

SANYO	No.1787A	2SB1121/2SD1621
		PNP/NPN Epitaxial Planar Silicon Transistors High-Current Driver Applications

Applications

- . Voltage regulators, relay drivers, lamp drivers, electrical equipment.

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 high-density, small-sized hybrid IC's.

(): 2SB1121

Absolute Maximum Ratings at Ta=25°C				unit
Collector to Base Voltage	V _{CB0}	(-)30	V	
Collector to Emitter Voltage	V _{CEO}	(-)25	V	
Emitter to Base Voltage	V _{EBO}	(-)6	V	
Collector Current	I _C	(-)2	A	
Collector Current(Pulse)	I _{CP}	(-)5	A	
Collector Dissipation	P _C	500	mW	
	P _C Mounted on ceramic board (250mm ² x 0.8mm)	1.3	W	
Junction Temperature	T _j	150	°C	
Storage Temperature	T _{stg}	-55 to +150	°C	

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} =(-)20V, I _E =0			(-)0.1	µA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			(-)0.1	µA
DC Current Gain	h _{FE} (1)	V _{CE} =(-)2V, I _C =(-)100mA	100*		560*	
	h _{FE} (2)	V _{CE} =(-)2V, I _C =(-)1.5A	65			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA		150		MHz
C-E Saturation Voltage	V _{CE(sat)}	I _C =(-)1.5A, I _B =(-)75mA		0.18	0.4	V
				(-0.35)	(-0.6)	V
B-E Saturation Voltage	V _{BE(sat)}	I _C =(-)1.5A, I _B =(-)75mA		(-)0.85	(-)1.2	V

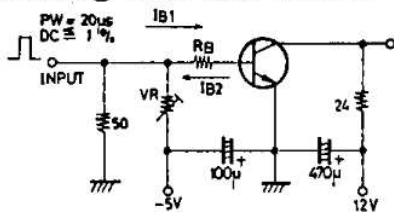
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*:The 2SB1121/2SD1621 are classified by 100mA h_{FE} as follows:

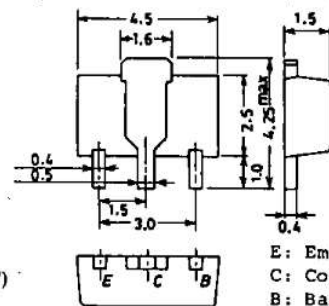
100	R	200	140	S	280	200	T	400	280	U	560
Marking		2SB1121:BD		h _{FE} rank : R, S, T, U							
		2SD1621:DD									

Package Dimensions 2038
(unit: mm)

Switching Time Test Circuit



Unit (Resistance : Ω, Capacitance : F)
(For PNP, the polarity is reversed.)



(Bottom View)

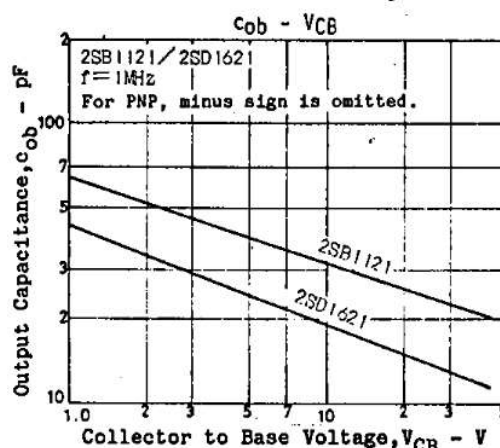
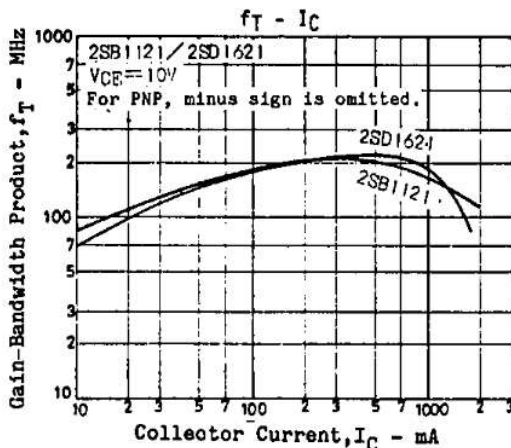
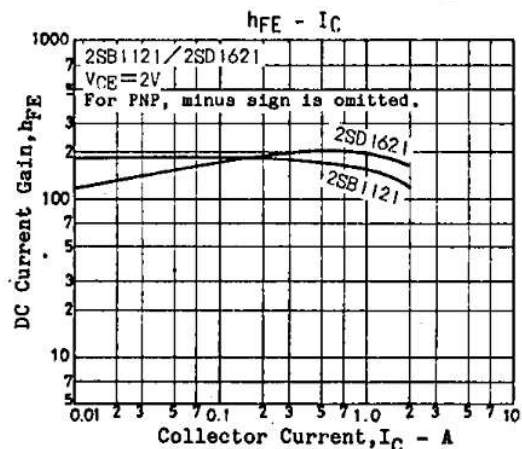
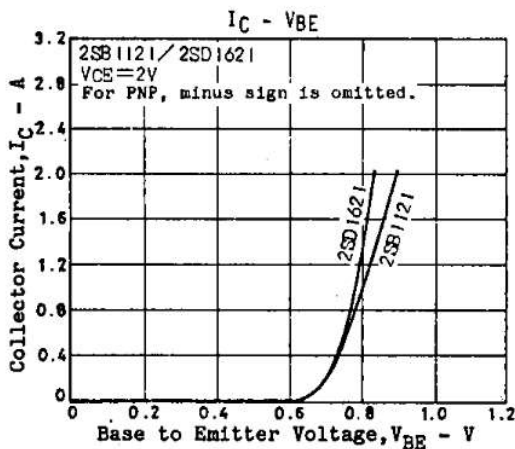
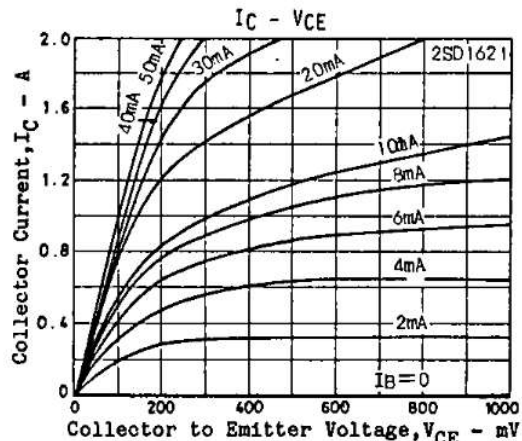
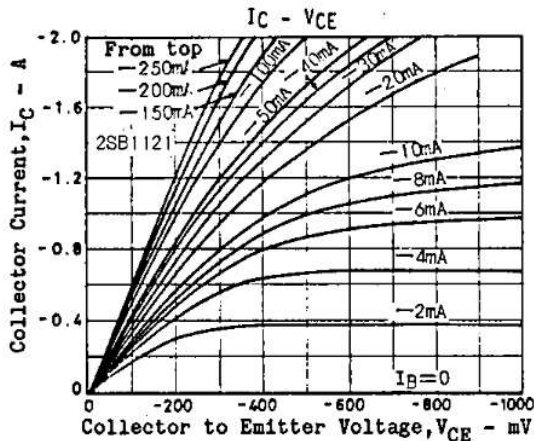
E: Emitter
C: Collector
B: Base

