

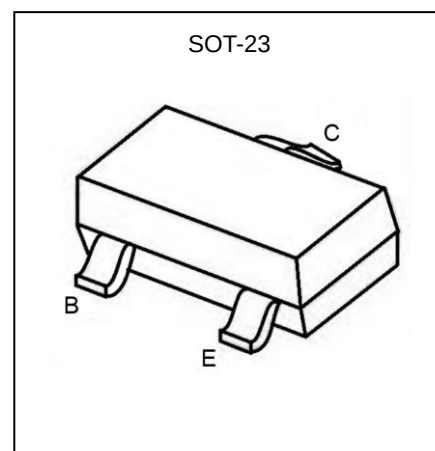
MMBT2222A Transistor(NPN)

Features:

- Epitaxial planar die construction

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

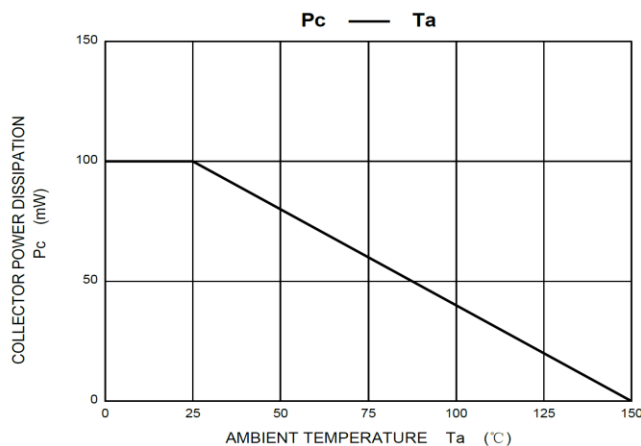
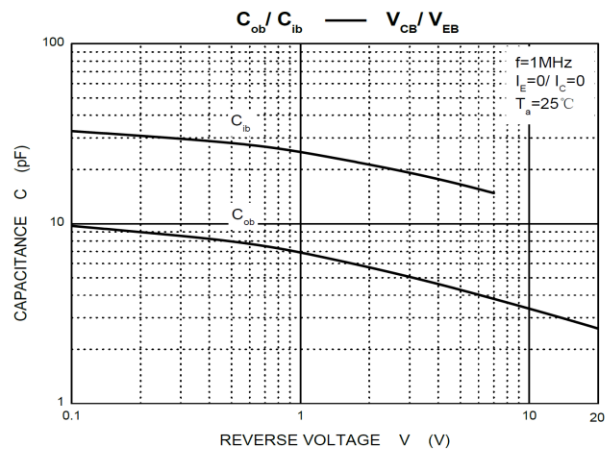
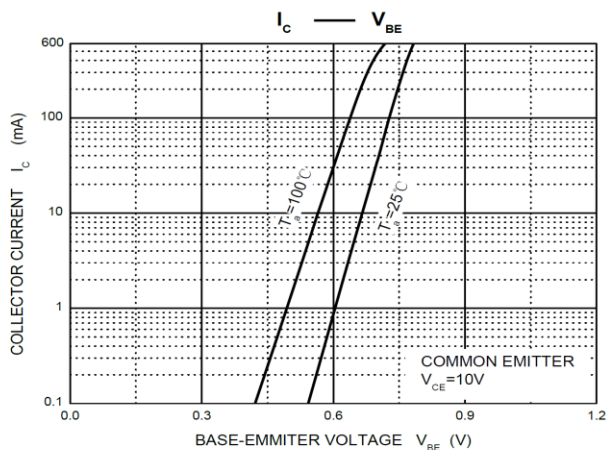
