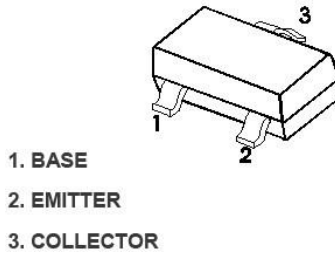


SOT-23



MARKING:1P

特征 Features

- 与MMBT2907A配对;Complementary to MMBT2907A
- 最大功率耗散 300mW; Power Dissipation of 300mW
- 高稳定性和可靠性。High Stability and High Reliability

机械数据 Mechanical Data

- 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package
- 环氧树脂UL 易燃等级Epoxy UL: 94V-0
- 安装位置: 任意 Mounting Position: Any
- Device meets MSL 1 requirements

极限值和温度特性($T_A = 25^\circ\text{C}$ 除非另有规定)Maximum Ratings & Thermal Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Collector-Base Voltage	V_{CB0}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter -Base Voltage	V_{EB0}	6	V
Collector Current-Continuous	I_C	600	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55-+150	$^\circ\text{C}$
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$

电特性 Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits		单位 Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	75		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6		V
Collector cut-off current	I_{CEX}	$V_{CE}=30\text{V}, V_{EB(off)}=3\text{V}$		10	nA
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$		10	nA

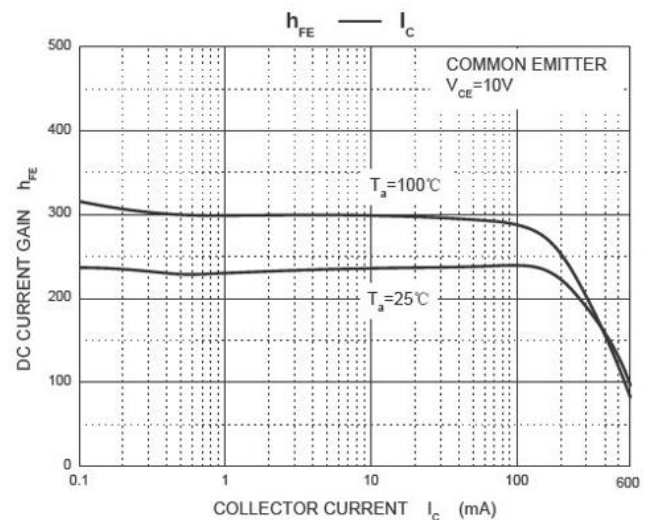
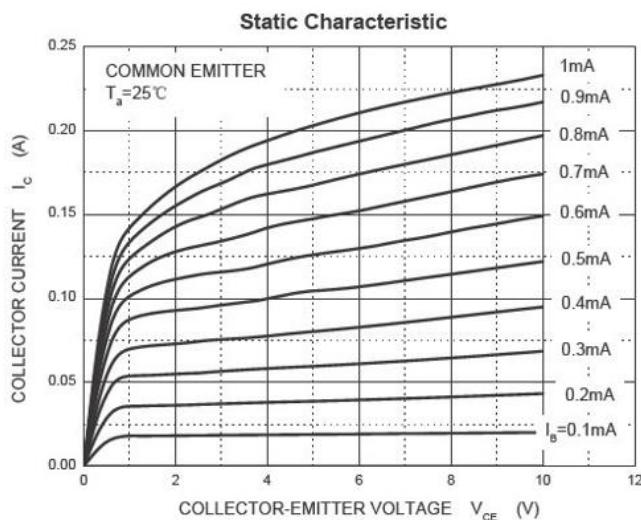
Emitter cut-off current	I_{EBO}	$V_{EB}=3V, I_C=0$		100	nA
DC current gain	$h_{FE(1)*}$	$V_{CE}=10V, I_C=150mA$	100	300	
	$h_{FE(2)*}$	$V_{CE}=10V, I_C=0.1mA$	40		
	$h_{FE(3)*}$	$V_{CE}=10V, I_C=500mA$	42		
Collector-emitter saturation voltage	$V_{CE(sat)1*}$	$I_C=500mA, I_B=50mA$		1.00	V
	$V_{CE(sat)2*}$	$I_C=150mA, I_B=15mA$		0.30	V
Base -emitter saturation voltage	$V_{BE(sat)1*}$	$I_C=500mA, I_B=50mA$		2.00	V
	$V_{BE(sat)2*}$	$I_C=150mA, I_B=15mA$		1.2.0	V
Transition frequency	f_T	$V_{CE}=20V, I_C=20mA, f=100MHz$	300		MHz
Delay time	t_d	$V_{CC}=30V, V_{BE(off)}=-0.5V, I_C=150mA, I_{B1}=15mA$		10	nS
Rise time	t_r			25	nS
Storage time	t_s	$V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA$		225	nS
Fall time	t_f			60	nS

