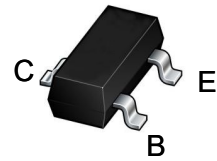


FEATURES

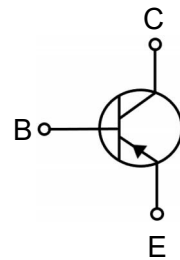
- Collector Current: $I_C = -0.6A$
- Power Dissipation of 300mw



SOT-23

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MMBT4403	SOT-23	2T	3000



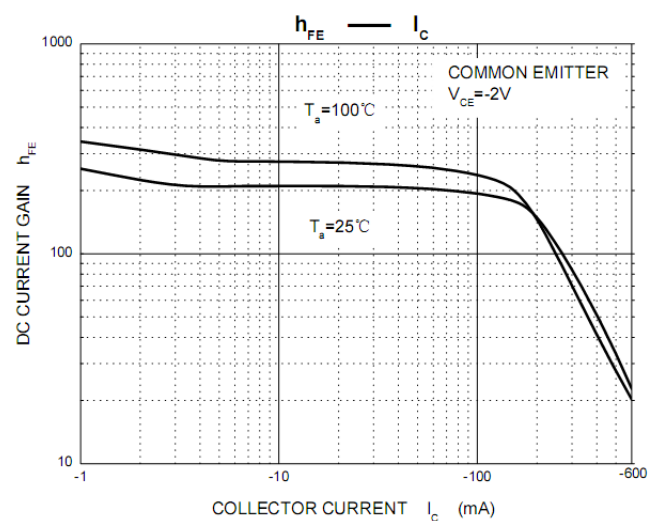
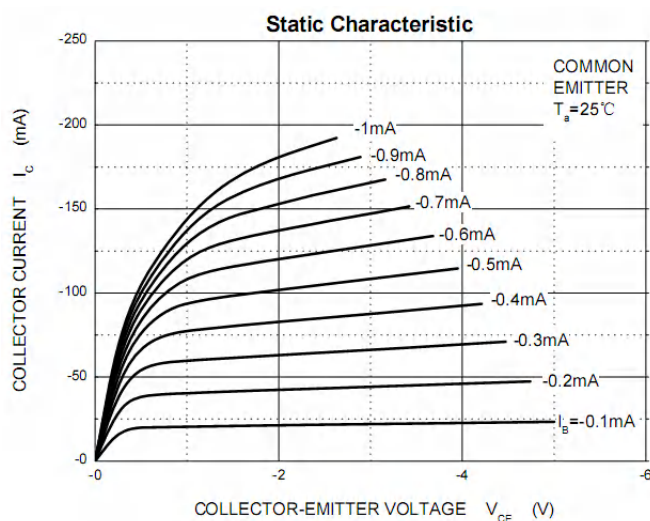
MAXIMUM RATINGS (Ta=25 unless otherwise noted)