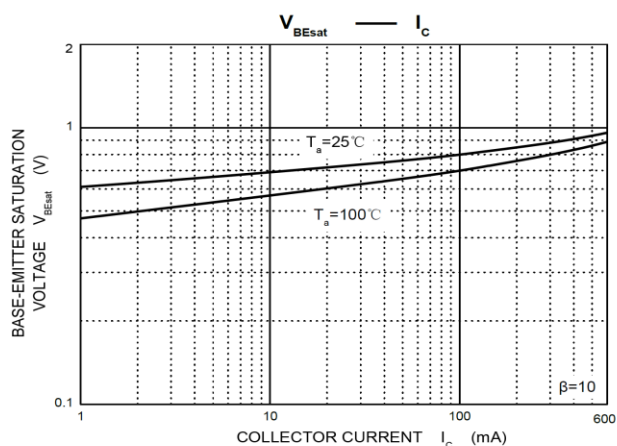
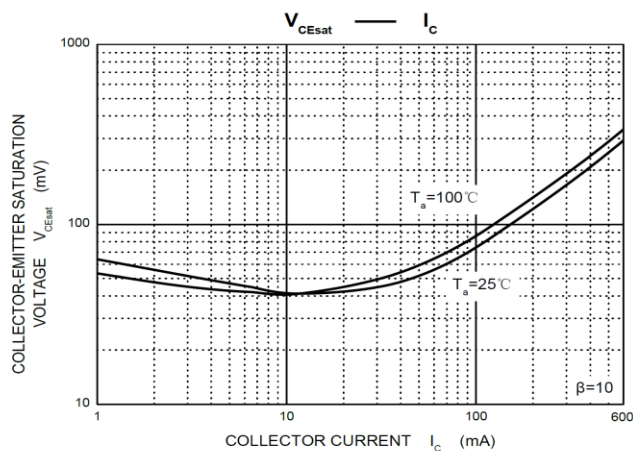
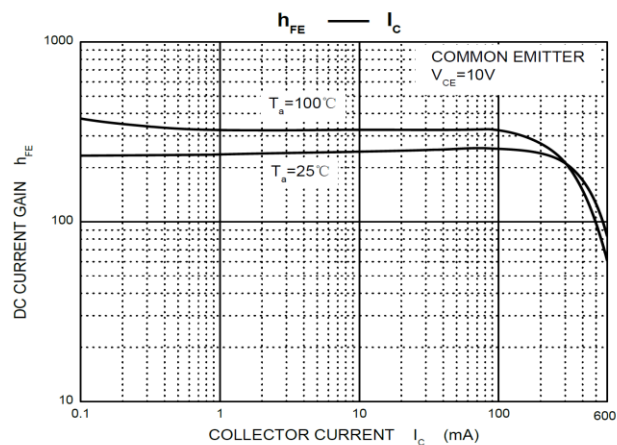
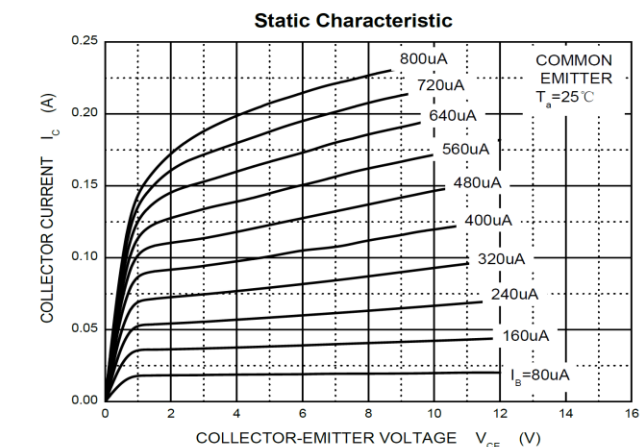
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	0.6	A
Power Dissipation	P_d	0.625	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

