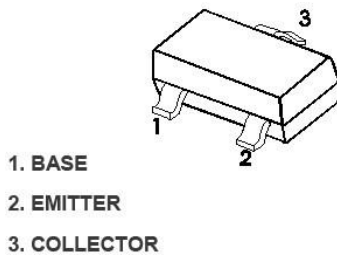


SOT-23



MARKING:2T1

特征 Features

- 与S9013配对;Complementary to S9013
- 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}	-40	V
Collector-Emitter Voltage	V_{CEO}	-25	V
Emitter -Base Voltage	V_{EB0}	-5	V
Collector Current-Continuous	I_C	-500	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	$R_{\theta JA}$	416	$^\circ\text{C/W}$

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

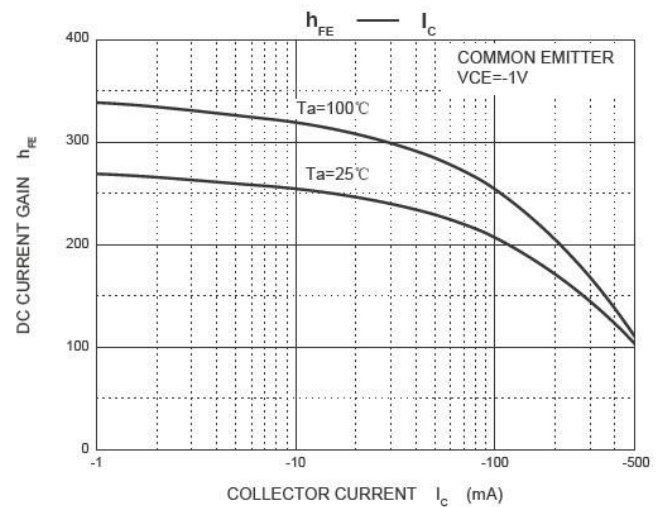
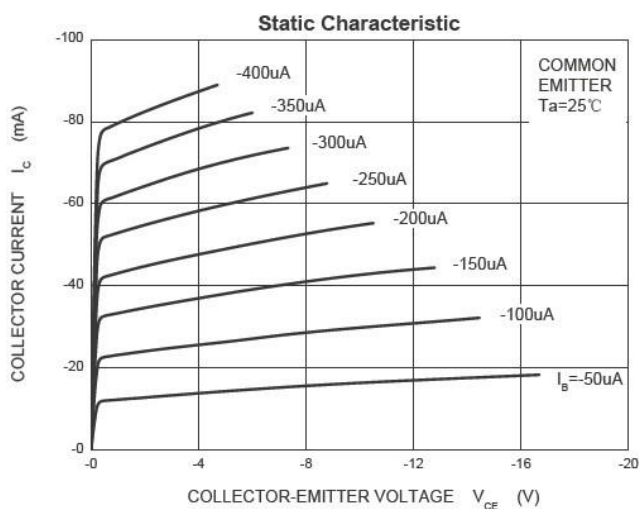
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits		单位 Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	-40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-5		V
Collector cut-off current	I_{CEO}	$V_{CE}=-20\text{V}, I_B=0$		-100	nA
Collector cut-off current	I_{CBO}	$V_{CB}=-40\text{V}, I_E=0$		-100	nA

