



浩畅半导体

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MMBT4401 TRANSISTOR (NPN)

SOT-23 Plastic-Encapsulate Transistors

产 品 规 格 书

承 认 书

客户确认：

公司签章：

部门

工程部

品保部

采购部

签名

日期



SOT-23 Plastic-Encapsulate Transistors

MMBT4401 TRANSISTOR (NPN)

FEATURES

Switching transistor

MARKING: MMBT4401=2X

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	40	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current -Continuous	600	mA
P _C	Collector Power dissipation	0.3	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55to +150	°C
R _{θJA}	Thermal Resistance, junction to Ambient	357	°C/mW

SOT-23

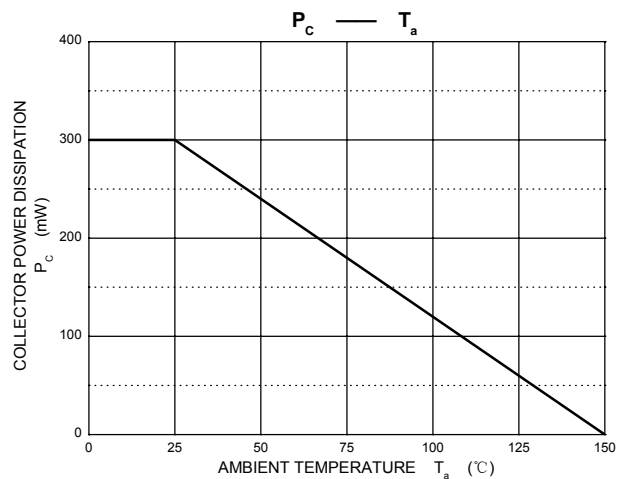
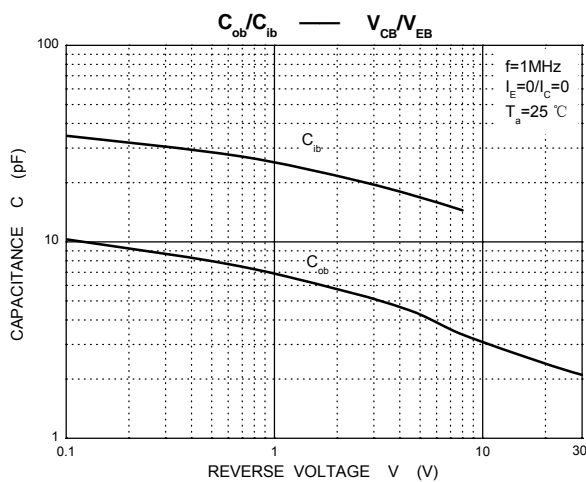
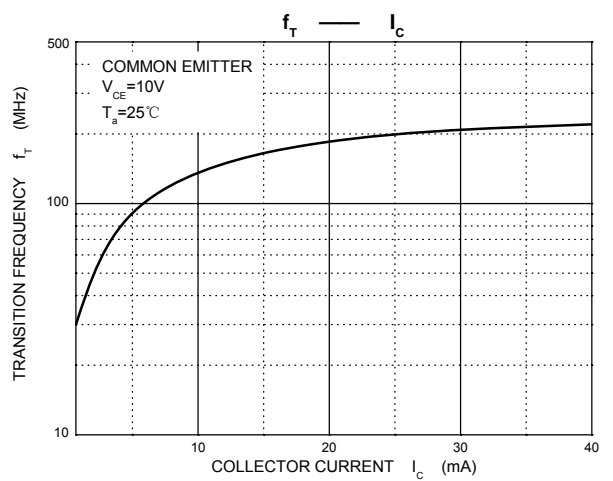
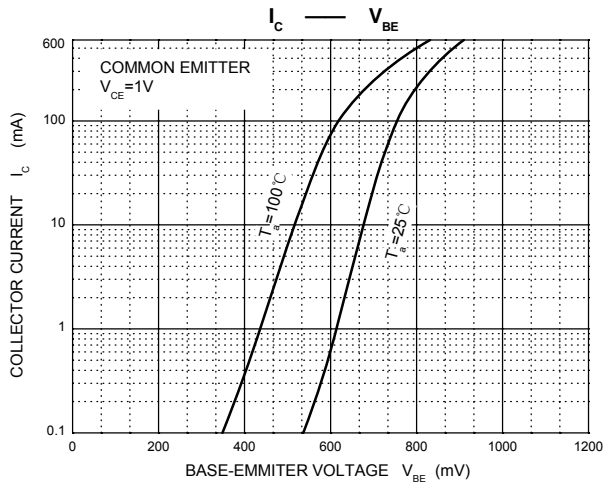
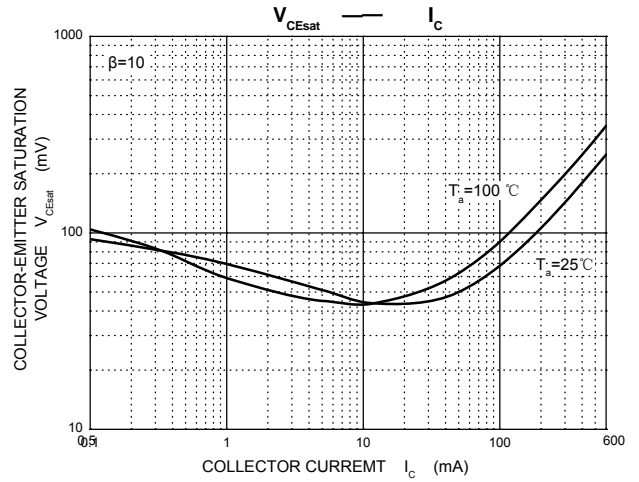
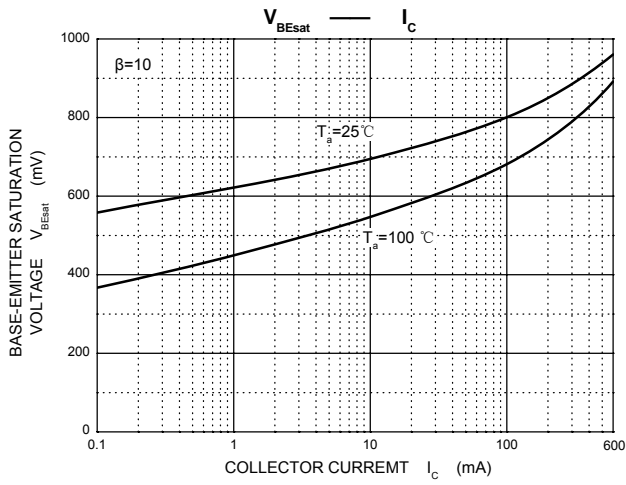
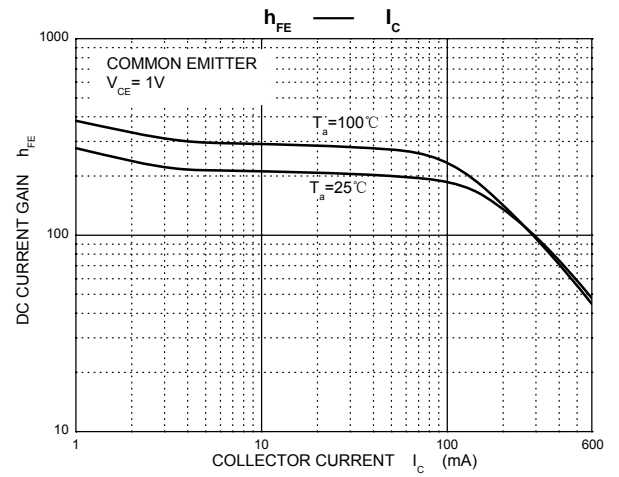
