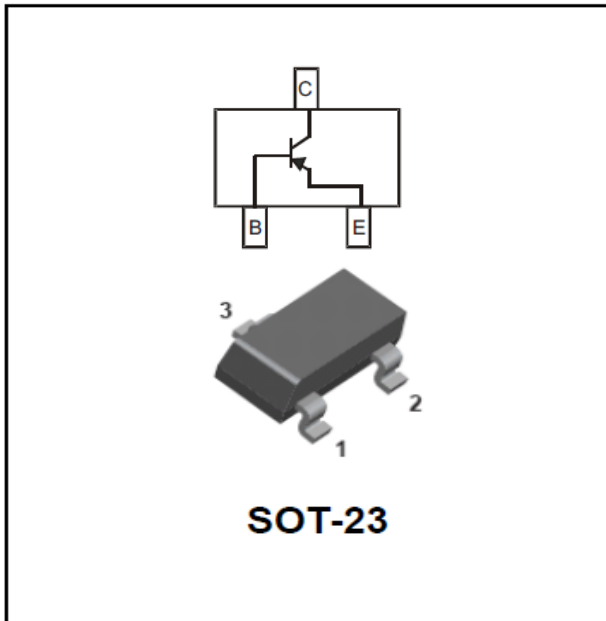


## PNP Transistor



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 2T1

### ■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	VCBO	V		-40
Collector-Emitter Voltage	VCEO	V		-25
Emitter-Base Voltage	VEBO	V		-5
Collector Current	IC	mA		-500
Total Device Dissipation	PC	mW		300
Thermal Resistance Junction to Ambient	RTHJA	°C/W		416
Junction Temperature	Tj	°C		150
Storage Temperature	TSTG	°C		-55 to +150

### ■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	V	I <sub>C</sub> =-0.1mA, I <sub>E</sub> =0	-40		
Collector-emitter breakdown voltage	V <sub>(BR)CEO*</sub>	V	I <sub>C</sub> = -1mA, I <sub>B</sub> =0	-25		
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	V	I <sub>E</sub> =-0.1mA, I <sub>C</sub> =0	-5		
Collector cut-off current	I <sub>CBO</sub>	uA	V <sub>CB</sub> =-40V, I <sub>E</sub> =0			-0.1
Collector cut-off current	I <sub>CEO</sub>	uA	V <sub>CE</sub> =-20V, I <sub>B</sub> =0			-0.1
Emitter cut-off current	I <sub>EBO</sub>	uA	V <sub>EB</sub> =-5V, I <sub>C</sub> =0			-0.1
DC current gain	h <sub>FE</sub>	V	V <sub>CE</sub> =1V, I <sub>C</sub> =-50mA	120		400
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	V	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA			-0.6
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	V	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA			-1.2
Transition frequency	f <sub>T</sub>	MHz	V <sub>CE</sub> =-6V, I <sub>C</sub> =-20mA, f=30MHz	150		



