



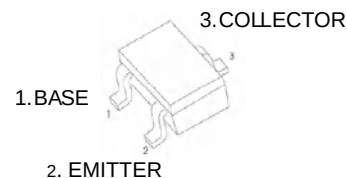
2SA1774T PNP Transistors

Features

Reduces Board Space

High h_{FE}

Low $V_{CE(sat)}$



SOT-523

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-60	V
Collector - Emitter Voltage	V_{CEO}	-50	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-150	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

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

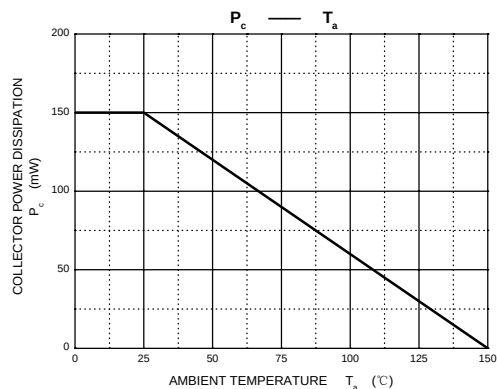
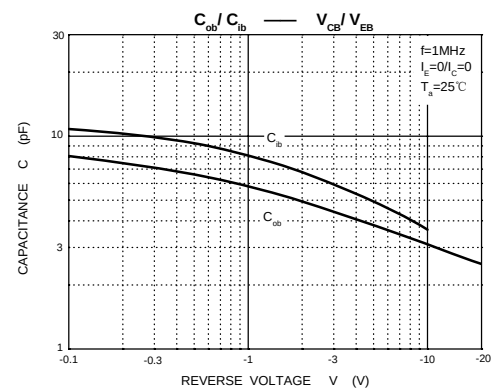
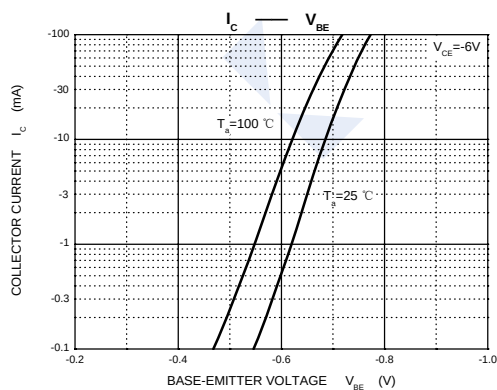
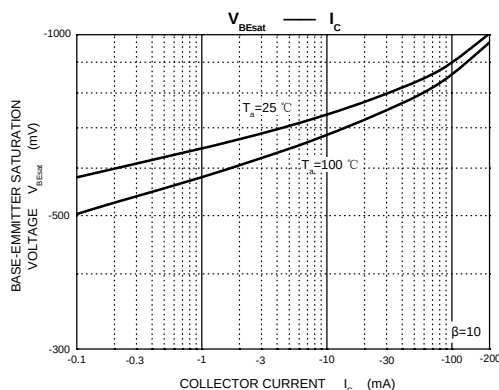
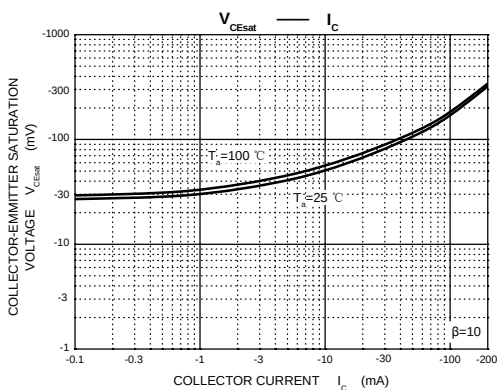
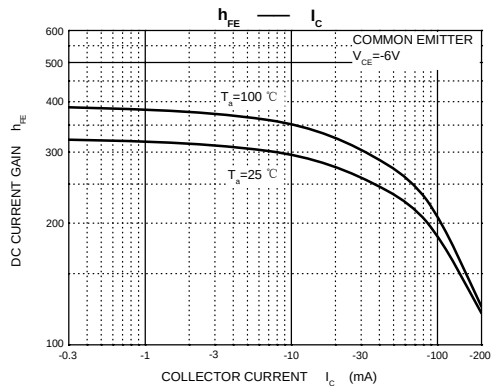
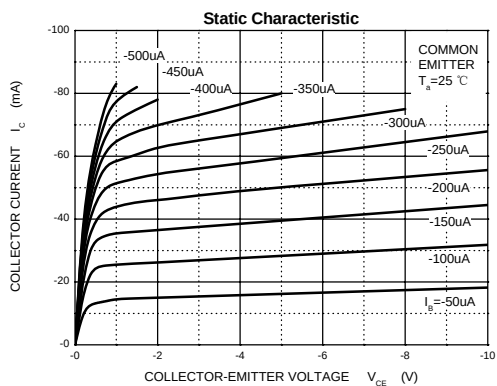
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = -50 \mu\text{A}$, $I_E = 0$	-60			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = -1 \text{ mA}$, $I_B = 0$	-50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -50 \mu\text{A}$, $I_C = 0$	-6		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

Classification of h_{FE}

Type	Q	R	S
Range	120-270	180-390	270-560
Marking	FQ	FR	FS

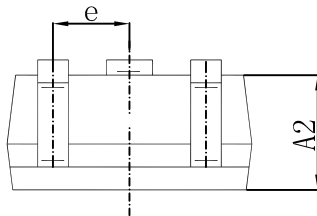
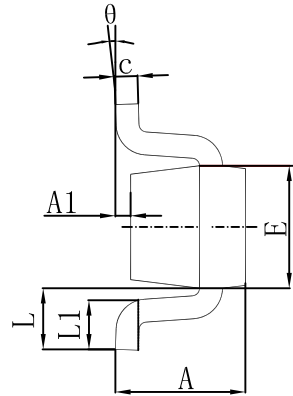
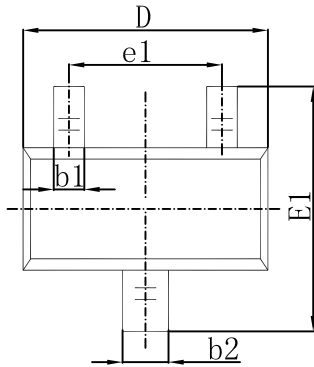


Typical Characteristics



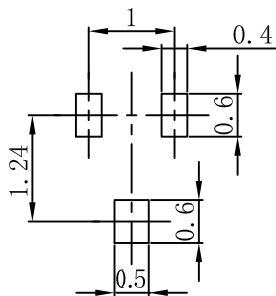


SOT-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		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	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-523 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.