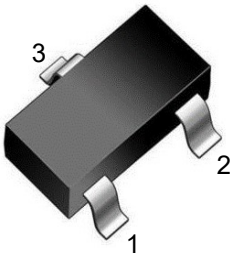
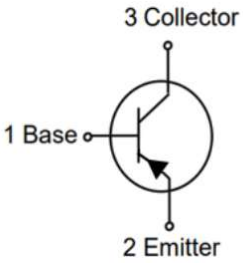
Plastic-Encapsulate Transistors(PNP)

Features

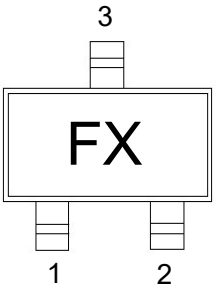
- Reduces Board Space
- High h_{FE}
- Low $V_{CE(sat)}$



SOT-523 top view



Schematic diagram



X:Rank

Marking and pin assignment

Pb-Free RoHS Halogen-Free

Maximum Ratings(Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-150	mA
P_C	Collector Power Dissipation	150	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Electrical Characteristics (TJ=25℃ unless otherwise noted)

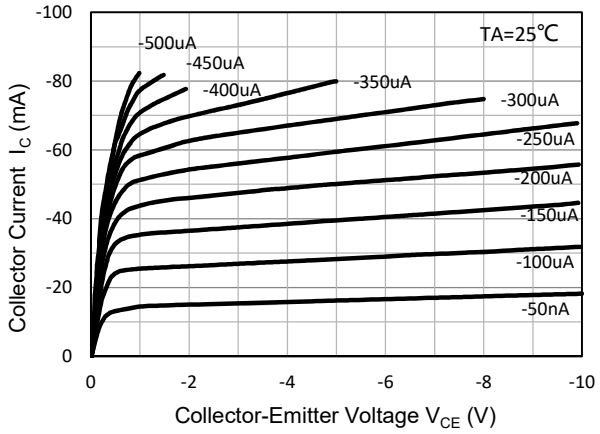
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-50μA, I_E=0	-60	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-1mA, I_B=0	-50	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-50μA, I_C=0	-6	--	--	V
I_{CBO}	Collector cut-off current	V_{CB}=-60V , I_E=0	--	--	-100	nA
I_{EBO}	Emitter cut-off current	V_{EB}=-6V , I_C=0	--	--	-100	nA
h_{FE}	DC current gain	V_{CE}=-6V, I_C=-0.1mA	120	--	560	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=-50mA, I_B=-5mA	--	--	-0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=-50mA, I_B=-5mA	--	--	-1.2	V
f_T	Transition frequency	V_{CE}=-12V, I_C=-2mA,f=30MHz	--	140	--	MHz
C_{ob}	Collector output capacitance	V_{CB}=-12V, I_E=0, f=1MHz	--	3.5	5	pF

Ordering Information (Example)

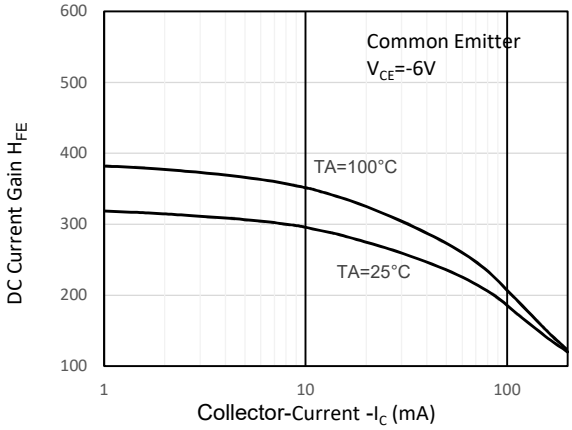
Type	Rank	Hfe	Marking	Package(pcs)	Delivery Mode
2SA1774	Q	120-270	FQ	3000	7"reel
	R	180-390	FR		
	S	270-560	FS		