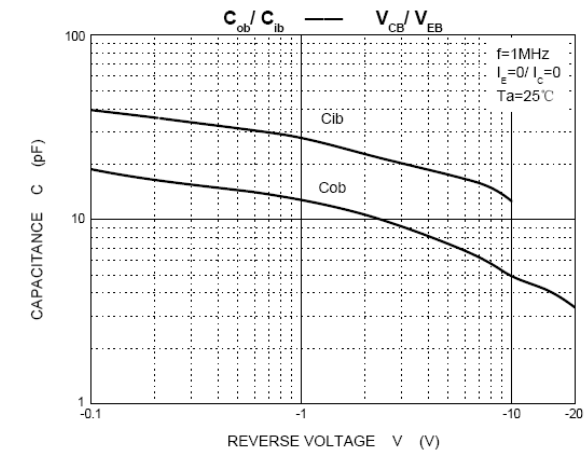
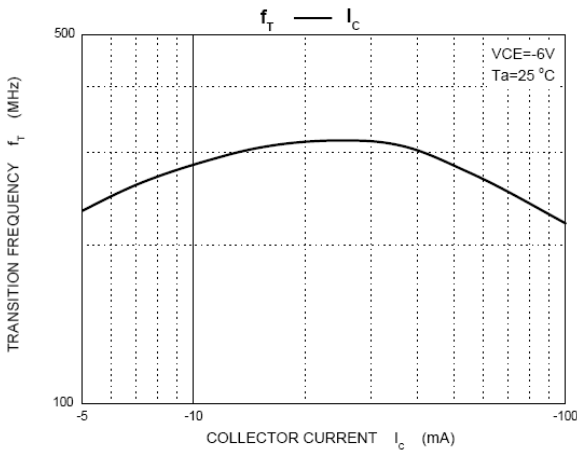
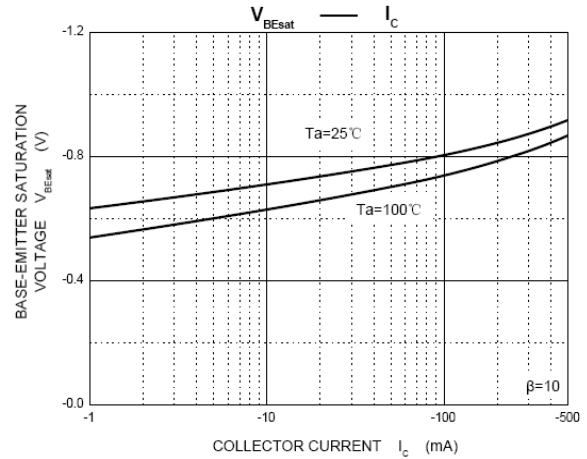
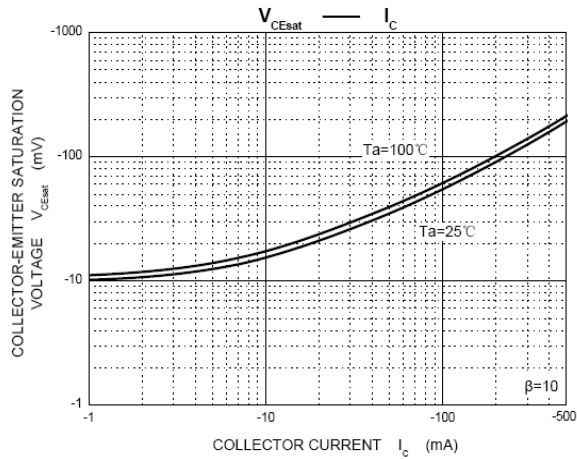
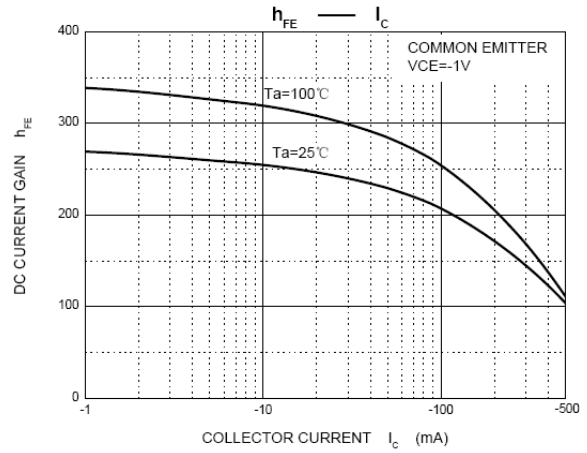
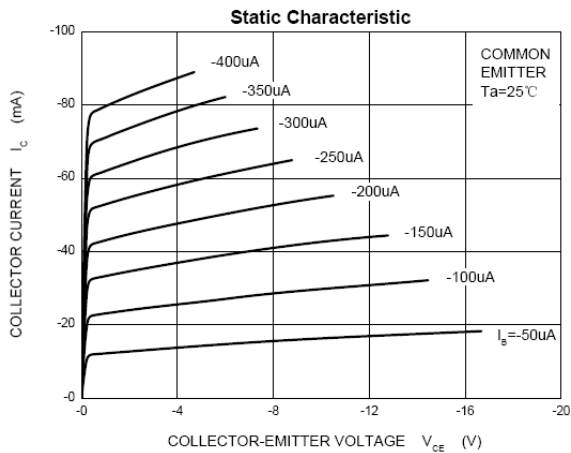
■ CLASSIFICATION OF HFE (1)