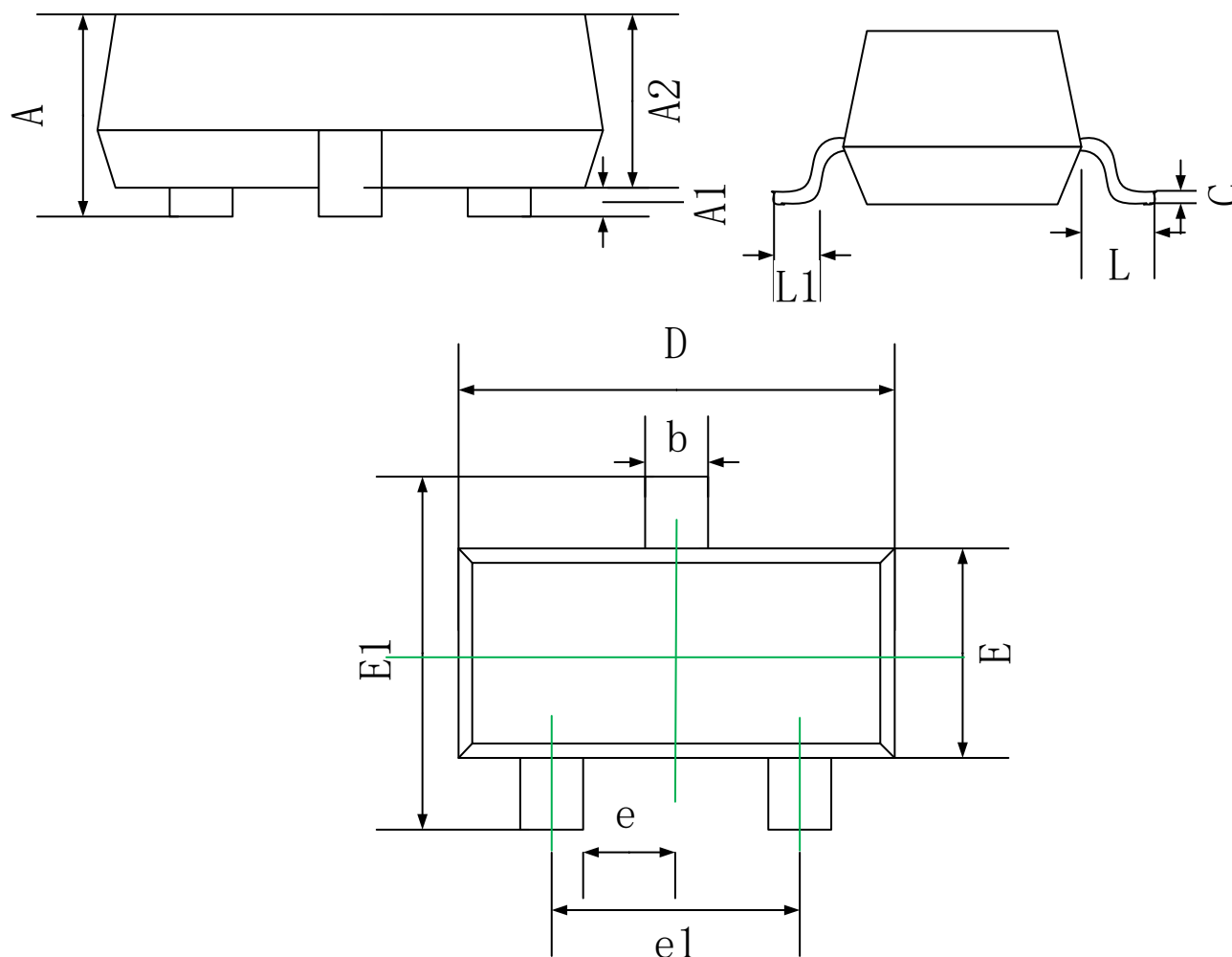


ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	75		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=100\mu\text{A}$, $I_B=0$	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}	$V_{CB}=75\text{V}$, $I_E=0$		100	nA
Collector cut-off current	I_{CEX}	$V_{CE}=40\text{V}$, $I_B=0$		100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}$, $I_C=0$		100	nA
DC current gain	h_{FE1}	$V_{CE}=10\text{V}$, $I_C=0.1\text{mA}$	40		
	h_{FE2}	$V_{CE}=10\text{V}$, $I_C=150\text{mA}$	100	300	
	h_{FE3}	$V_{CE}=10\text{V}$, $I_C=500\text{mA}$	42		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$		1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$		2	V
Transition frequency	f_T	$V_{CE}=20\text{V}$, $I_C=20\text{mA}$, $f=100\text{MHz}$	250		MHZ
Delay Time	t_d	$V_{CC}=30\text{V}$, $I_C=150\text{mA}$, $V_{BE(off)}=-0.5\text{V}$, $I_{B1}=15\text{mA}$		10	ns
Rise Time	t_r			25	ns
Storage Time	t_s	$V_{CC}=30\text{V}$, $I_C=150\text{mA}$,		225	ns
Fall Time	t_f	$I_{B1}=I_{B2}=15\text{mA}$		60	ns