Typical Operating Characteristics

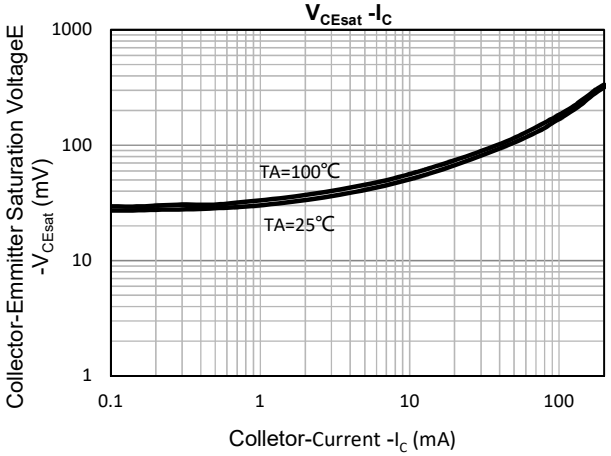
Static Characteristic



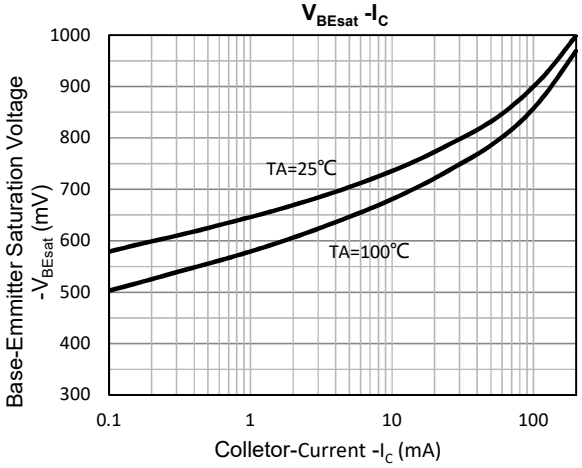
H_{FE}-I_C



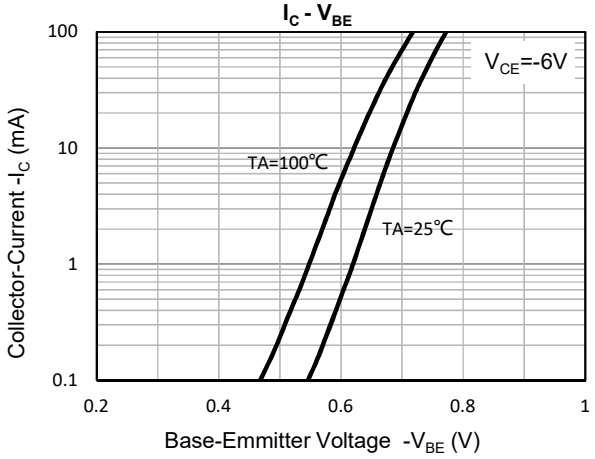
V_{CEsat} -I_C



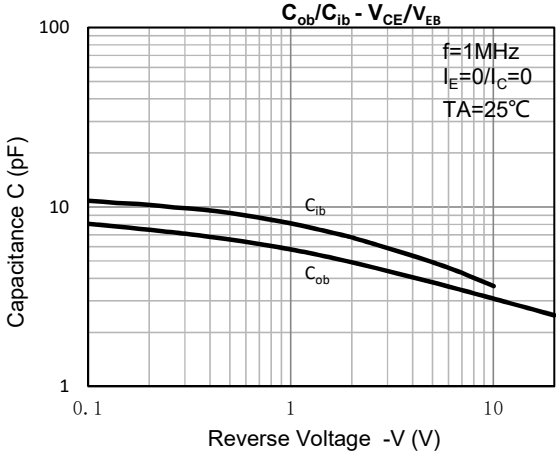
V_{BEsat} -I_C



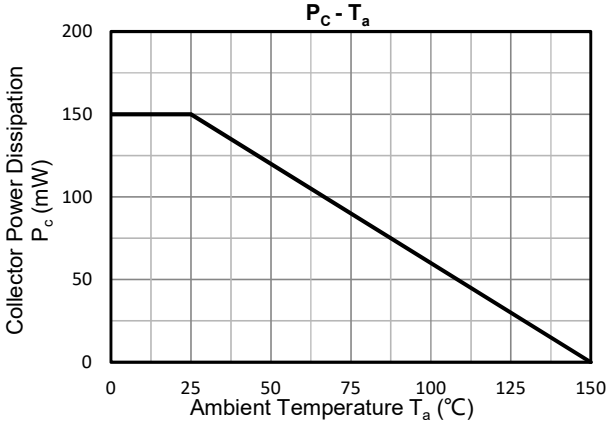
I_C - V_{BE}



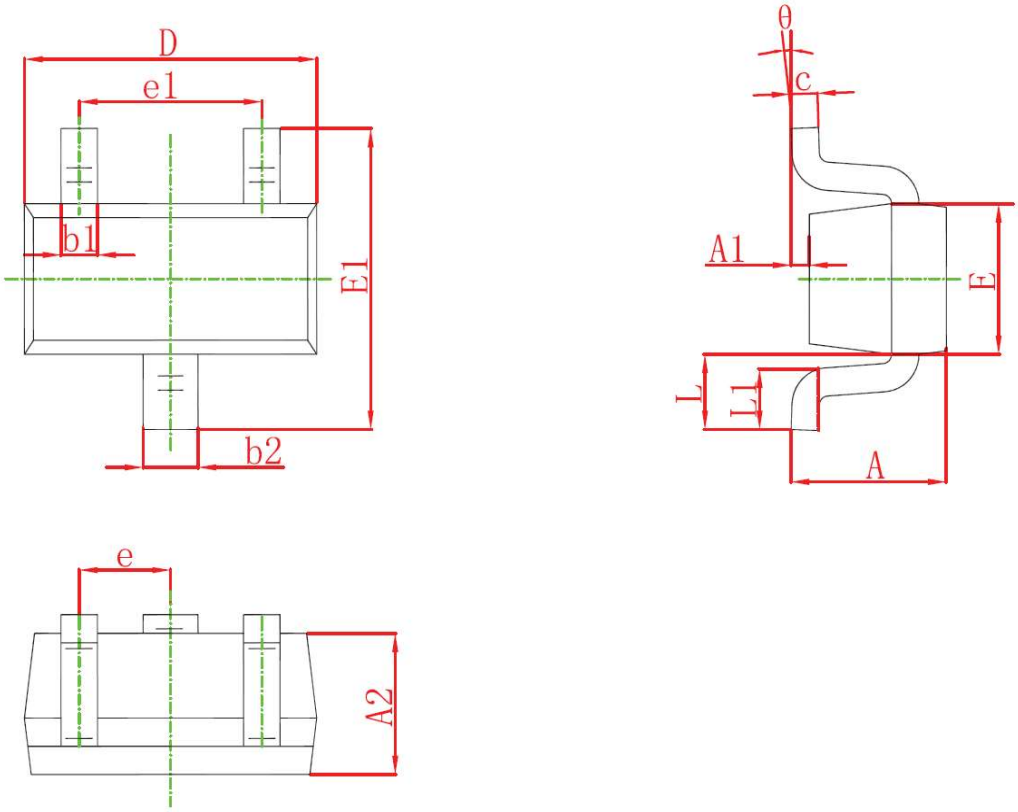
C_{ob}/C_{ib} - V_{CE}/V_{EB}



P_C - T_a



SOT-523 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°