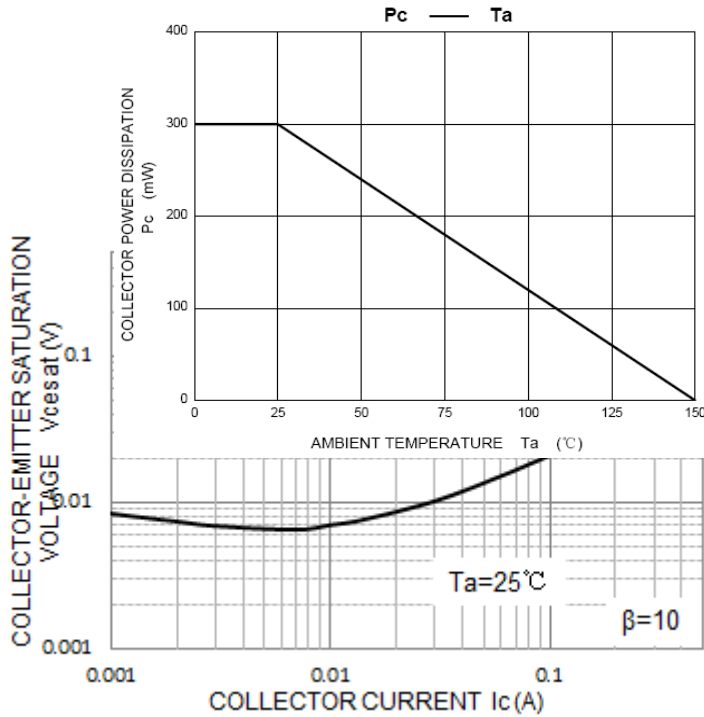
RANK	L	H	J
RANGE	120-200	200-350	300-400

■ Ordering Information (Example)

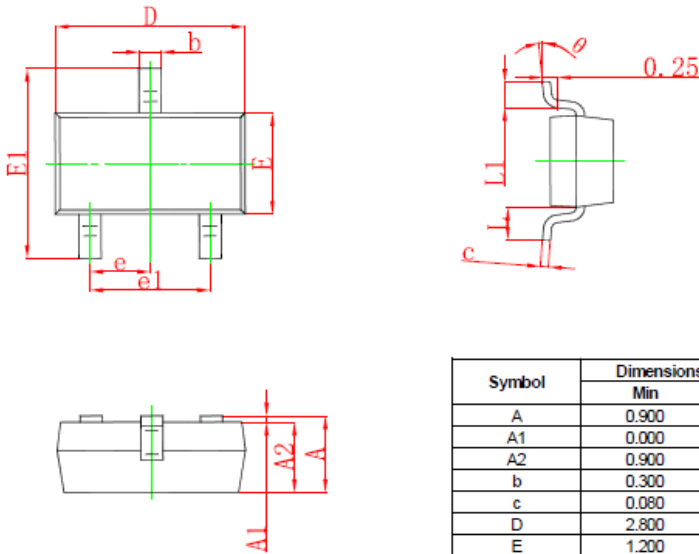
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S9012	F2	Approximate 0.008	3000	30000	120000	7" reel

■ Characteristics (Typical)

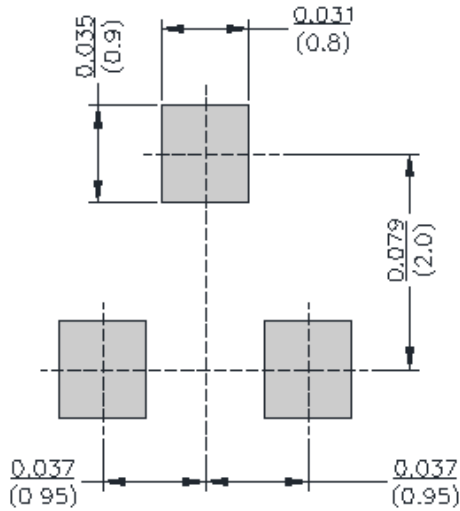




### ■ SOT-23 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
$\theta$	0°	8°	0°	8°

**■ SOT-23 Suggested Pad Layout****Disclaimer**

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.