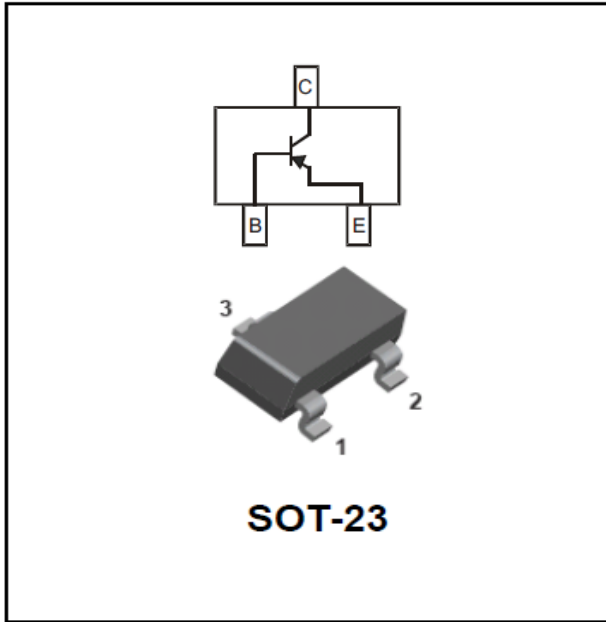


## PNP Transistor



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Marking: 2T1

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

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	$V_{CB0}$	V		-40
Collector-Emitter Voltage	$V_{CE0}$	V		-25
Emitter-Base Voltage	$V_{EB0}$	V		-5
Collector Current	$I_c$	mA		-500
Collector Power Dissipation	$P_c$	mW		300
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W		416
Operation Junction Temperature	$T_j$	°C		150
Storage Temperature	$T_{stg}$	°C		-55 to +150

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

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{CB0}$	V	$I_c = -0.1mA, I_E = 0$	-40		
Collector-emitter breakdown voltage	$V_{CE0}$	V	$I_c = -1mA, I_B = 0$	-25		
Emitter-base breakdown voltage	$V_{EB0}$	V	$I_E = -0.1mA, I_c = 0$	-5		
Collector-Base cut-off current	$I_{CB0}$	uA	$V_{CB} = -40V, I_E = 0$			-0.1
Collector-Emitter cut-off current	$I_{CE0}$	uA	$V_{CE} = -20V, I_B = 0$			-0.1
Emitter-Base cut-off current	$I_{EB0}$	uA	$V_{EB} = -5V, I_c = 0$			-0.1
DC current gain	$h_{FE}$	V	$V_{CE} = -1V, I_c = -50mA$	120		400
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_c = -500mA, I_B = -50mA$			-0.6
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_c = -500mA, I_B = -50mA$			-1.2
Transition frequency	$f_T$	MHz	$V_{CE} = -6V, I_c = -20mA, f = 30MHz$	150		



