



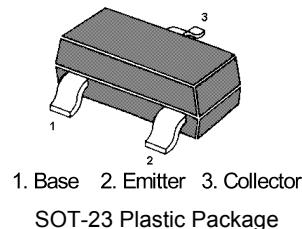
S9012

PNP Silicon Epitaxial Planar Transistors

for switching and amplifier applications.

FEATURES

- High Collector Current.
- Complementary to S9013.
- Excellent h_{FE} Linearity.



MARKING: 2T1

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-40	V
Collector Emitter Voltage	V_{CEO}	-25	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-500	mA
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Thermal Temperature From Junction To Ambient	$R_{\Theta JA}$	416	$^\circ\text{C/W}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

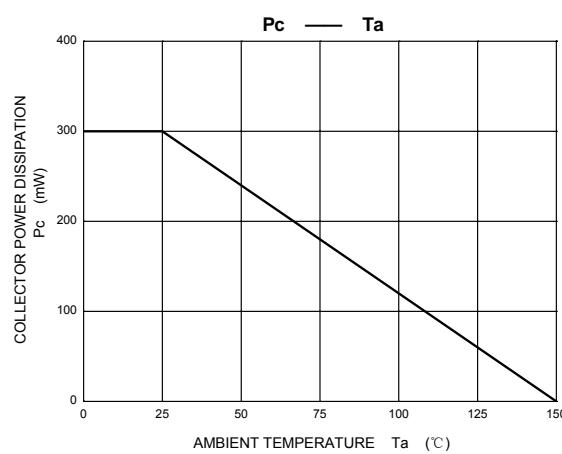
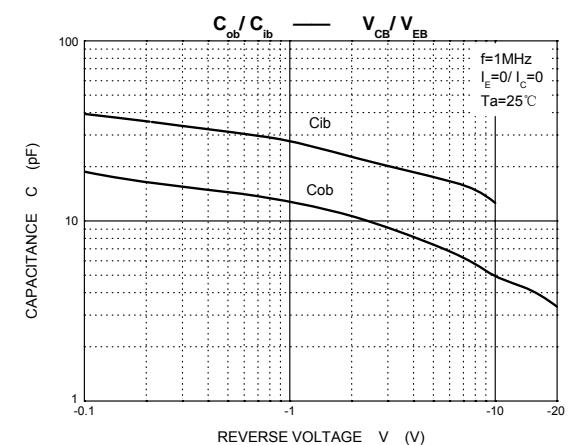
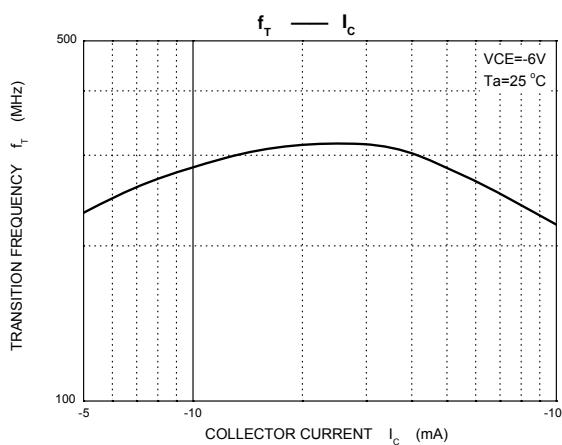
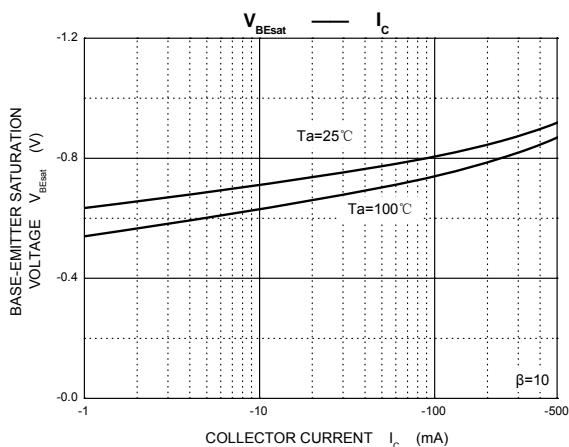
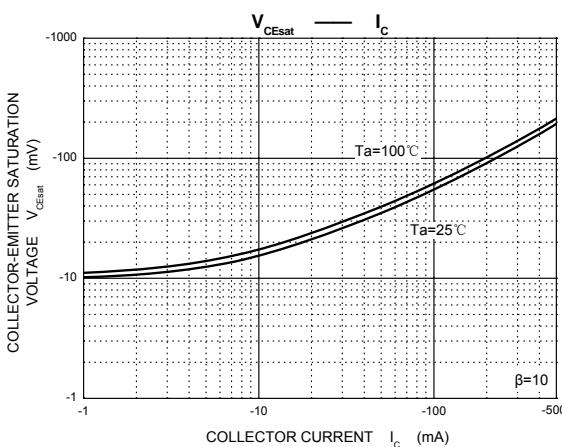
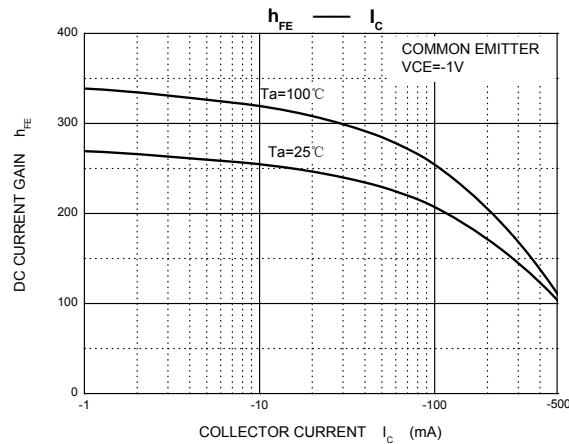
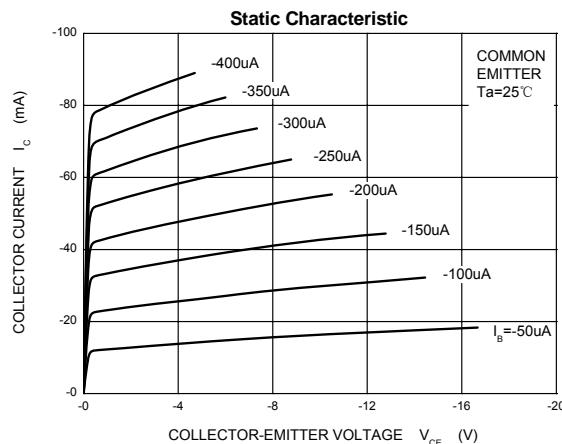
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-0.1\text{mA}, I_E=0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-0.1\text{mA}, I_E=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-40\text{V}, I_E=0$			-0.1	uA
Collector cut-off current	I_{CEO}	$V_{CE}=-20\text{V}, I_B=0$			-0.1	uA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-0.1	uA
DC current gain	$h_{FE(1)}$	$V_{CE}=-1\text{V}, I_C=50\text{mA}$	120		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-1.2	V
Transition frequency	f_T	$V_{CE}=-6\text{V}, I_C=-20\text{mA}, f=30\text{MHz}$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$			5	pF

CLASSIFICATION OF $h_{FE(1)}$

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



Typical Characteristics



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