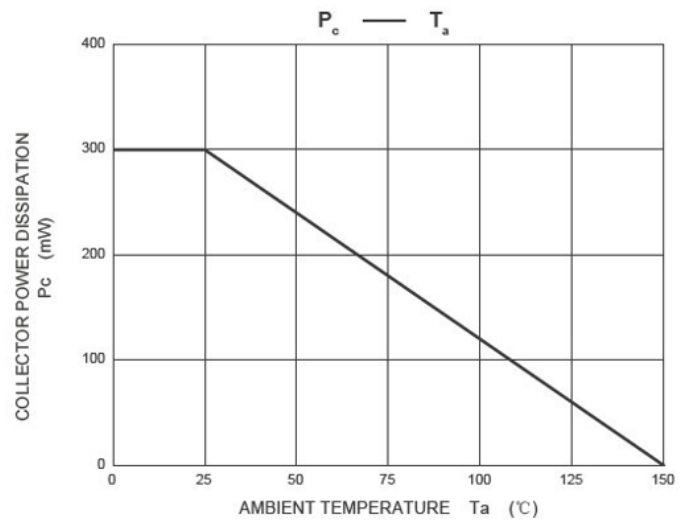
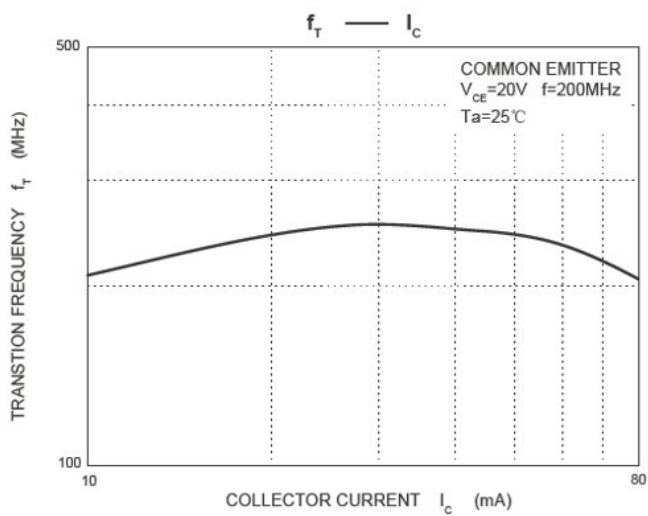
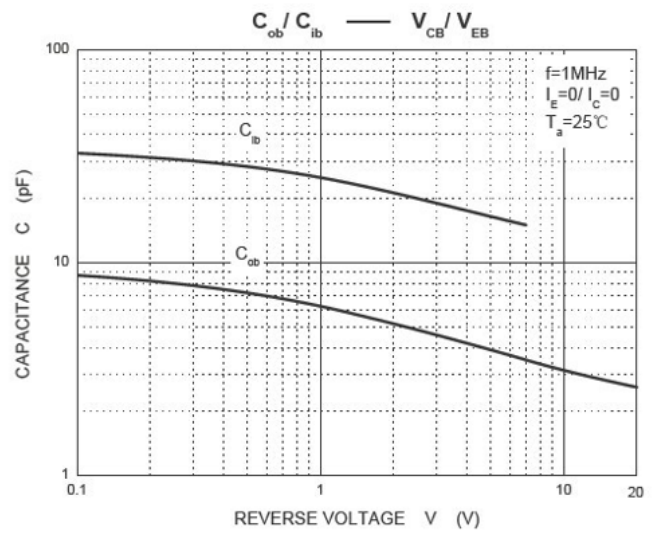
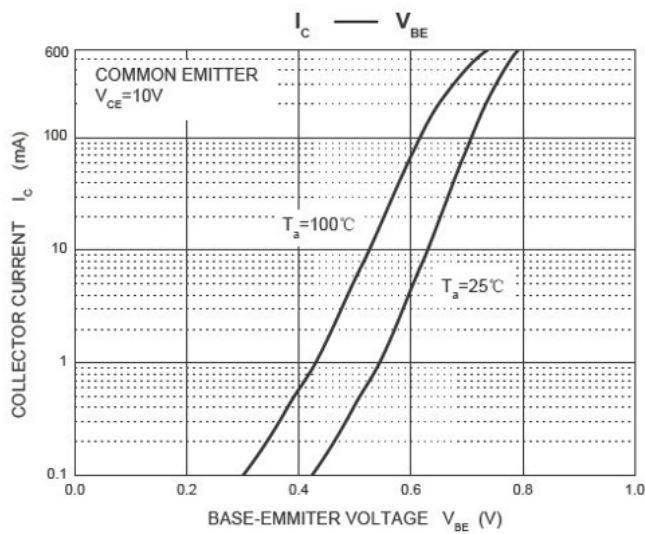
