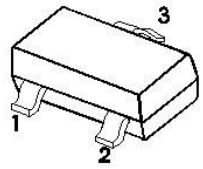
SOT-23 贴片塑封三极管

SOT-23 Plastic-Encapsulate Transistors

SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

MARKING:2X

特征 **Features**

- 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(TA = 25℃ 除非另有规定)
Maximum Ratings & Thermal Characteristics (T_A=25°C unless otherwise specified)

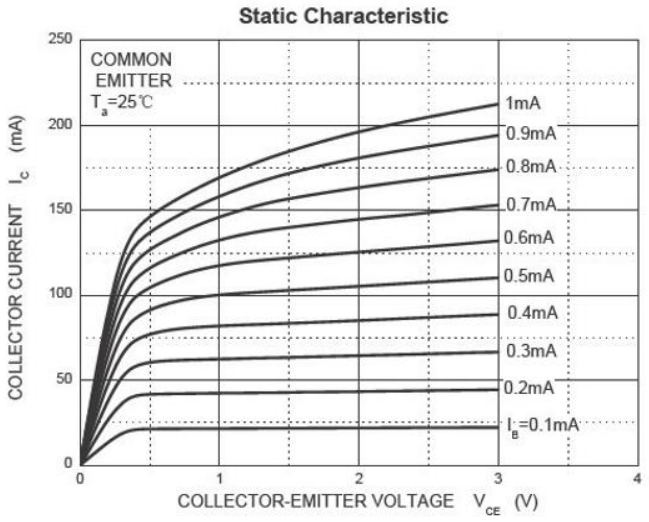
参数 **Parameters**	符号 **Symbol**	数值 **Value**	单位 **Unit**
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter -Base Voltage	V_{EBO}	6	V
Collector Current-Continuous	I_C	600	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	℃
Storage Temperature	T_{STG}	-55-+150	℃
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	℃/W

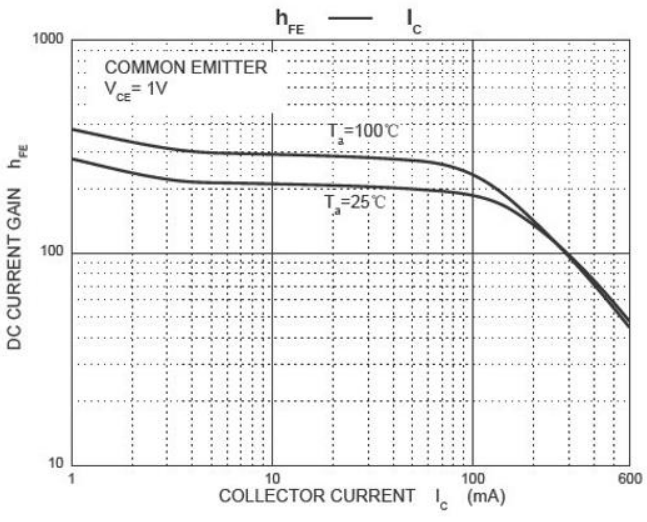
电特性 Electrical Characteristics (T_A=25°C unless otherwise specified)

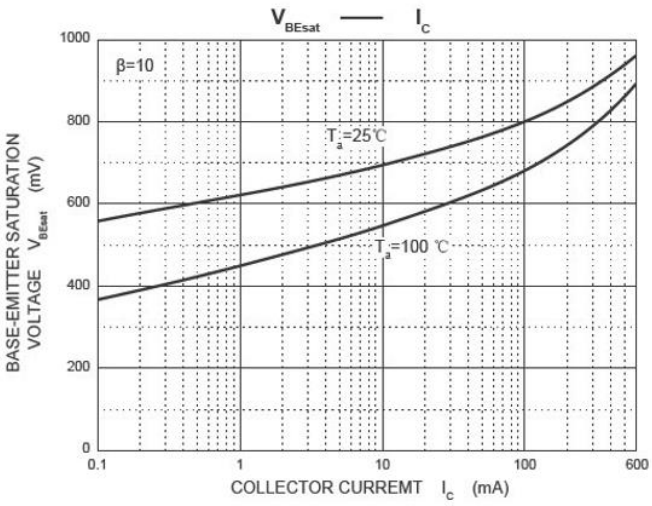
参数 **Parameter**	符号 **Symbols**	测试条件 **Test Condition**	界限 **Limits**		单位 **Unit**
			Min	**Max**	
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100uA, I_E=0	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100uA, I_C=0	6		V
Collector cut-off current	I_{CBO}	V_{CB}=50V, I_E=0		100	nA
Collector cut-off current	I_{CEX}	V_{CE}=35V, $V_{EB(off)}$=0.4V		100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0		100	nA

