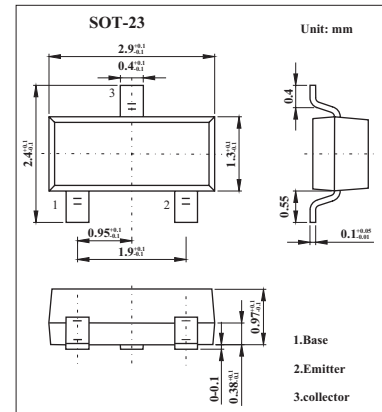


NPN Silicon Epitaxial Transistor

2SC1621

■ Features

- High speed : $t_{stg}=20\text{ns}$ MAX.

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	40	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	5	V
Collector current (DC)	I_C	200	mA
Total power dissipation	P_T	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$

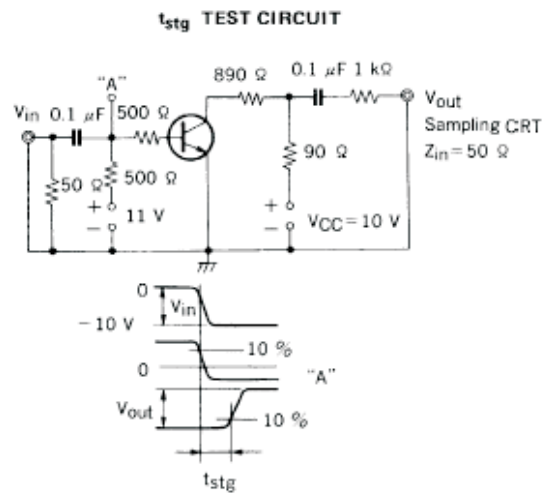
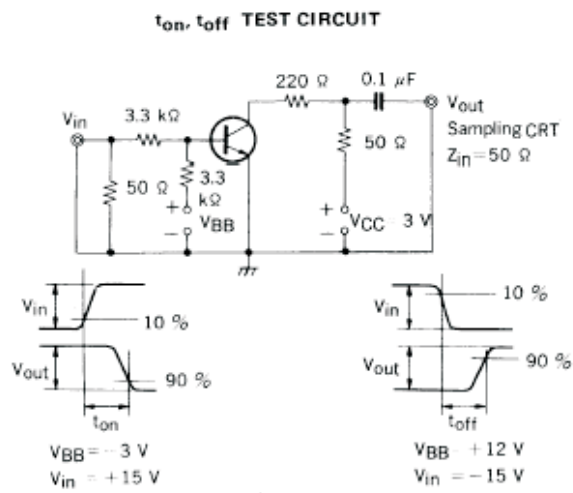
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 30\text{V}, I_E = 0$			100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$			100	nA
DC current gain *	h_{FE}	$V_{CE} = 0.5\text{V}, I_C = 1\text{mA}$	40	80	180	
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$		0.13	0.25	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$		0.74	0.85	V
Gain bandwidth product	f_T	$V_{CE} = 10\text{V}, I_E = -10\text{mA}$	200	500		MHz
Output capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1.0\text{MHz}$		3.0	6.0	pF
Turn-on time	t_{on}	See Test Circuit		12	20	ns
Storage time	t_{stg}			7	20	ns
Turn-off time	t_{off}			18	40	ns

*. $PW \leq 350\mu\text{s}, \text{duty cycle} \leq 2\%$

2SC1621

SWITCHING TIME TEST CIRCUIT



■ hFE Classification

Marking	B2	B3	B4
hFE	40~80	60~120	90~180