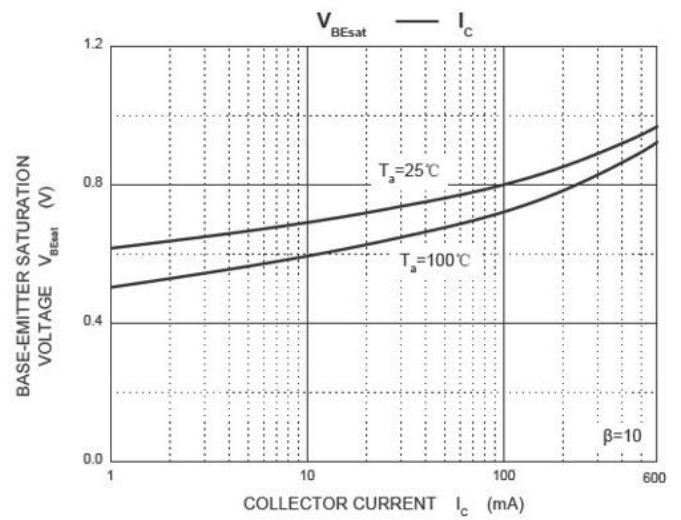
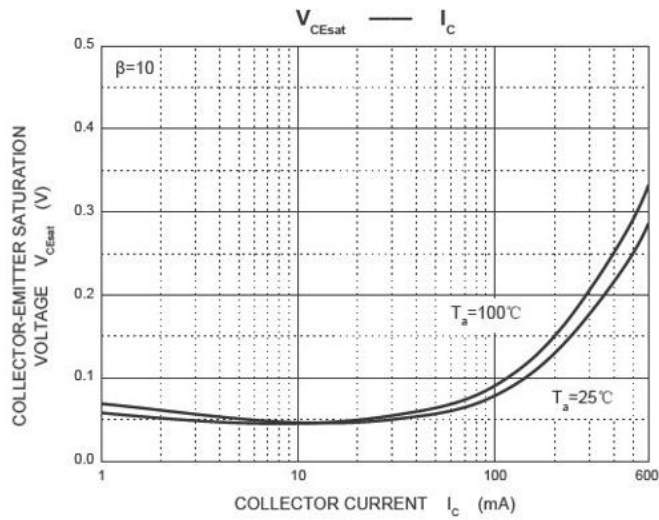
*Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2.0\%$.