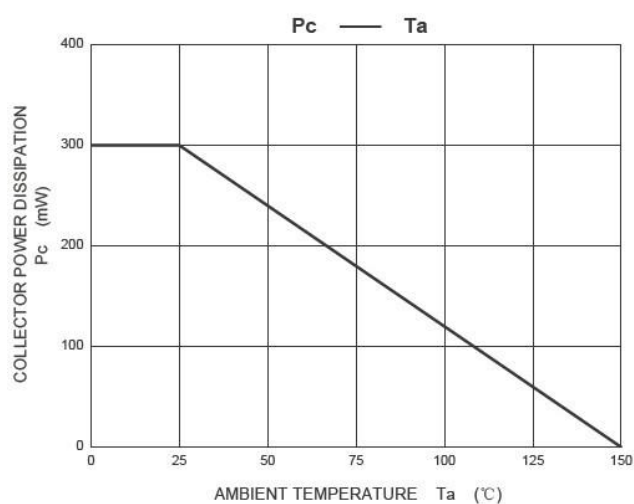
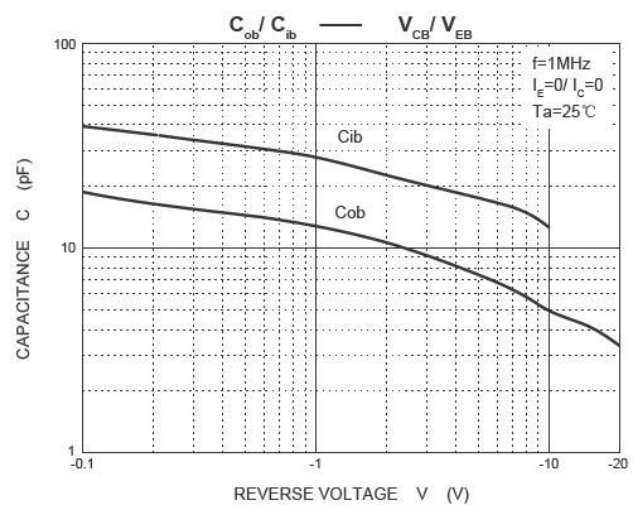
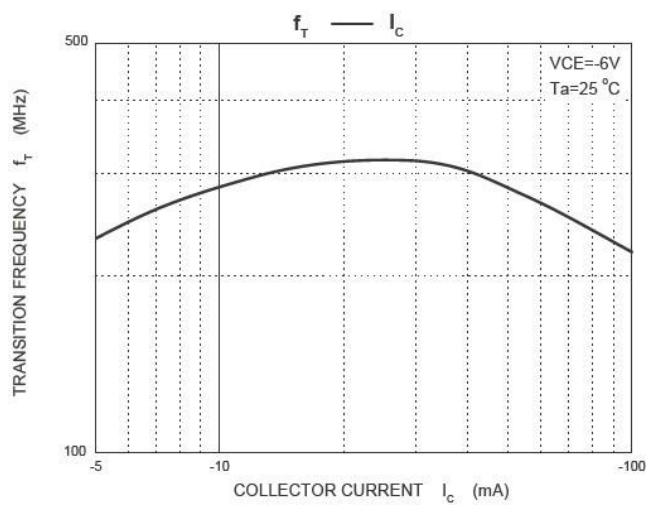
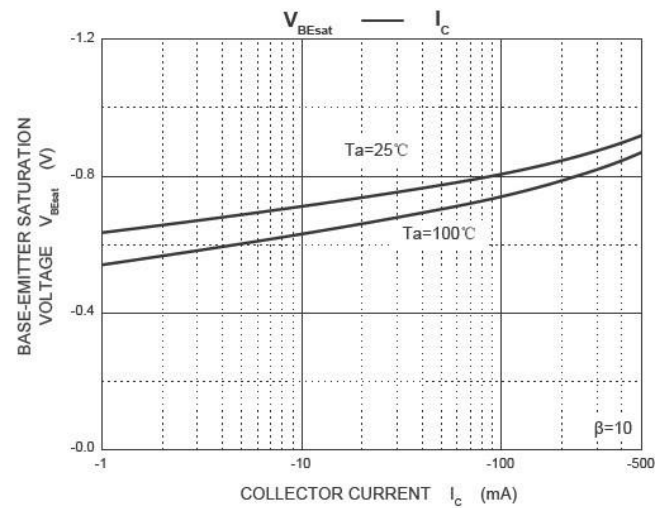
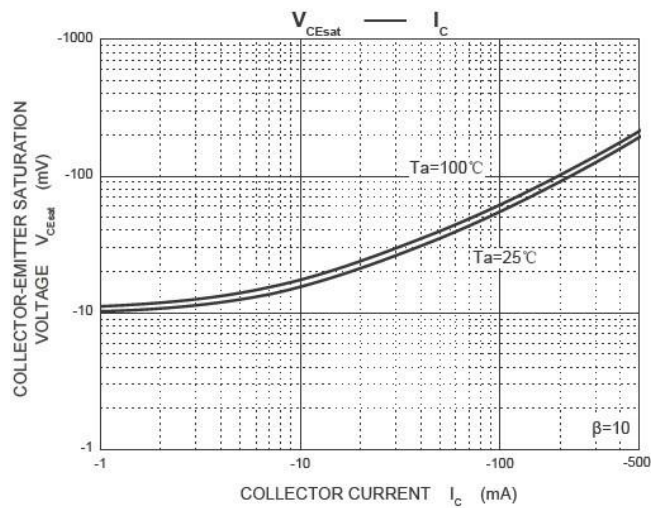
Emitter cut-off current	I_{EBO}	$V_{EB}=-5V, I_C=0$		-100	nA
DC current gain	h_{FE}	$V_{CE}=-1V, I_C=-50mA$	120	400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500mA, I_B=-50mA$		-0.60	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C=-500mA, I_B=-50mA$		-1.20	V
Transition frequency	f_T	$V_{CE}=-6V, I_C=-20mA, f=30MHz$	150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$		5	pF