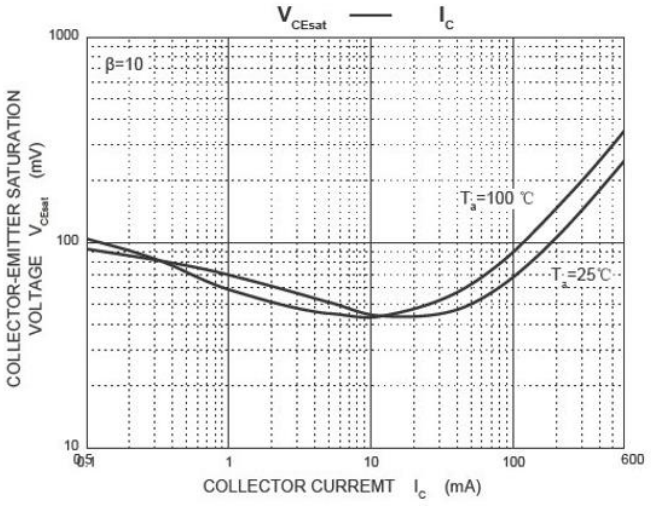
DC current gain	hFE(1)	V_{CE}=1V, I_C=0.1mA	20		
	hFE(2)	V_{CE}=1V, I_C=1mA	40		
	hFE(3)	V_{CE}=1V, I_C=10mA	80		
	hFE(4)	V_{CE}=1V, I_C=150mA	100	300	
	hFE(5)	V_{CE}=1V, I_C=500mA	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=150mA, I_B=15mA		0.40	V
		I_C=500mA, I_B=50mA		0.75	V
Base -emitter saturation voltage	$V_{BE(sat)}$	I_C=150mA, I_B=15mA		0.95	V
		I_C=500mA, I_B=50mA		1.20	V
Transition frequency	fT	V_{CE}=10V, I_C=20mA,f=100MHz	250		MHz
Delay time	td	V_{CC}=30V, $V_{BE(off)}$=-2V, I_C=150mA, I_{B1}=15mA		15	nS
Rise time	tr			20	nS
Storage time	ts	V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA		225	nS
Fall time	tf			60	nS

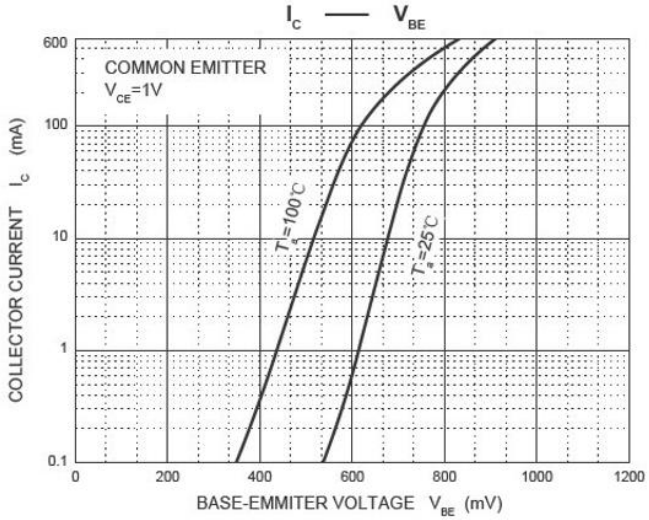
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

