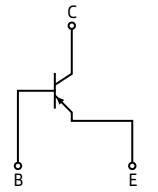


Features

- Collector current $I_C = -0.5A$.
- Excellent h_{FE} Linearity.
- Complementary to S9013.



SOT23



Equivalent Circuit

Absolute Maximum Ratings($T_A = 25^\circ C$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-25	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.5	A
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	400	$^\circ C/W$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	$^\circ C/W$

Electrical Characteristics ($T_A = 25^\circ C$ unless otherwise specified)

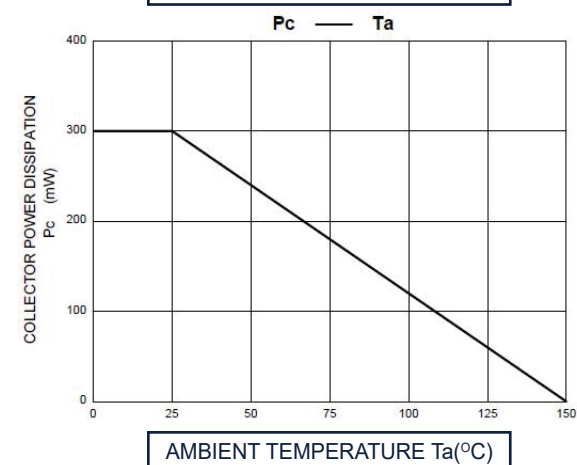
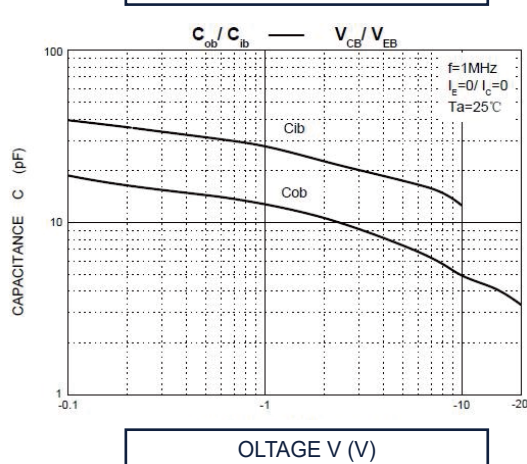
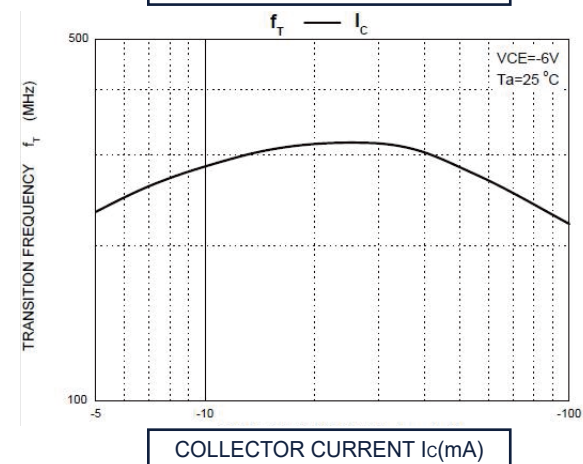
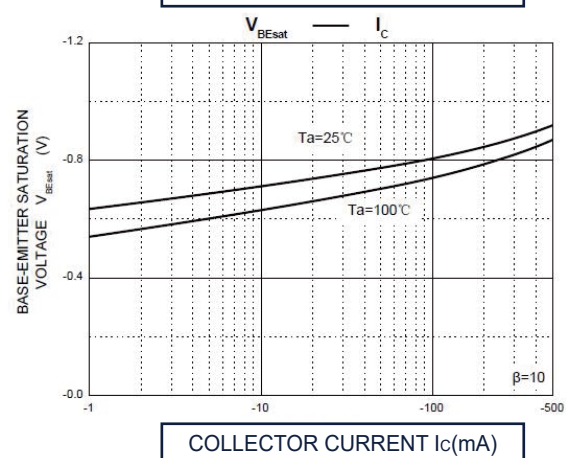
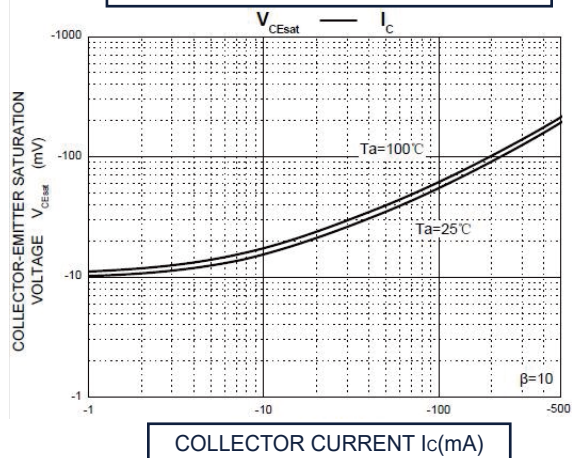
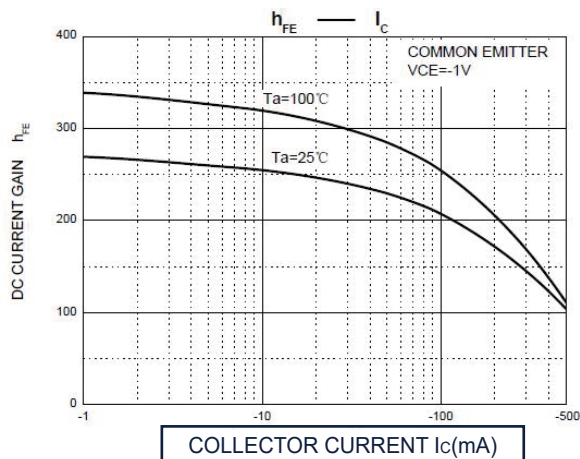
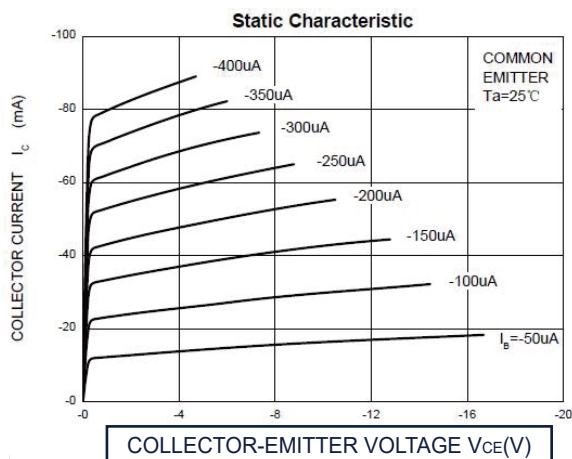
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = 100\mu A, I_E = 0$	-40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -0.1mA, I_B = 0$	-25			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -100\mu A, I_C = 0$	-5			V
I_{CEO}	Collector cut-off current	$V_{CE} = -20V, I_E = 0$			-100	nA
I_{CBO}	Collector cut-off current	$V_{CB} = -40V, I_E = 0$			-100	nA
I_{EBO}	Emitter cut-off current	$V_{EB} = -5V, I_C = 0$			-100	nA
$h_{FE(1)}$	DC current gain(1)	$V_{CE} = -1V, I_C = -50mA$	200		350	
$h_{FE(2)}$	DC current gain(2)	$V_{CE} = -1V, I_C = -500mA$	50			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -500mA, I_B = -50mA$			-0.6	V
$V_{BE(sat)}$	Base-emitter saturation voltage				-1.2	V
f_T	Transition frequency	$V_{CE} = -6V, I_C = -20mA, f = 30MHz$	150			MHz
C_{ob}	Collector output capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$			5	pF

Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE(1)}$	Qty(PCS)
S9012	SOT23	S9012 ↓ 产品名称 product name	2T1	200 ~ 350	3000



Typical Characteristics





SOT23 Package Outline Dimensions



Symbol	Dimensions in Millimeters	
	mm	
	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°