CLASSIFICATION OF $h_{FE(1)}$

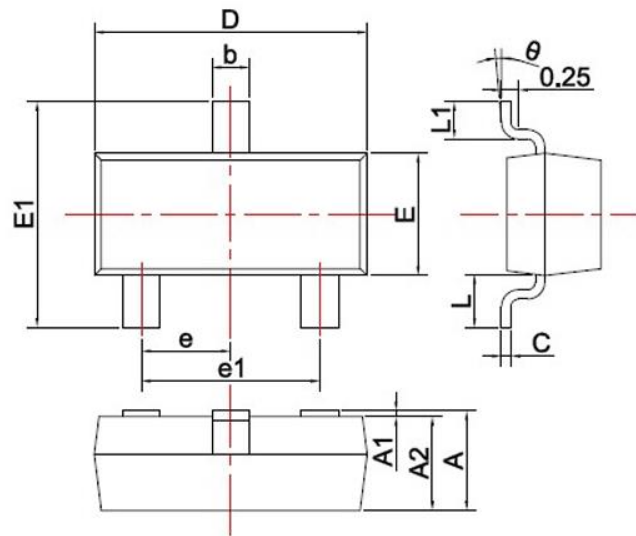
HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

Typical Performance Characteristics ($T_A=25^\circ C$ unless otherwise Specified)





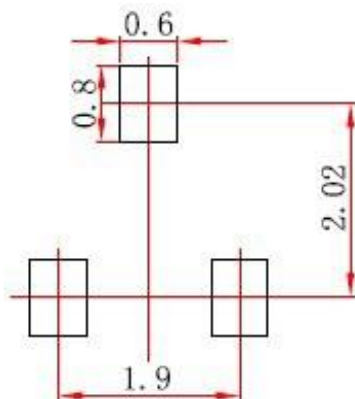
SOT-23 Package Outline Drawing



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

Suggested Land Pattern



Note:

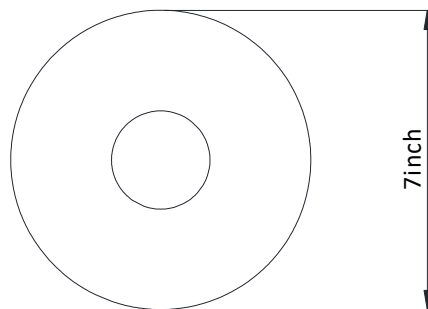
1. Controlling dimension: In millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Ordering Information

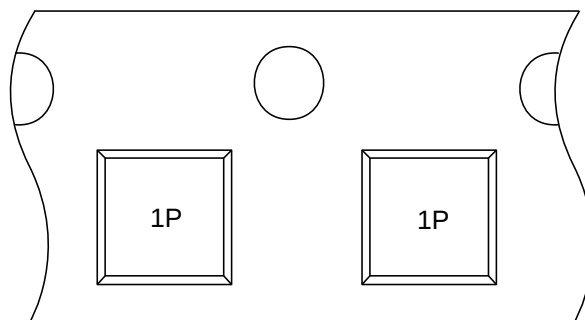
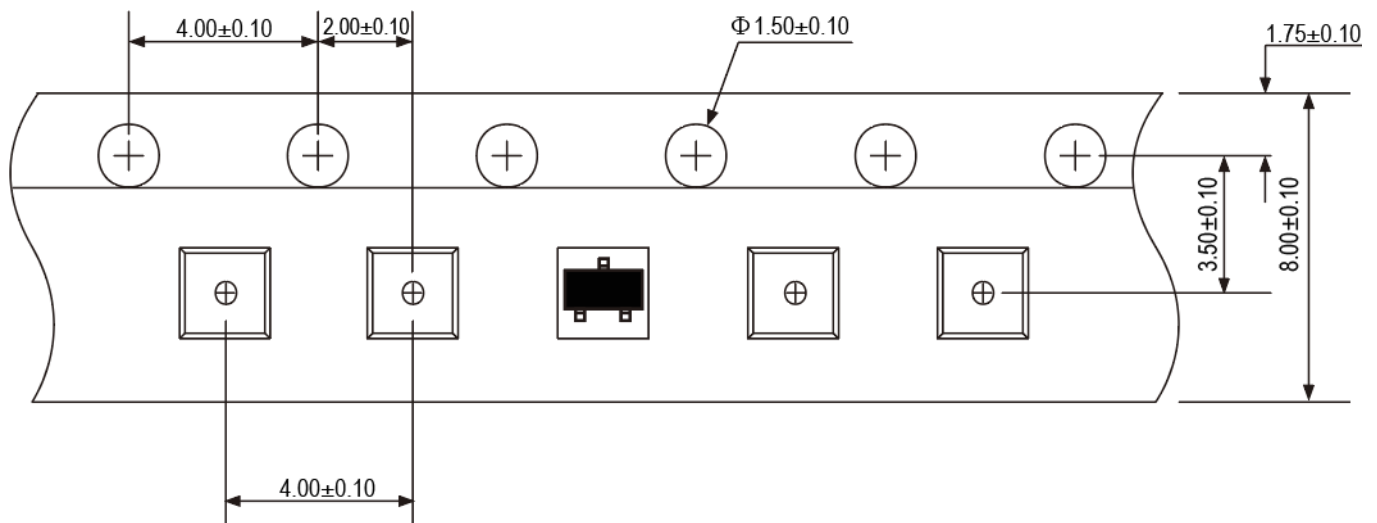
Part Number	Shipping	Reel Size
MMBT2222A	3000/Tape & Reel	7 inch

Tape and Reel Information

Reel Dimensions



Tape Dimensions



User Direction of Feed

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