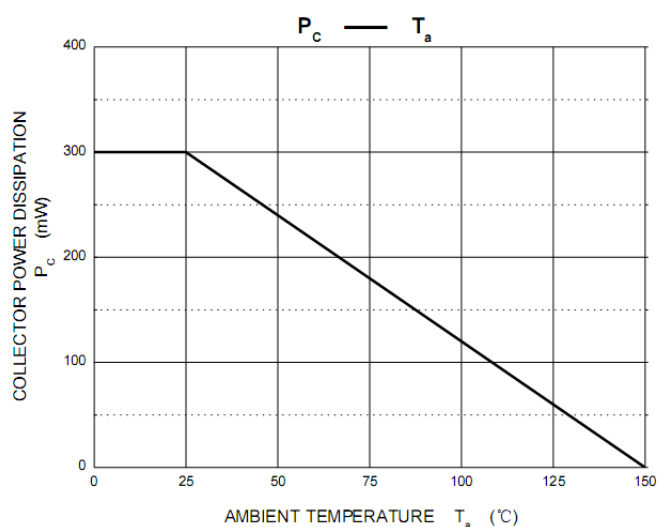
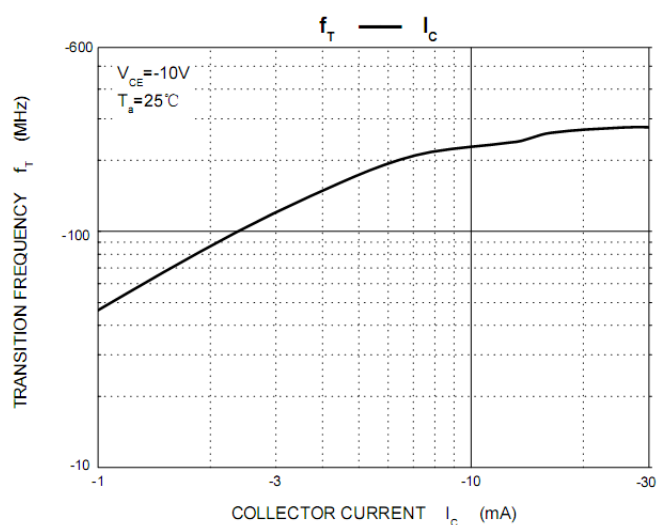
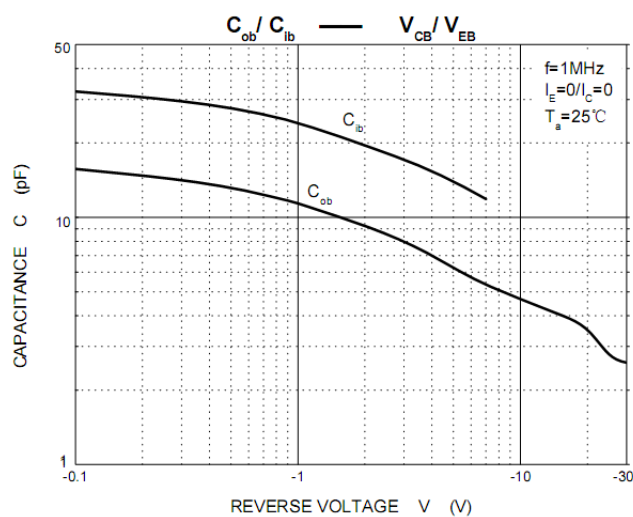
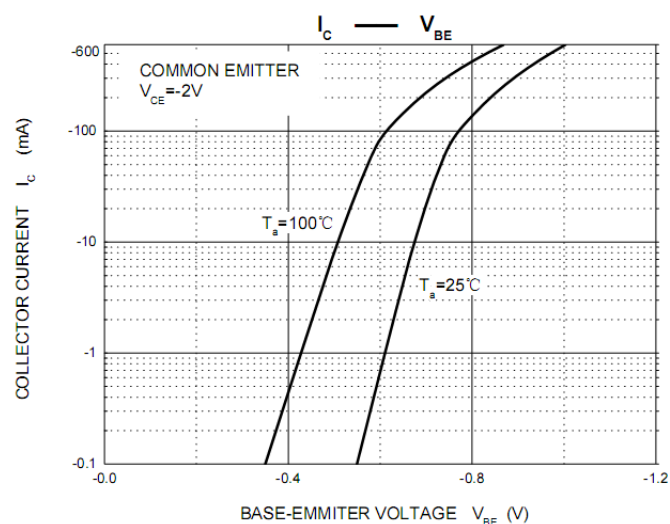
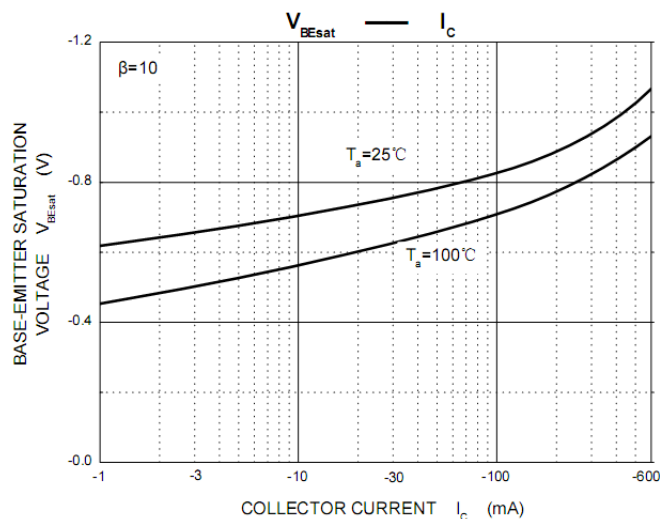
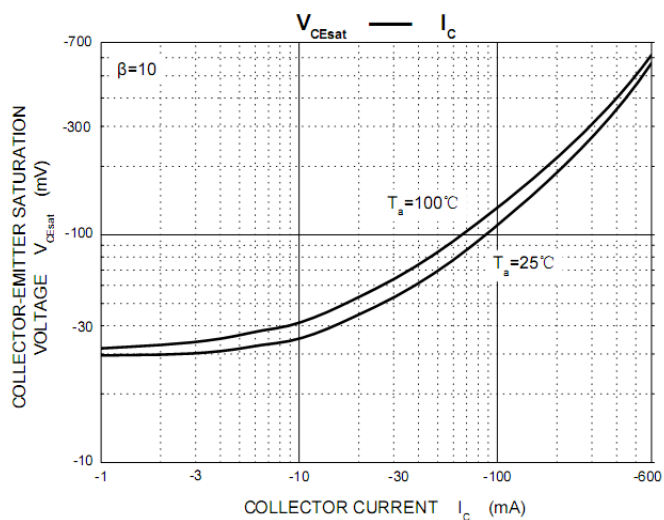
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-600	mA
Collector Power Dissipation	P_C	300	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	417	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{stg}	-55~+150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS (Ta=25 unless otherwise specified)

