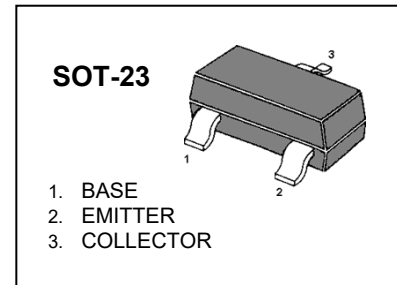


MMBT4401 TRANSISTOR (NPN)

FEATURES

- Epitaxial Planar Die Construction
- Complementary PNP Type Available (MMBT4403)
- Ideal for Medium Power Amplification and Switching



MARKING: 2X

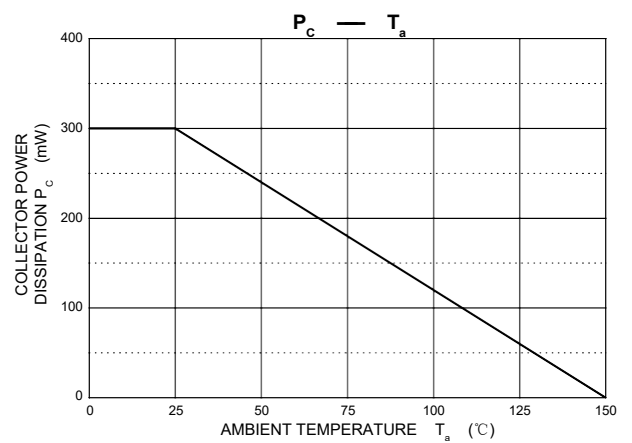
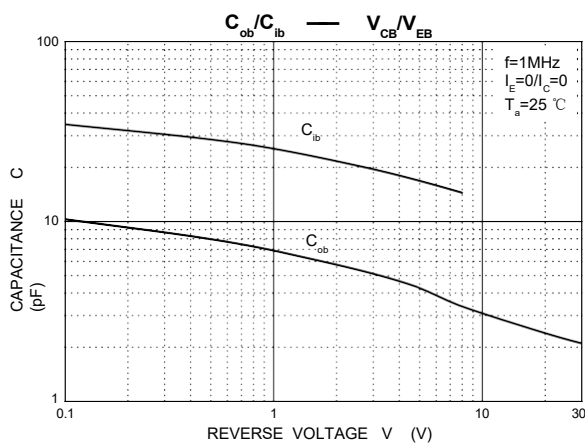
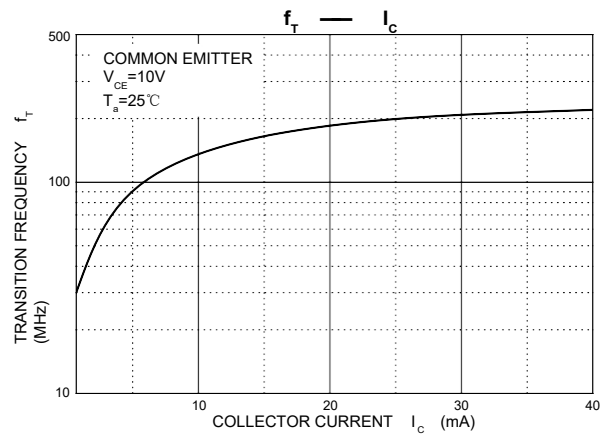
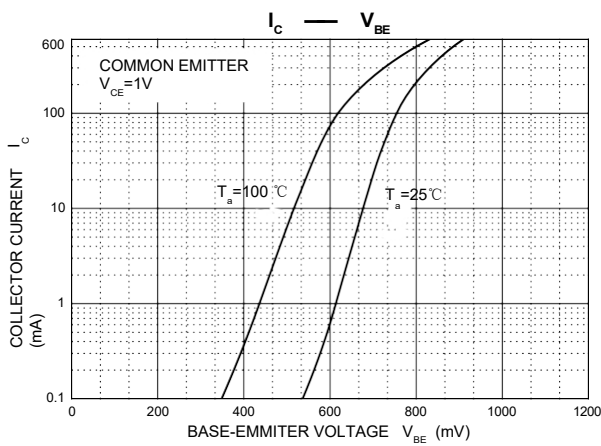
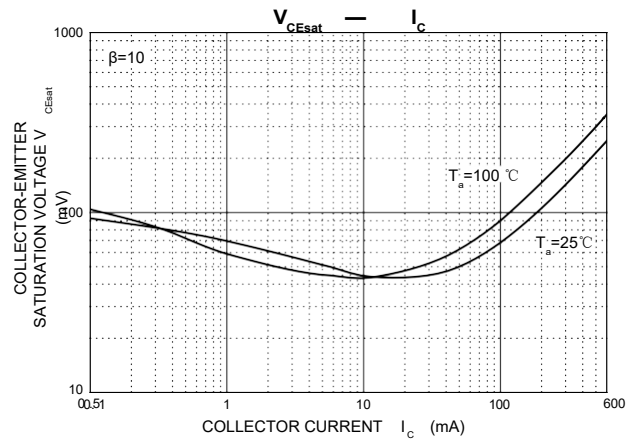
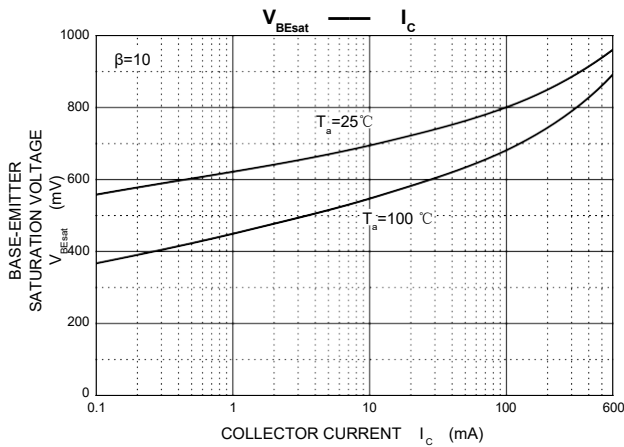
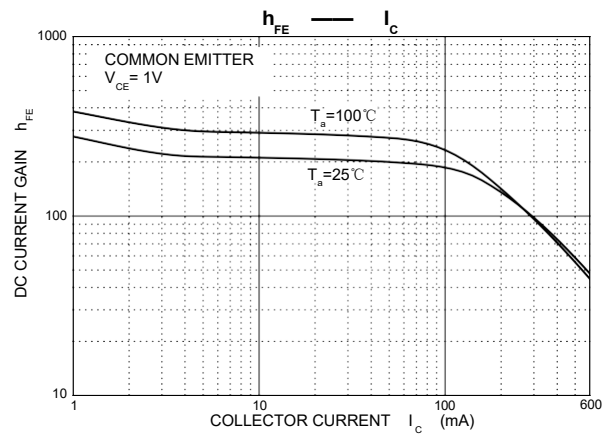
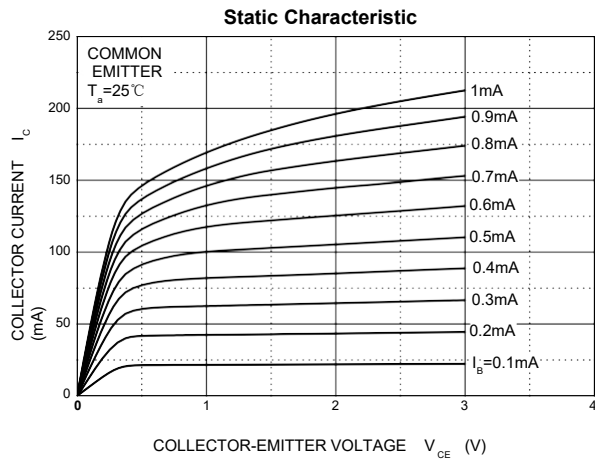
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	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	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55 to +150	$^{\circ}\text{C}$
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	417	$^{\circ}\text{C}/\text{mW}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB}=50\text{V}$, $I_E=0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=30\text{V}$, $I_B=0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$		0.1	μA
DC current gain	h_{FE}	$V_{CE}=1\text{V}$, $I_C=150\text{mA}$	100	300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=150\text{mA}$, $I_B=15\text{mA}$		0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=150\text{mA}$, $I_B=15\text{mA}$		0.95	V
Transition frequency	f_T	$V_{CE}=10\text{V}$, $I_C=20\text{mA}$ $f=100\text{MHz}$	250		MHz