Typical Characteristics

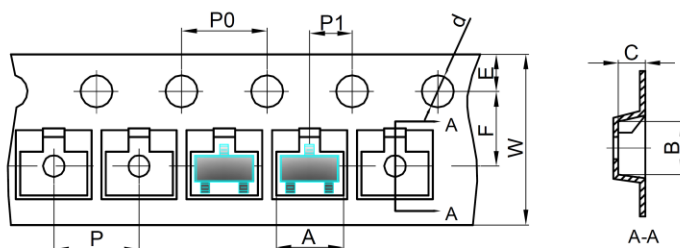


SOT-23 Package Information


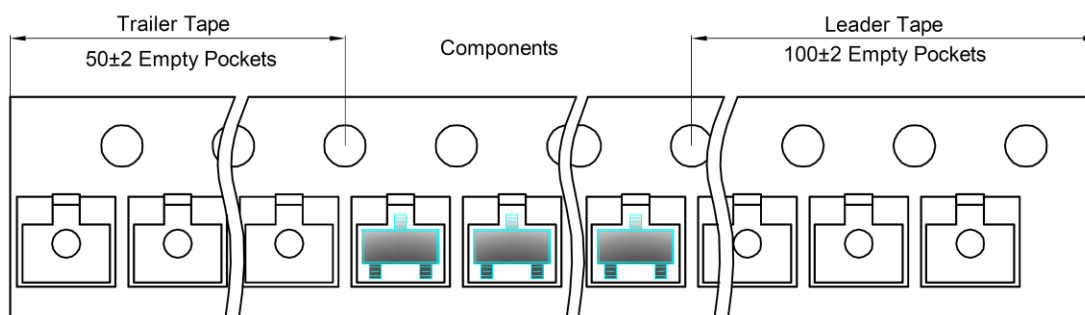
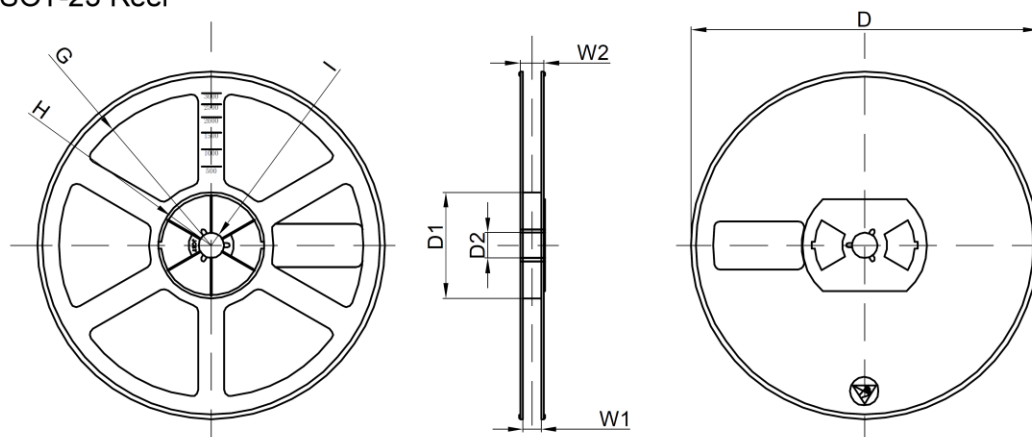
Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50

SOT-23 Tape and Reel
SOT-23 Tape and reel

SOT-23 Embossed Carrier Tape



Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

SOT-23 Reel


Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	