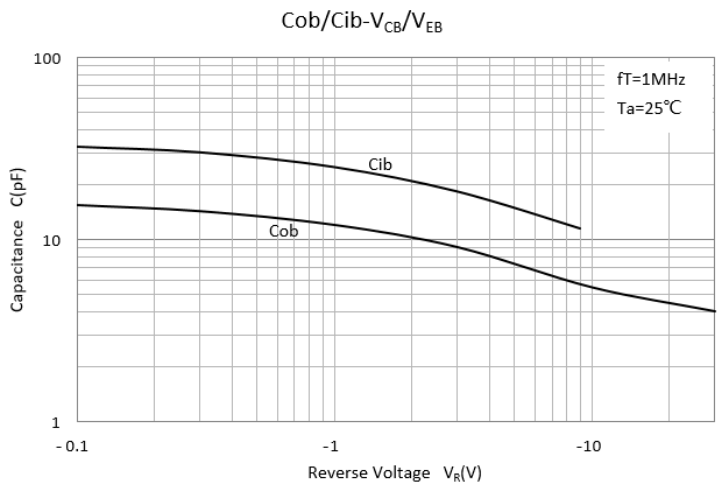
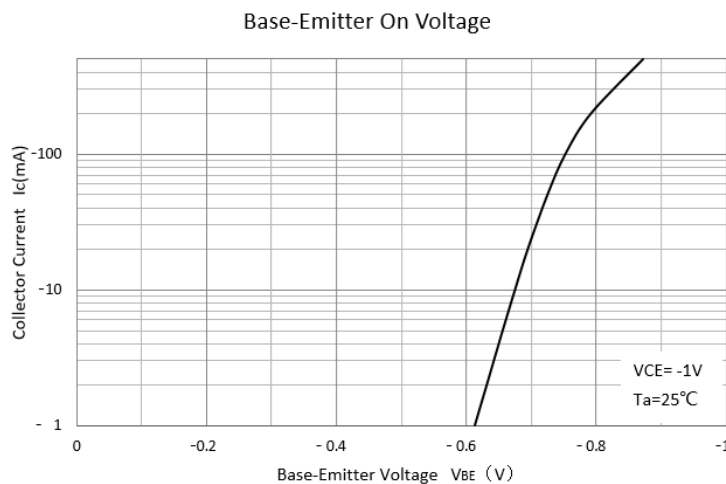
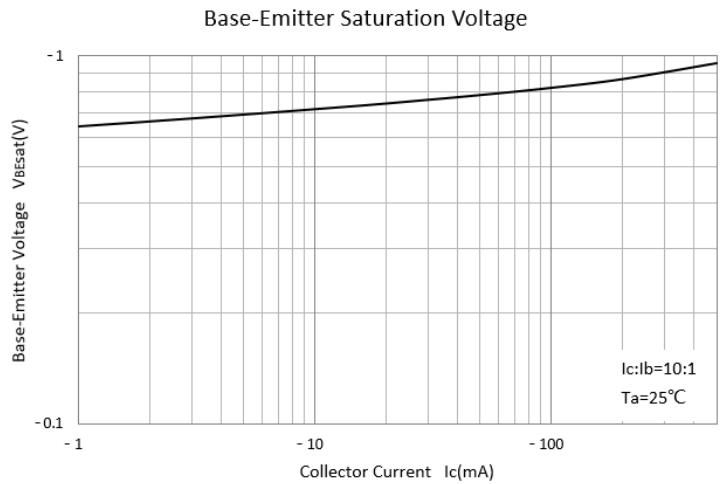
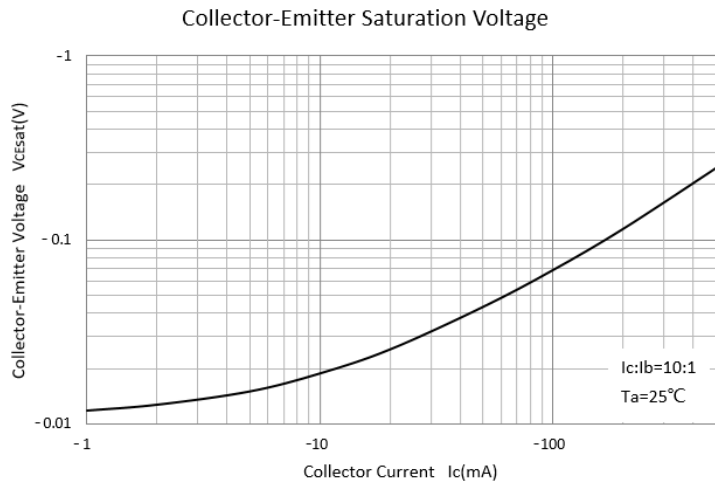
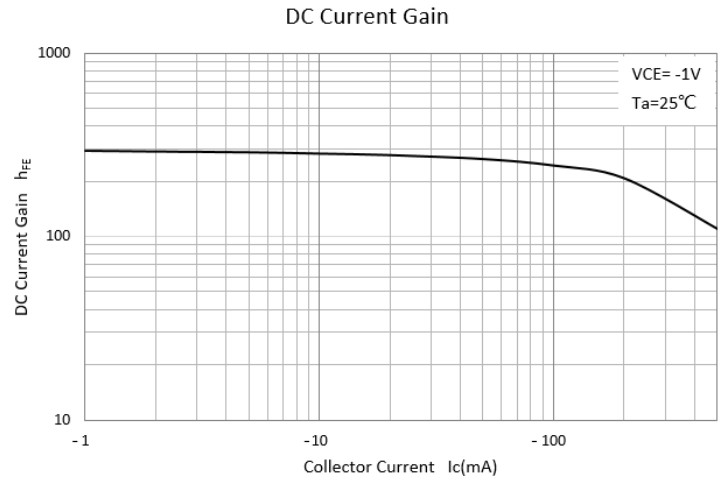
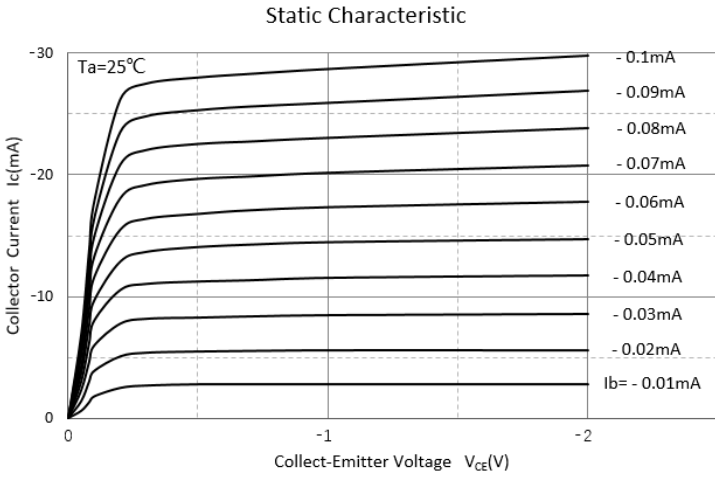
■ CLASSIFICATION OF HFE (1)