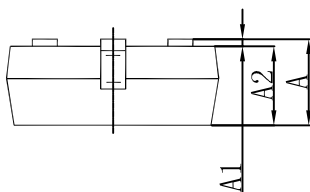
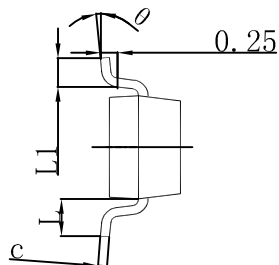
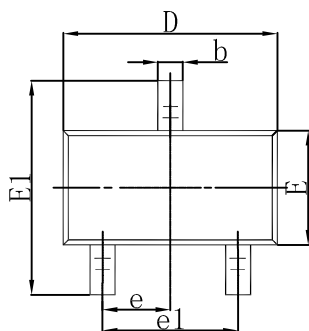
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100 \mu A, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100 \mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -35V, I_E = 0$			-0.1	μA
Collector cut-off current	I_{CEX}	$V_{CE} = -35V, V_{BE} = 0.4V$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_C = 0$			-0.1	μA
DC current gain	h_{FE1}	$V_{CE} = -1V, I_C = -0.1mA$	30			
	h_{FE2}	$V_{CE} = -1V, I_C = -1mA$	60			
	h_{FE3}	$V_{CE} = -1V, I_C = -10mA$	100			
	h_{FE4}	$V_{CE} = -2V, I_C = -150mA$	100		300	
	h_{FE5}	$V_{CE} = -2V, I_C = -500mA$	20			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$			-0.4	V
		$I_C = -500mA, I_B = -50mA$			-0.75	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -150mA, I_B = -15mA$			-0.95	V
		$I_C = -500mA, I_B = -50mA$			-1.3	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -20mA, f = 100MHz$	200			MHz
Delay time	t_d	$V_{CC} = -30V, V_{BE(off)} = -0.5V$			15	ns
Rise time	t_r	$I_C = -150mA, I_{B1} = -15mA$			20	ns
Storage time	t_s	$V_{CC} = -30V, I_C = -150mA$			225	ns
Fall time	t_f	$I_{B1} = I_{B2} = -15mA$			60	ns

Typical Characteristics



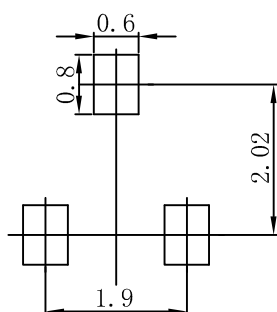


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.