CLASSIFICATION OF $h_{FE}(1)$

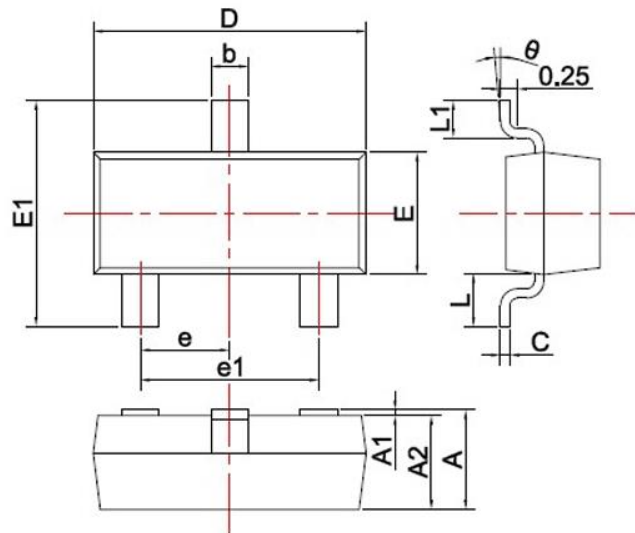
RANK	L	H	J
RANGE	120-200	200-350	300-400

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





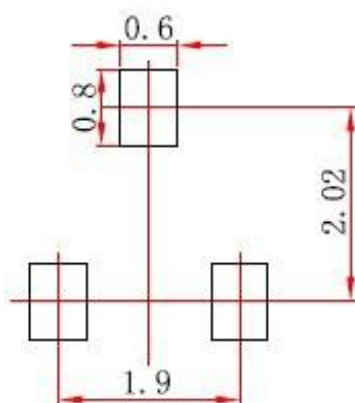
SOT-23 Package Outline Drawing



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:

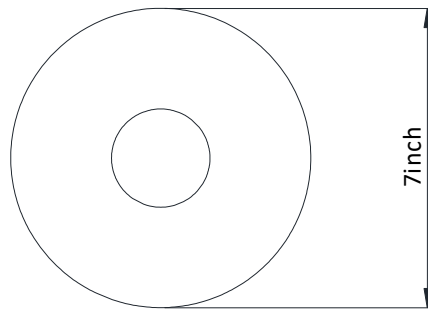
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Ordering Information

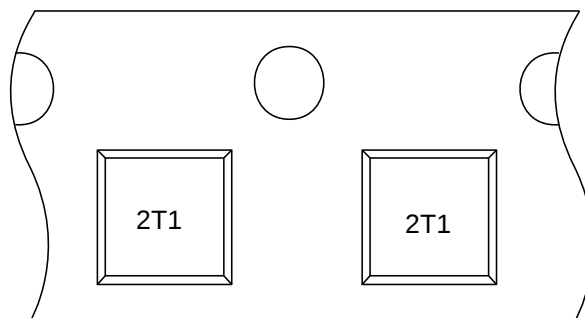
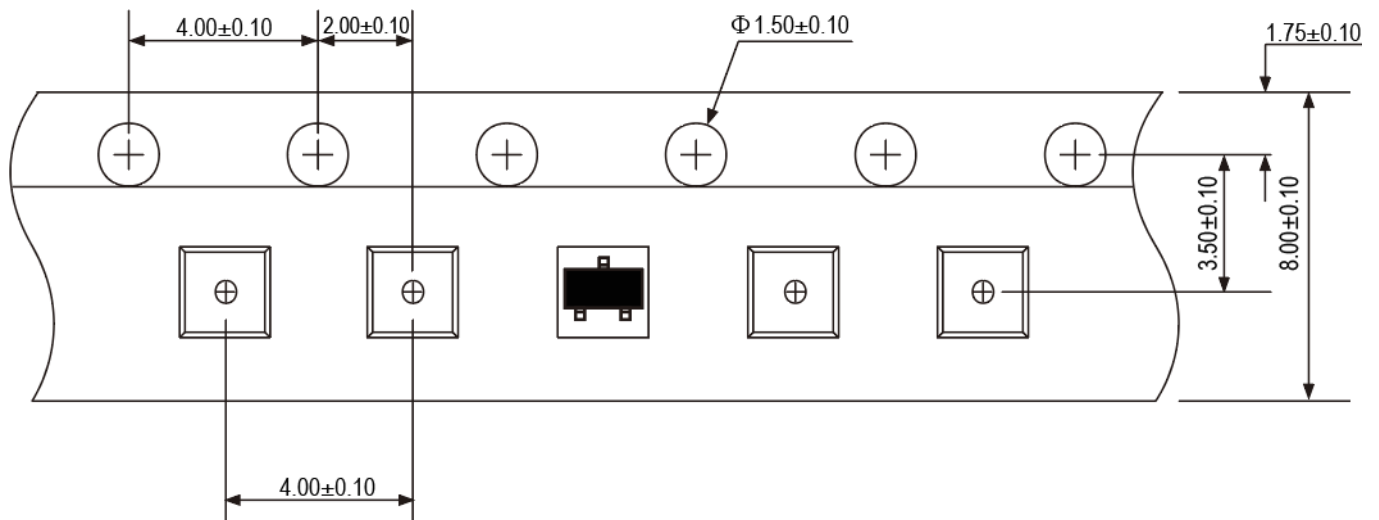
Part Number	Shipping	Reel Size
S9012	3000/Tape & Reel	7 inch

Tape and Reel Information

Reel Dimensions



Tape Dimensions



User Direction of Feed

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