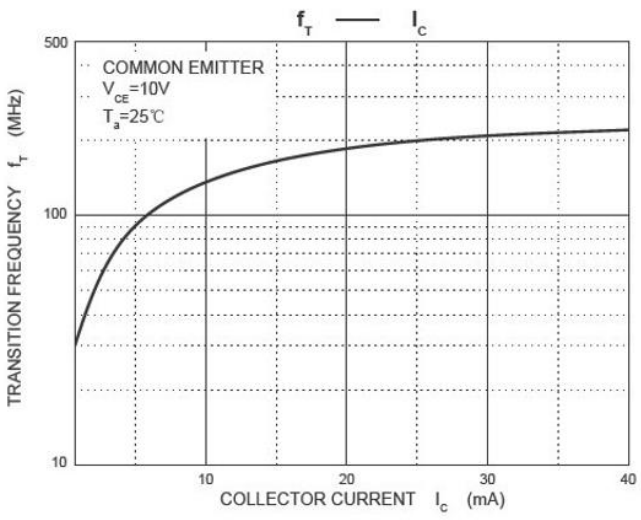


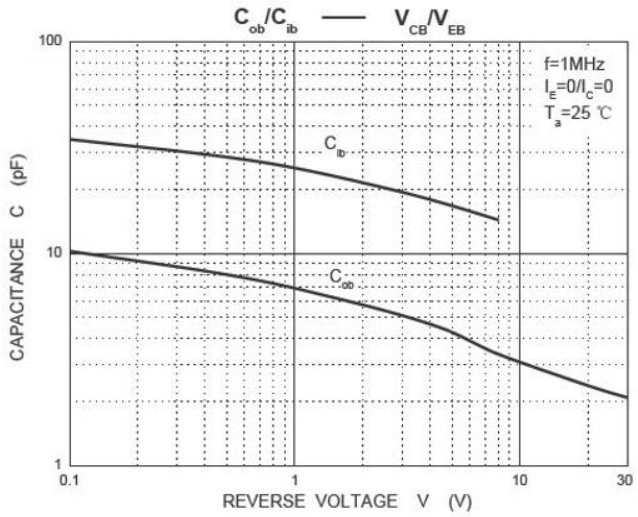


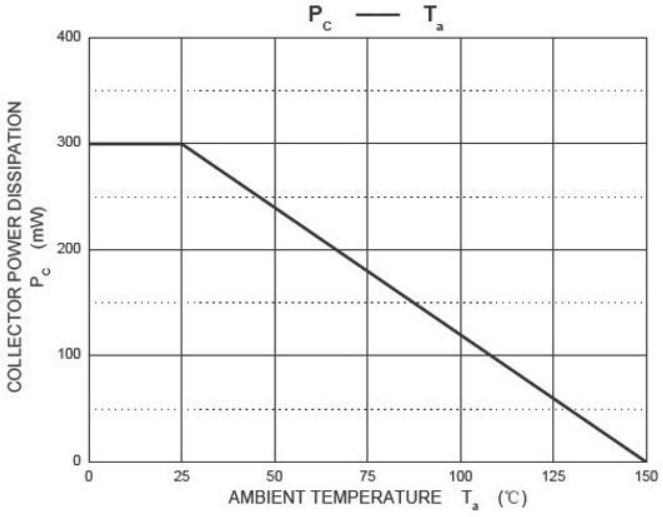




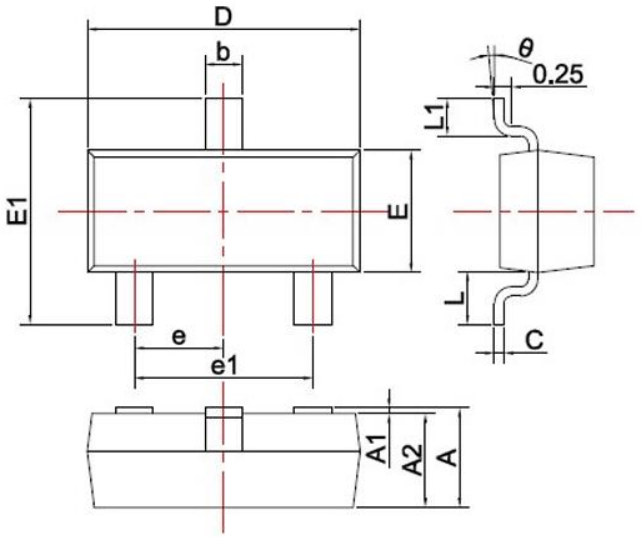








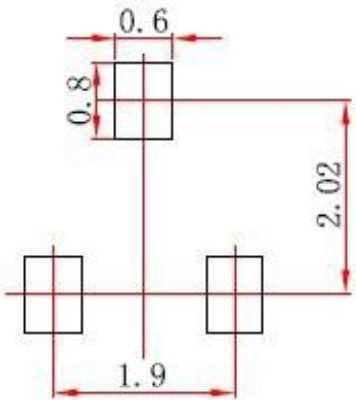
SOT-23 Package Outline Drawing



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



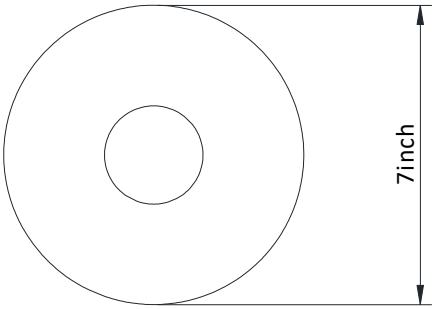
Note:
