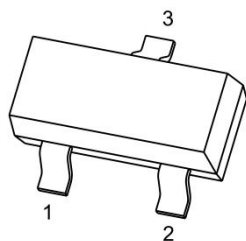


MMBT3904T2

Feature

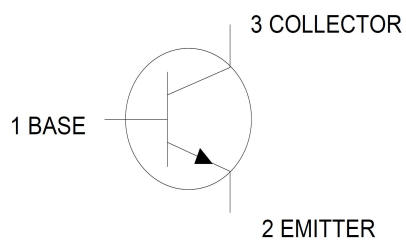
- Switching Transistor
- Collector-emitter voltage $V_{CE}=40V$
- Collector current $I_C=0.2A$

Package

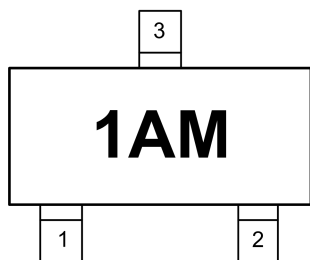


SOT-23

Circuit diagram



Marking



**Absolute maximum ratings (Ta=25°C unless otherwise noted)**

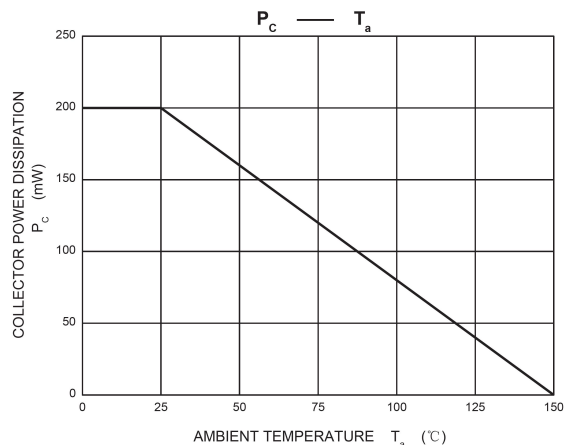
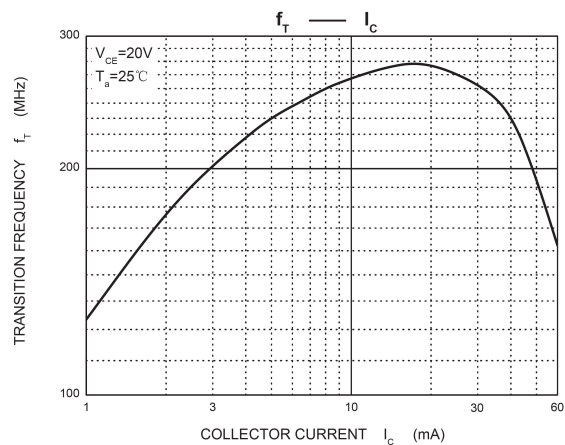
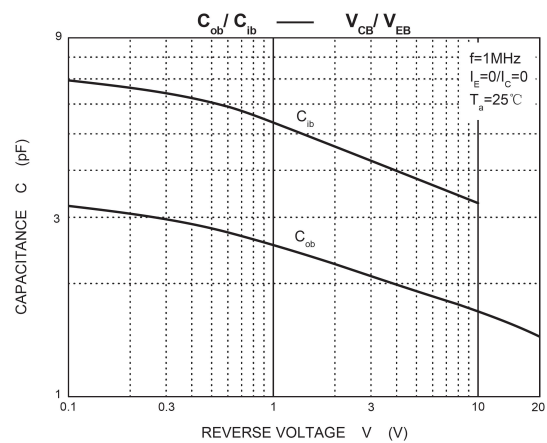
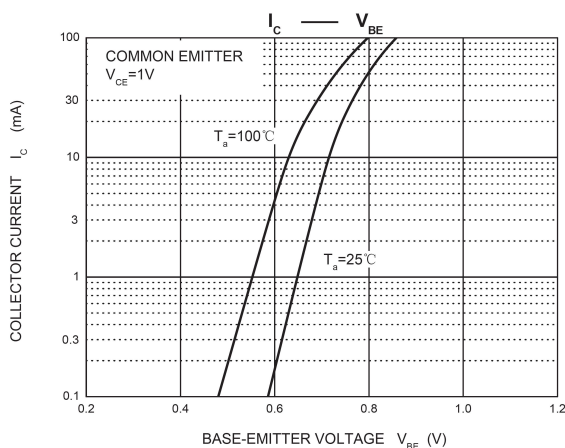
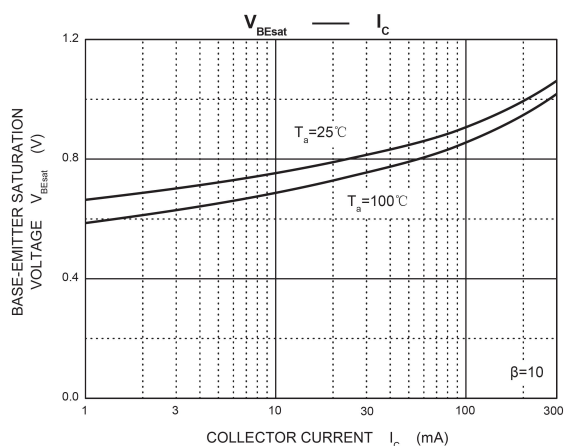
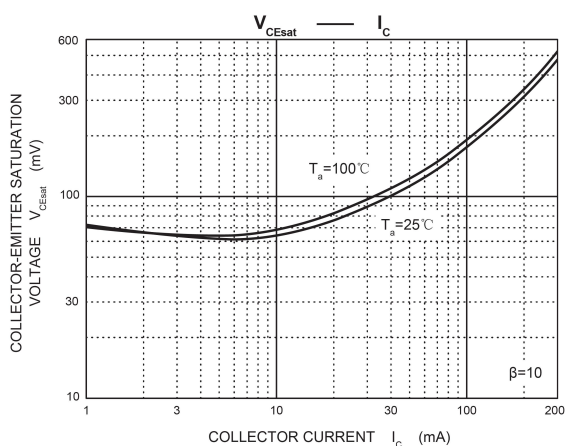
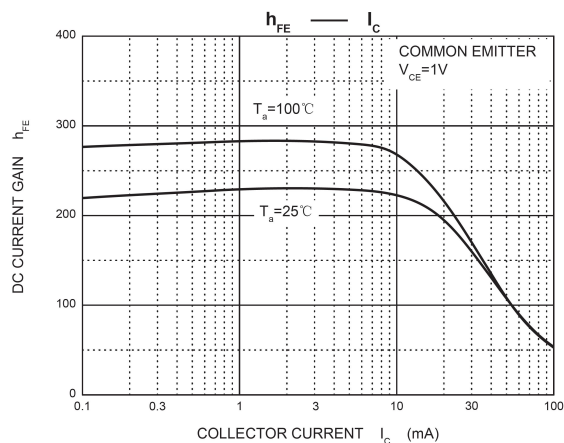
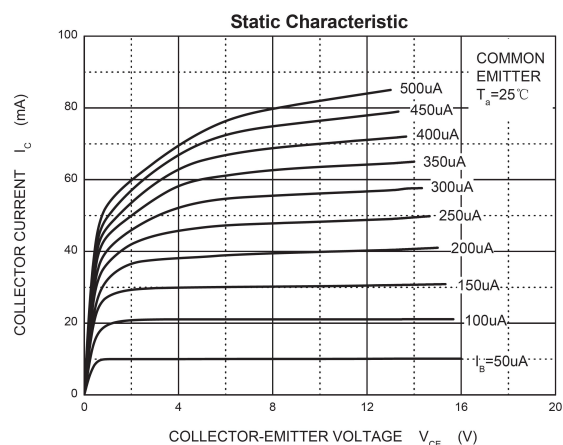
Parameter	Symbol	Value	Unit
Collector Emitter Voltage	V_{CEO}	40	V
Collector Base Voltage	V_{CBO}	60	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	200	mA
Power Dissipation	P_{tot}	100	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	1250	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Electrical characteristics (T_A=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=1mA, I_B=0$	40		V
Collector-base breakdown voltage	BV_{CBO}	$I_C=10\mu A, I_E=0$	60		V
Emitter-base breakdown voltage	BV_{EBO}	$I_E=10\mu A, I_C=0$	6		V
Collector cut-off current	I_{CEX}	$V_{CE}=30V, V_{EB}(off)=3V$		50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$		100	nA
DC current gain	h_{FE}	$V_{CE}=1V, I_C=0.1mA$	40		
		$V_{CE}=1V, I_C=1mA$	70		
		$V_{CE}=1V, I_C=10mA$	100		300
		$V_{CE}=1V, I_C=50mA$	60		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$		0.2	V
		$I_C=50mA, I_B=5mA$		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$	0.65	0.85	V
		$I_C=50mA, I_B=5mA$		0.95	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	300		MHZ

