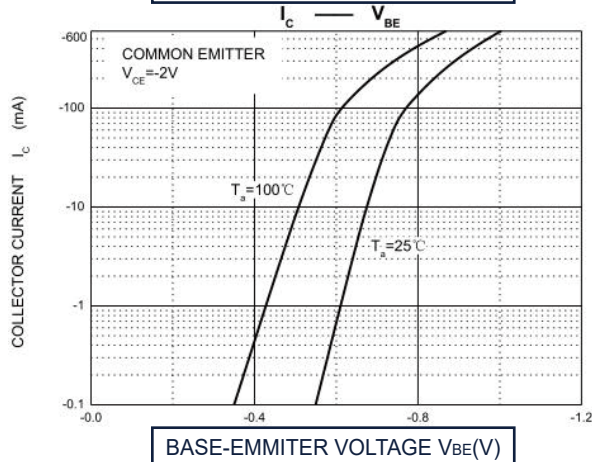
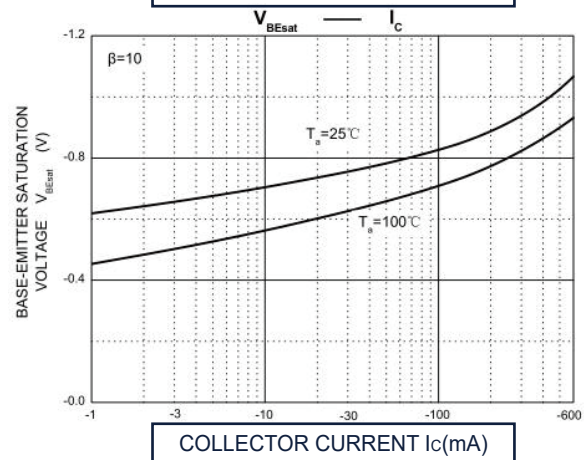
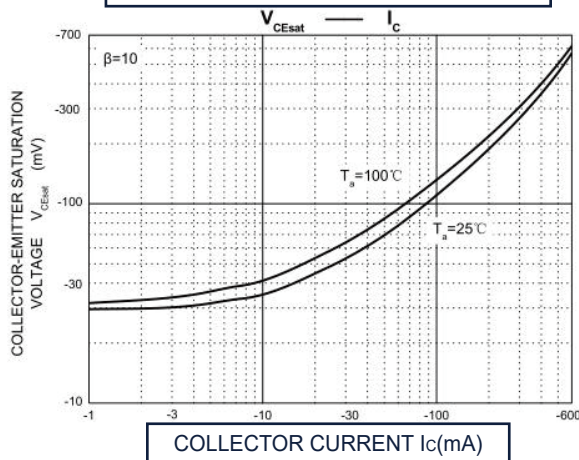
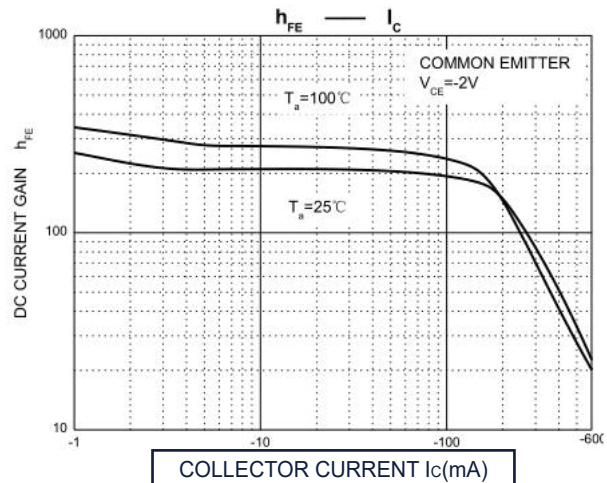
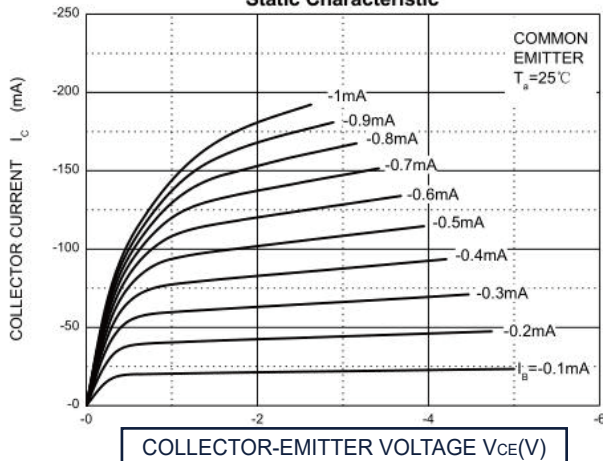
Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE(1)}$	Qty(PCS)
MMBT4403	SOT23	MMBT4403 产品名称 product name	2T	100-300	3000



Typical Characteristics

Static Characteristic





SOT23 Package Outline Dimensions



Symbol	Dimensions in Millimeters	
	mm	
	Min	Max
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°