

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_{EB0}	$V_{EB}=(-)4V, I_C=0$			(-)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:

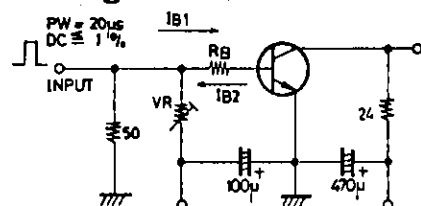
100 R	200	140 S	280	200 T	400	280 U	560
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Marking 2SB1121:BD h_{FE} rank :R,S,T,U

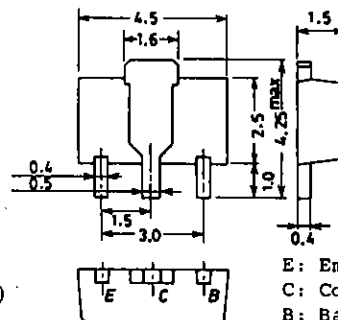
2SD1621:DD

Package Dimensions 2038
(unit:mm)

Switching Time Test Circuit



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



(Bottom View)

E: Emitter
C: Collector
B: Base

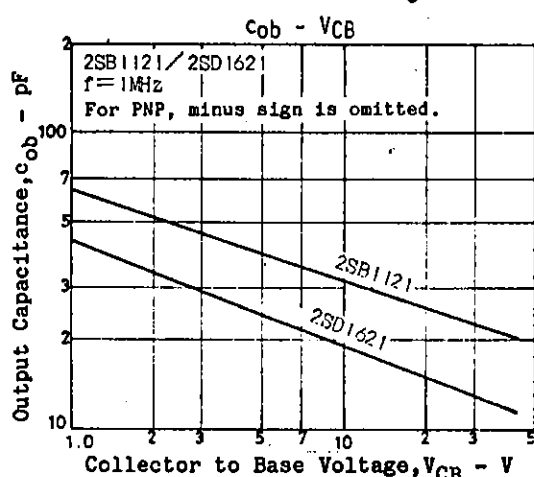
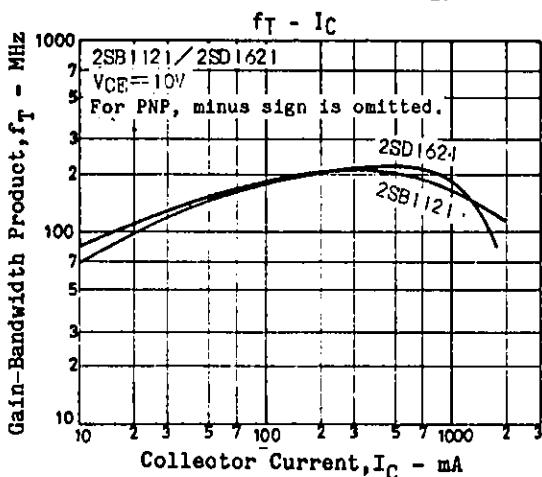
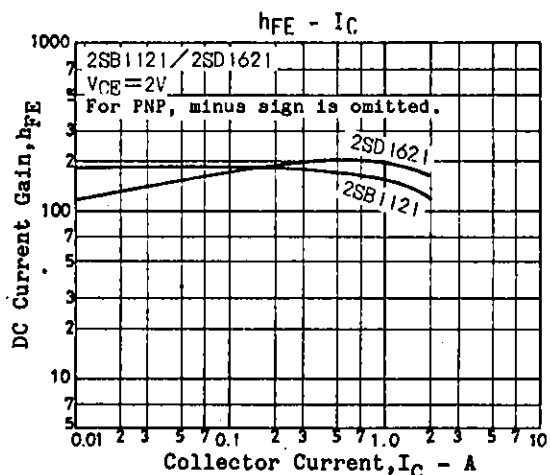
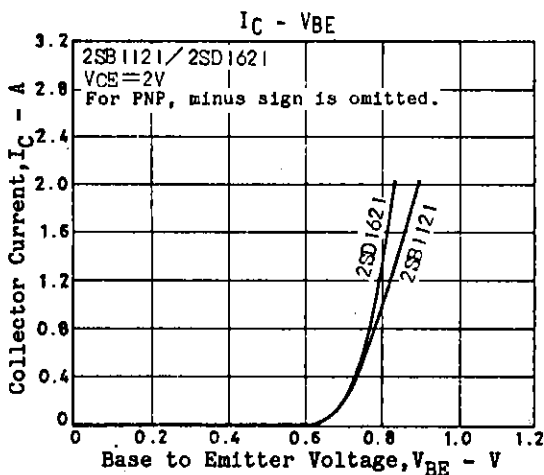
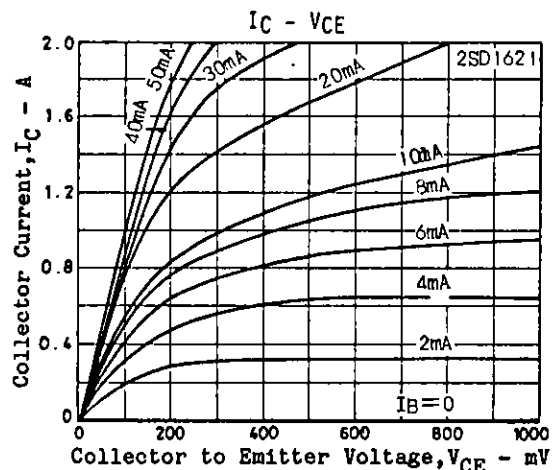
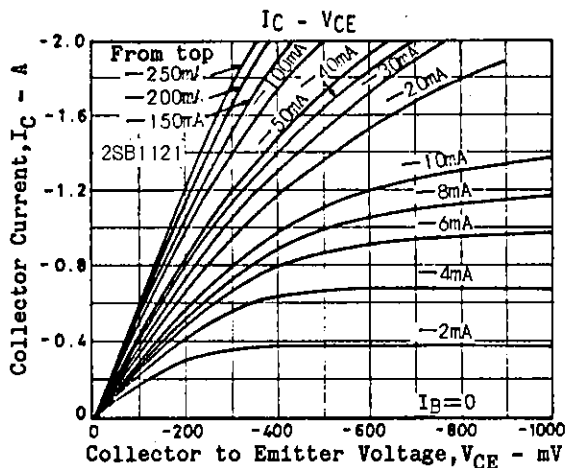
SANYO: PCP