1.Controlling dimension:In millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Ordering Information

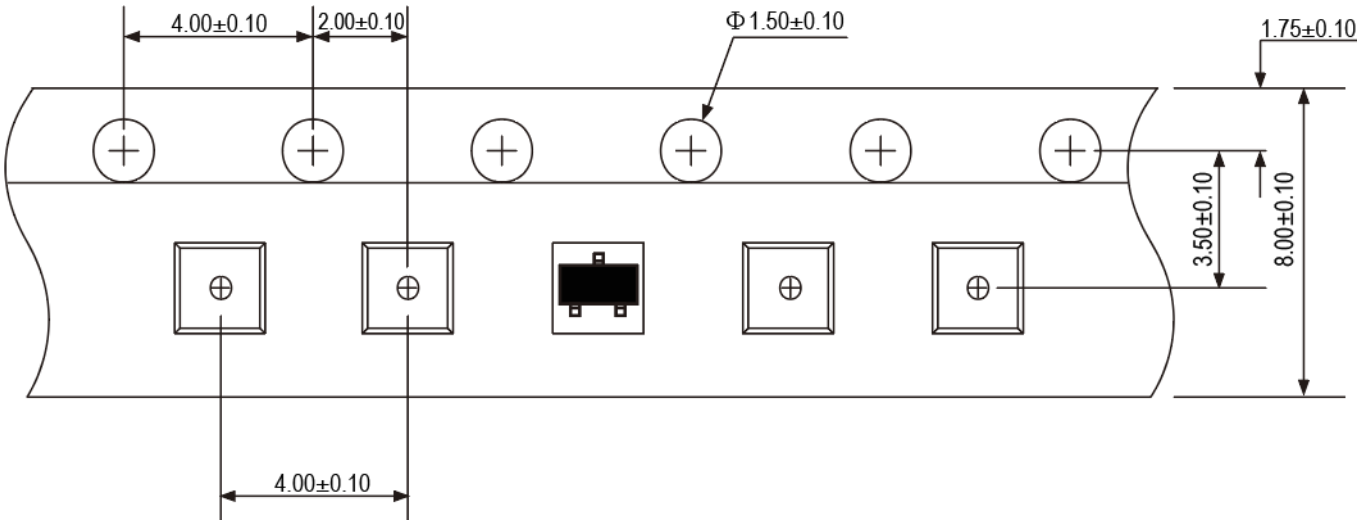
Part Number	Shipping	Reel Size
MMBT4401	3000/Tape &Reel	7 inch

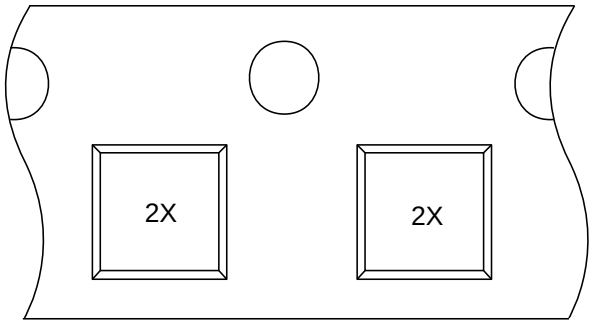
Tape and Reel Information

Reel Dimensions



Tape Dimensions





User Direction of Feed

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