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

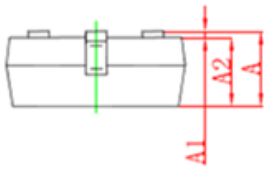
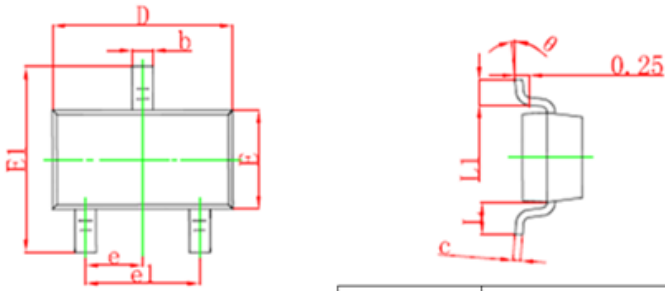
■ Ordering Information (Example)

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)

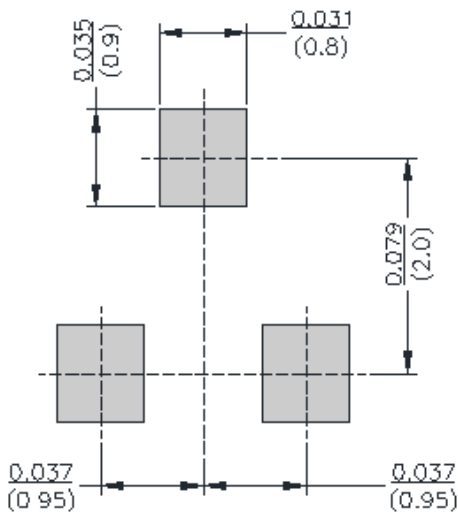


## ■SOT-23 Package Outline Dimensions



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	0.100	0.200	0.004	0.008
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	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
theta	0°	8°	0°	8°

## ■SOT-23 Soldering Footprint





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