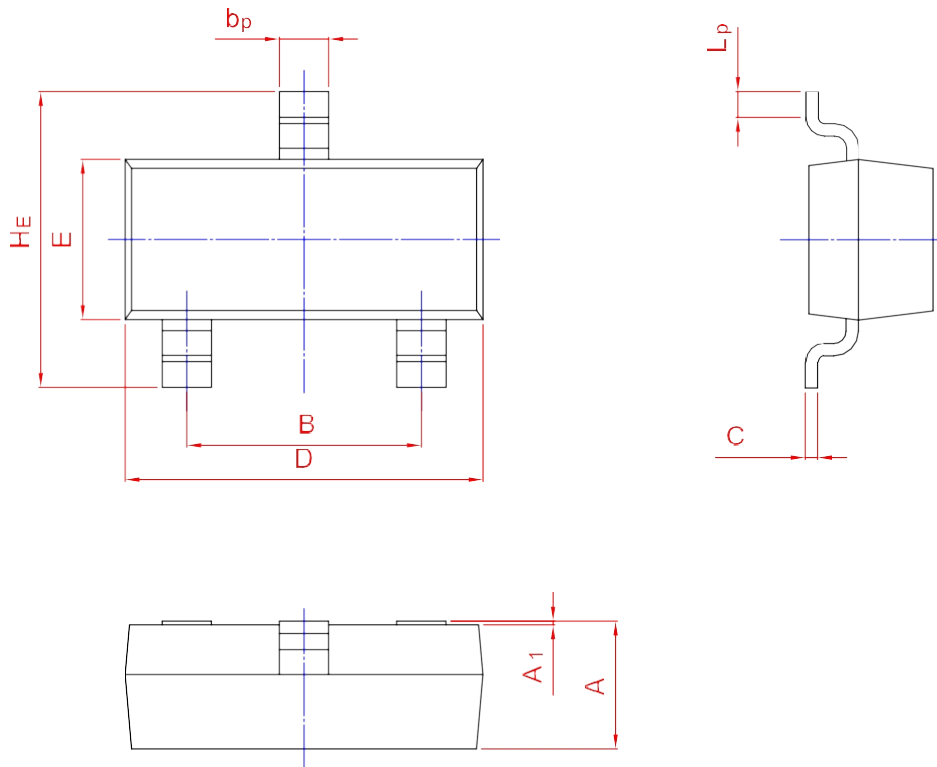
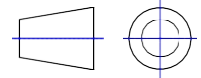
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20