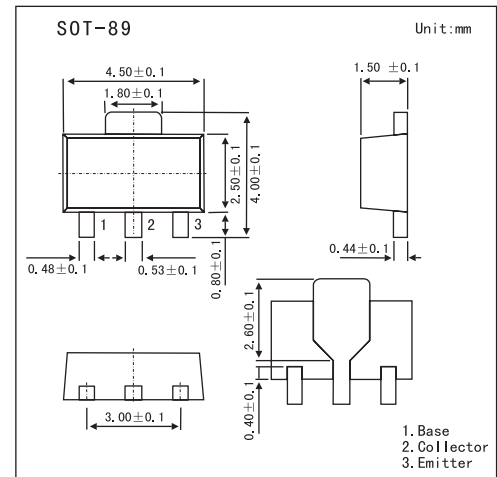


NPN Epitaxial Planar Silicon Transistor

2SD1621

■ Features

- Adoption of FBET, MBIT processes.
- Low collector-to-emitter saturation voltage.
- Large current capacity and wide ASO.
- Fast switching speed.
- Very small size making it easy to provide highdensity, small-sized hybrid ICs.

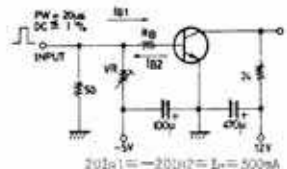
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	30	V
Collector-emitter voltage	V_{CE0}	25	V
Emitter-base voltage	V_{EB0}	6	V
Collector current	I_C	2	A
Collector current (pulse)	I_{CP}	5	A
Collector dissipation	P_C	500	mW
	P_{C^*}	1.3	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* Mounted on ceramic board(250mm2X0.8mm)

2SD1621

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	ICBO	V _{CB} = 20 V, I _E = 0			0.1	μA	
Emitter cutoff current	IEBO	V _{EB} = 4 V, I _C = 0			0.1	μA	
DC current gain	hFE	V _{CE} = 2 V, I _C = 100 mA	100		560		
Gain bandwidth product	f _T	V _{CE} = 10 V, I _C = 50 mA		150		MHz	
Output capacitance	C _{ob}	V _{CB} = 10 V, f = 1.0MHz		19		pF	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 1.5 A, I _B = 75 mA		0.18	0.4	V	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 1.5 A, I _B = 75 mA		0.85	1.2	V	
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	30			V	
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	25			V	
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	6			V	
Turn-on time	t _{on}	Switching Time Test Circuit 		60		ns	
Storage time	t _{stg}				500		ns
Turn-off time	t _f				25		ns

■ hFE Classification

Marking	DD			
Rank	R	S	T	U
hFE	100~200	140~280	200~400	280~560