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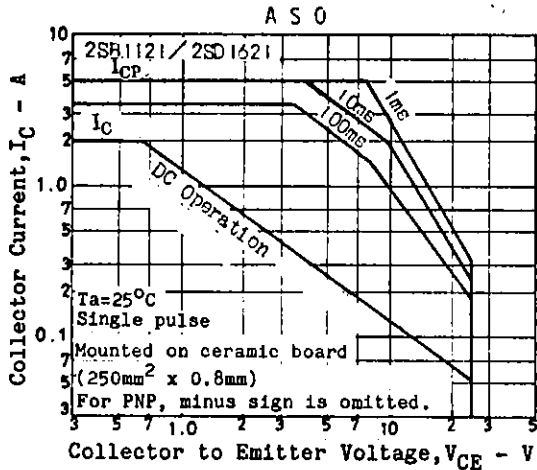
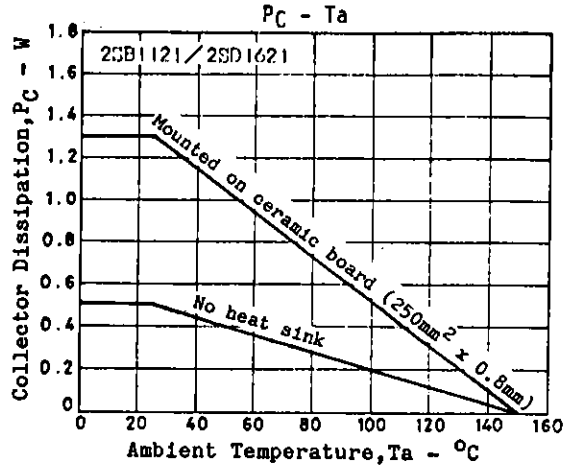
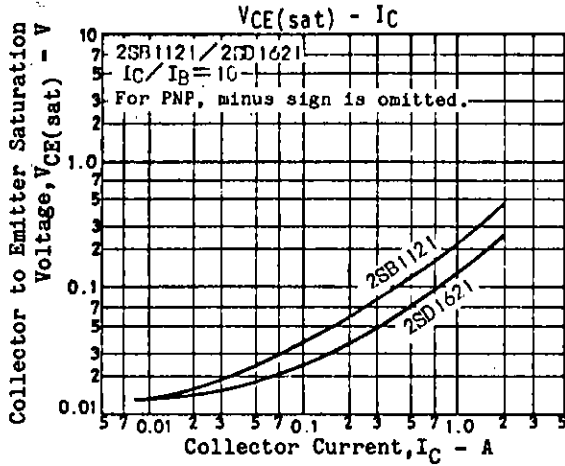
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			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-)30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)25			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu A, I_C = 0$	(-)6			V
Output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



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