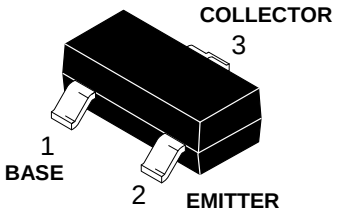
TRANSISTOR (PNP)

FEATURES

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



SOT-23 (Top View)

MARKING : 2T1

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

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	-500	mA
P_C	Collector Power Dissipation	300	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	416	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

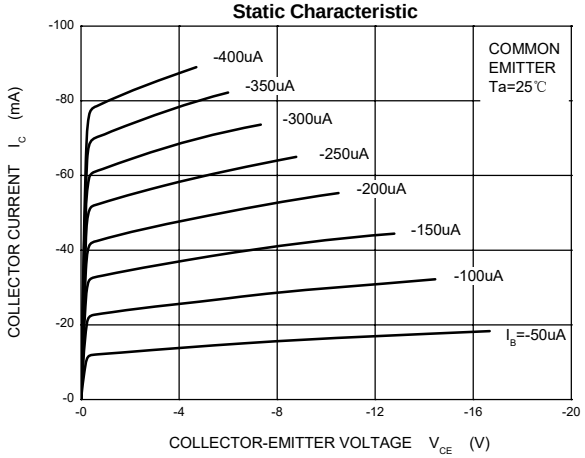
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-0.1mA, I_E=0	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA, I_B=0	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-0.1mA, I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-40V, I_E=0			-0.1	uA
Collector cut-off current	I_{CEO}	V_{CE}=-20V, I_B=0			-0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0			-0.1	uA
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			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-500mA, I_B=-50mA			-1.2	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