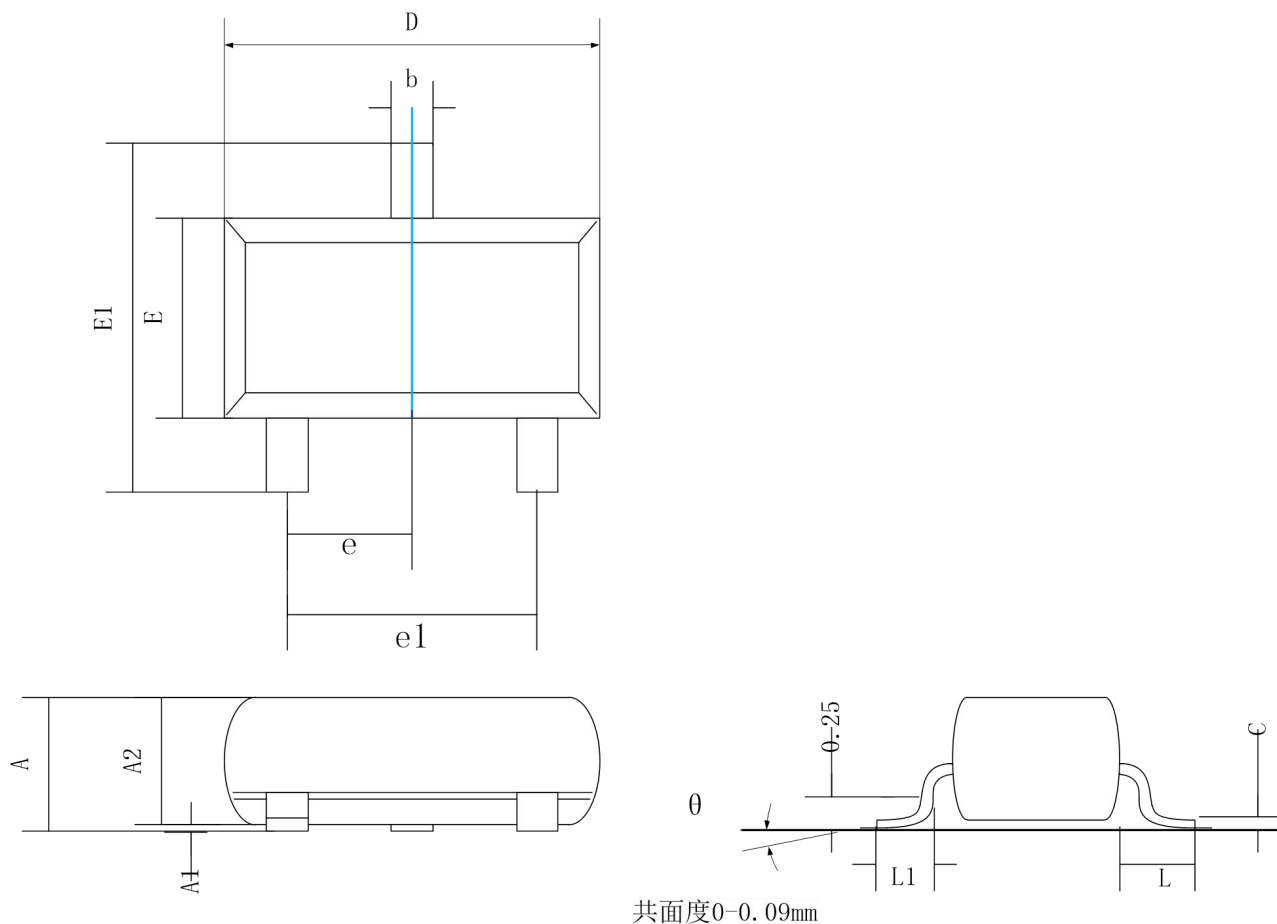


Typical Characteristics





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
θ	0°	8°