SANYO: PCP

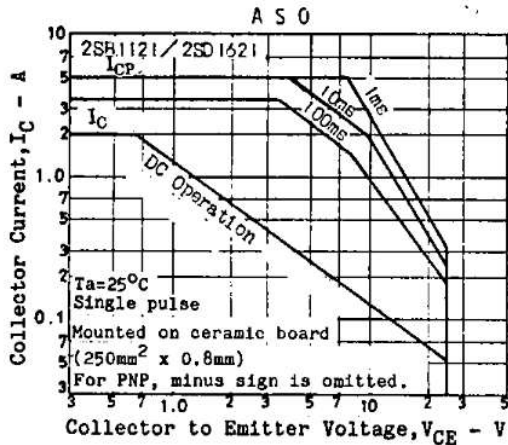
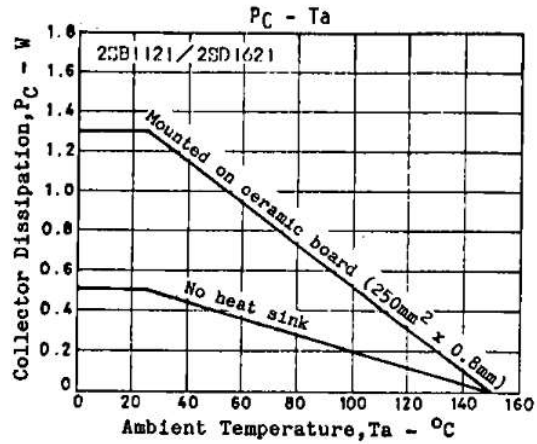
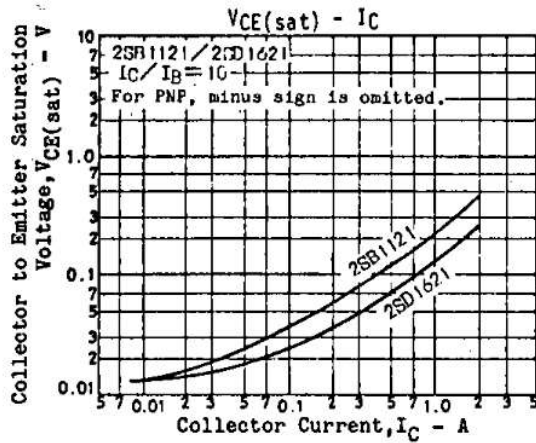
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			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-)30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)25			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu A, I_C = 0$	(-)6			V
Output Capacitance	c_{ob}	$V_{CB} = (-)10V, f = 1MHz$		19		pF
				(32)		pF
Turn-ON Time	t_{on}	See specified Test Circuit.		60		ns
				(60)		ns
Storage Time	t_{stg}			500		ns
				(350)		ns
Fall Time	t_f			25		ns
				(25)		ns



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