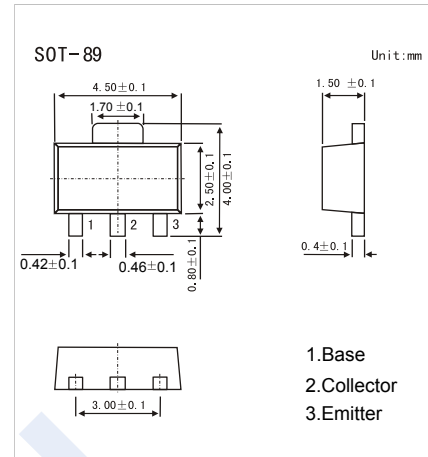


NPN Transistors

2SD1621

■ Features

- Low collector-to-emitter saturation voltage.
- Large current capacity and wide ASO.
- Fast switching speed.
- Complementary transistor with the 2SB1121



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	30	V
Collector - Emitter Voltage	V_{CE0}	25	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_C	2	A
Collector current -pulse	I_{CP}	5	
Collector Power Dissipation	P_C	500	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_{CB0}	$I_C = 100 \mu\text{A}$, $I_E = 0$	30			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{mA}$, $R_{BE} = \infty$	25			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}$, $I_C = 0$	6			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 20\text{V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1.5\text{A}$, $I_B = 75\text{mA}$		0.18	0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1.5\text{A}$, $I_B = 75\text{mA}$		0.85	1.2	
DC current gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 100\text{mA}$	100		560	
		$V_{CE} = 2\text{V}$, $I_C = 1.5\text{A}$	65			
Turn-on time	t_{on}	See specified Test Circuit.		60		ns
Storage time	t_{stg}			500		
Turn-off time	t_{off}			25		
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		19		pF
Transition frequency	f_T	$V_{CE} = 10\text{V}$, $I_C = 50\text{mA}$		150		MHz

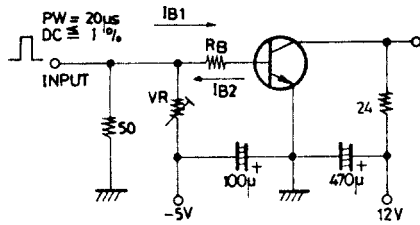
■ Classification of $h_{FE}(1)$

Type	2SD1621-R	2SD1621-S	2SD1621-T	2SD1621-U
Range	100-200	140-280	200-400	280-560
Marking	DDR	DDS	DDT	DDU

NPN Transistors

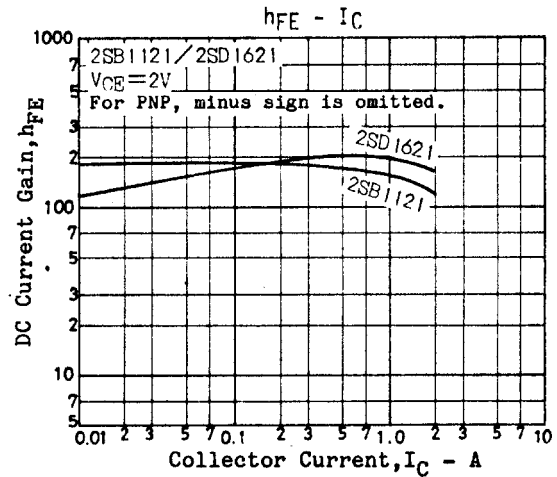
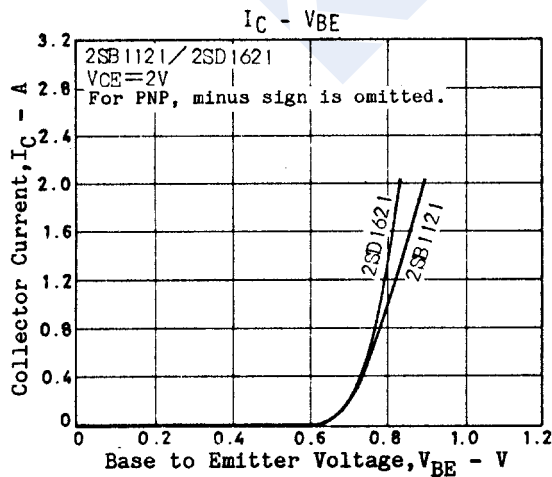
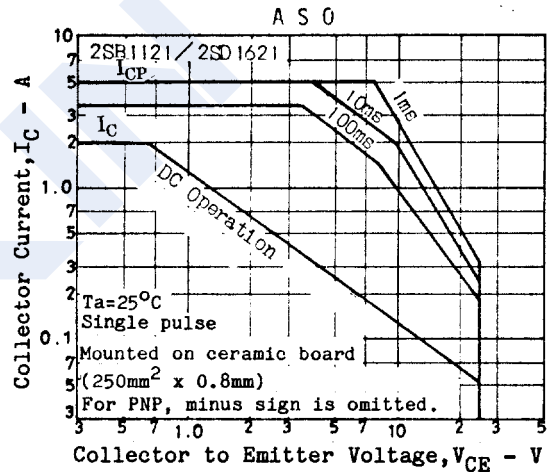
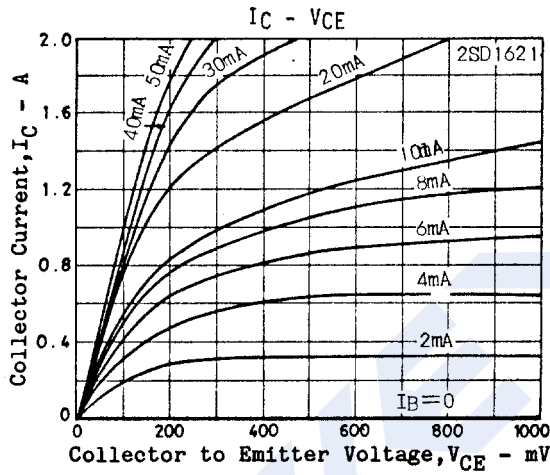
2SD1621

Switching Time Test Circuit



$20I_{B1} = -20I_{B2} = I_C = 500\text{mA}$
 (For PNP, the polarity is reversed.)
 Unit (resistance : Ω , capacitance : F)

Typical Characteristics



NPN Transistors

2SD1621

■ Typical Characteristics