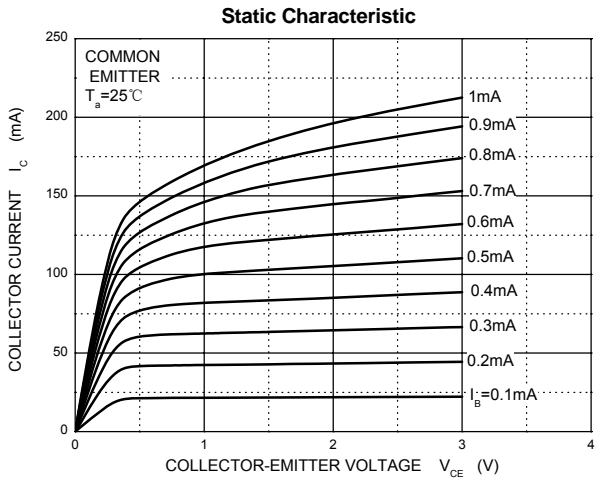


- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 100μA, I _E =0	60		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 = 100μA, I _C =0	6		V
Collector cut-off current	I _{CBO}	V _{CB} =50 V, I _E =0		0.1	μA
Collector cut-off current	I _{CEO}	V _{CE} =30 V, I _B =0		0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0		0.1	μA
DC current gain	h _{FE}	V _{CE} =1V, I _C =150mA	100	300	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =150mA, I _B =15mA		0.4	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 150mA, I _B =15mA		0.95	V
Transition frequency	f _T	V _{CE} = 10V, I _C = 20mA f = 100MHz	250		MHz

Typical Characteristics

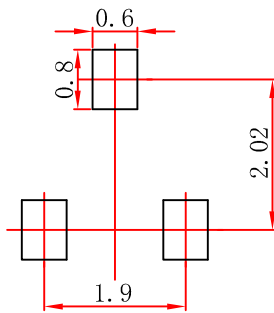


SOT-23 Package Outline Dimensions



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: ± 0.05 mm.
3. The pad layout is for reference purposes only.