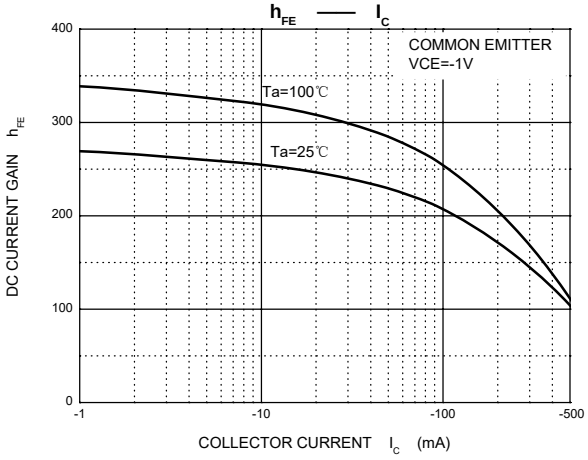
CLASSIFICATION OF h_{FE}

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

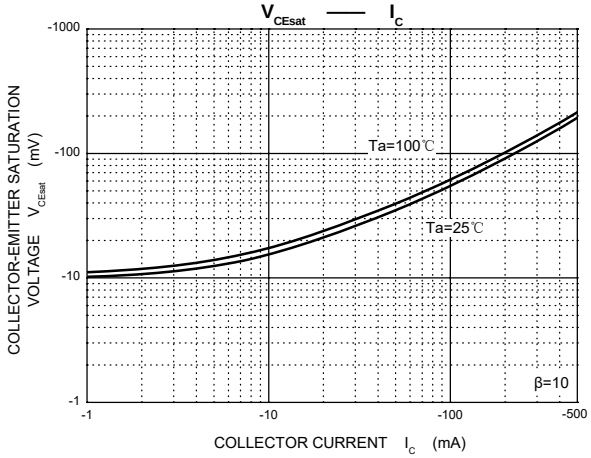
Static Characteristic



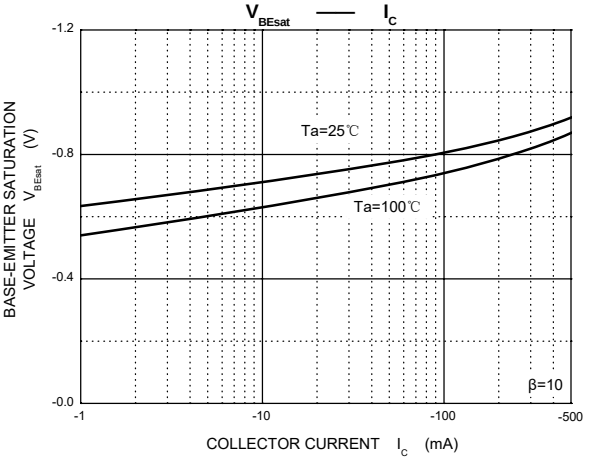
h_{FE} —— I_C



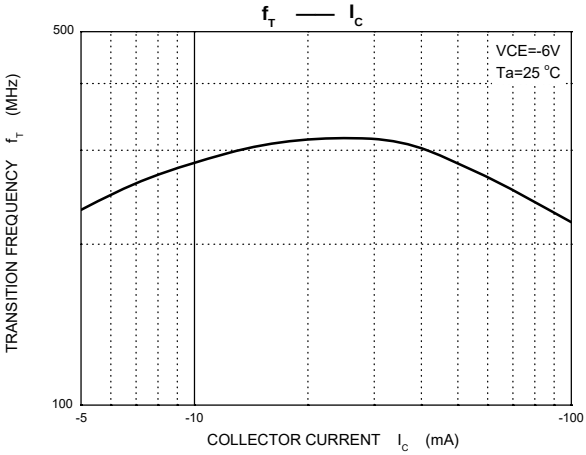
V_{CEsat} —— I_C



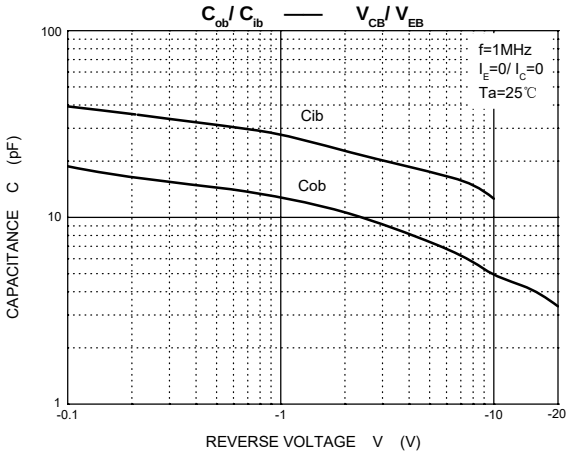
V_{BEsat} —— I_C



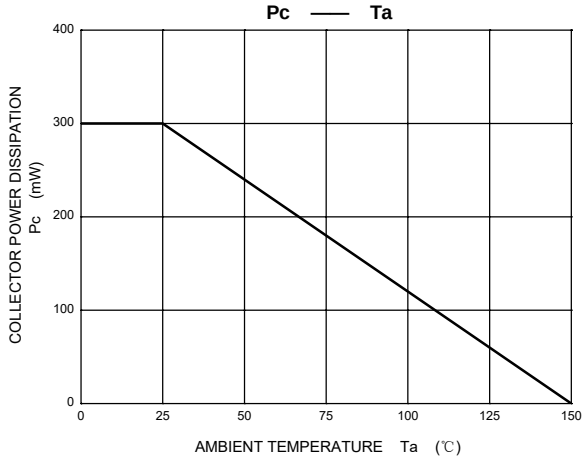
f_T —— I_C



C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}

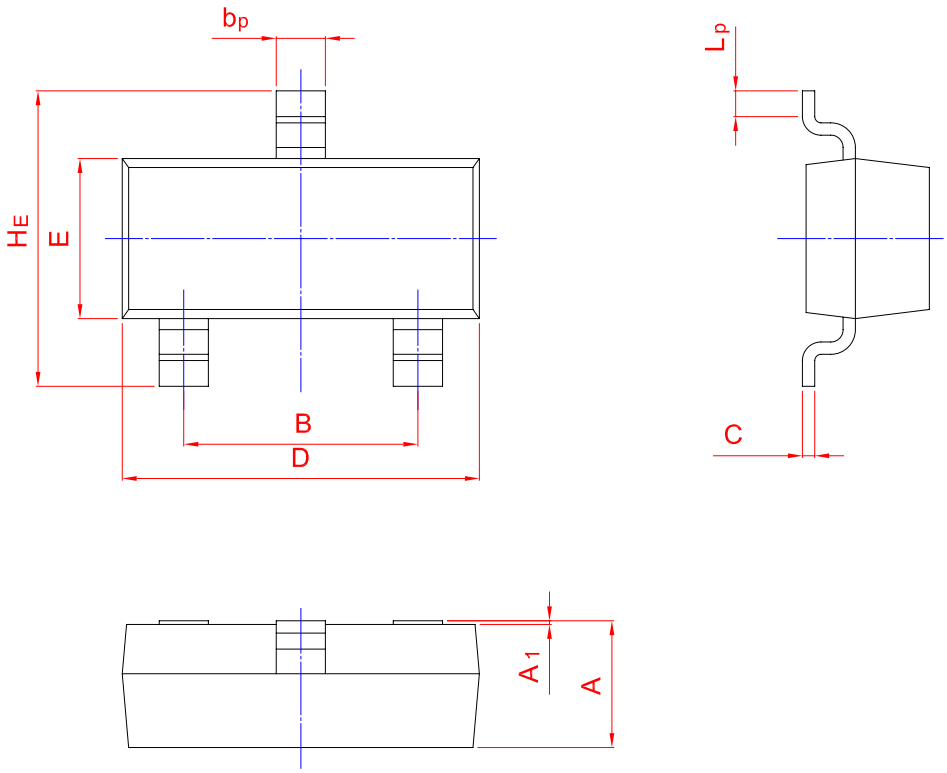


Pc —— Ta



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20