



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

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.
- Ultrasmall size making it easy to provide high-density, small-sized hybrid IC's.

Specifications () : 2SB1121

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		(-)30	V
Collector-to-Emitter Voltage	VCEO		(-)25	V
Emitter-to-Base Voltage	VEBO		(-)6	V
Collector Current	IC		(-)2	A
Collector Current (Pulse)	ICP		(-)5	A
Collector Dissipation	PC		500	mW
		Mounted on a ceramic board (250mm ² ×0.8mm)	1.3	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Marking 2SB1121 : BD

~~2SD1621 : DD~~

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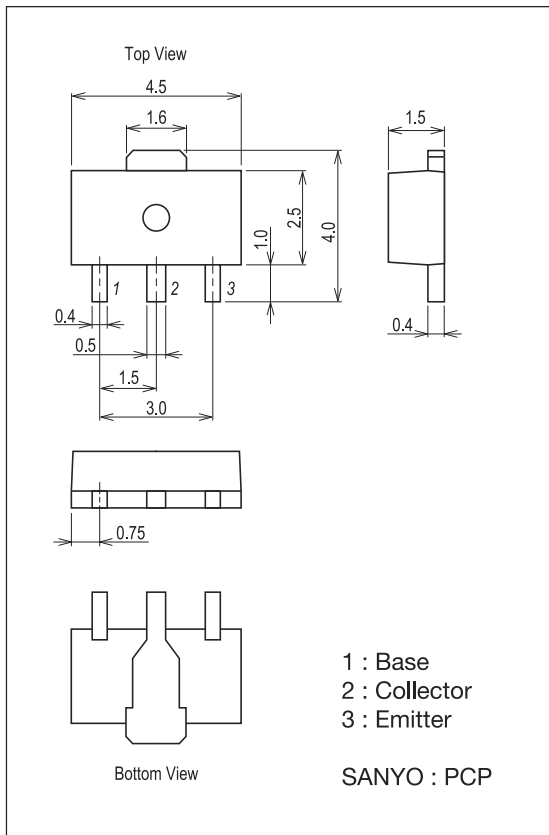
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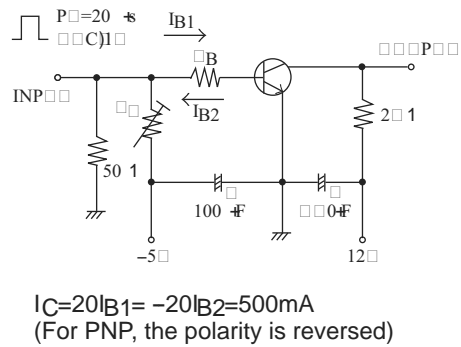
Electrical Characteristics

Parameter	Symbol	Conditions	Units			Unit
			min	typ	max	
Collector-to-Base Current Ratio	β_{CB}	$V_{CE} = (-)20V, I_C = 0A$			$(-)0.1$	μA
Emitter Current Ratio	β_E	$V_{CE} = (-)10V, I_C = 0A$			$(-)0.1$	μA
Cutoff Frequency	$f_{\beta 1}$	$V_{CE} = (-)2V, I_C = (-)100mA$	100		50	
	$f_{\beta 2}$	$V_{CE} = (-)2V, I_C = (-)5A$	5			
Gain-Bandwidth Product	f_{β}	$V_{CE} = (-)10V, I_C = (-)50mA$		150		MHz
Output Capacitance	C_{ob}	$V_{CE} = (-)10V, I_C = 1mA$		$(2)1$		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)105A, I_B = (-)5mA$		$(-0)50$	$(-0)0$	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)105A, I_B = (-)5mA$		$(-0)05$	$(-1)2$	V
Collector-to-Base Breakdown Voltage	$V_{(B)CB}$	$I_C = (-)10 \mu A, I_E = 0A$		$(-)0$		V
Collector-to-Emitter Breakdown Voltage	$V_{(B)CE}$	$I_C = (-)1mA, I_B = 0$		$(-)25$		V
Emitter-Base Breakdown Voltage	$V_{(B)EB}$	$I_C = (-)10 \mu A, I_C = 0A$		$(-)$		V
Storage Time	t_s	See specified Test Circuit		$(=0)10$		ns
Turn-on Time	t_{st}	See specified Test Circuit		$(=50)50$		ns
Fall Time	t_f	See specified Test Circuit		$(2)25$		ns

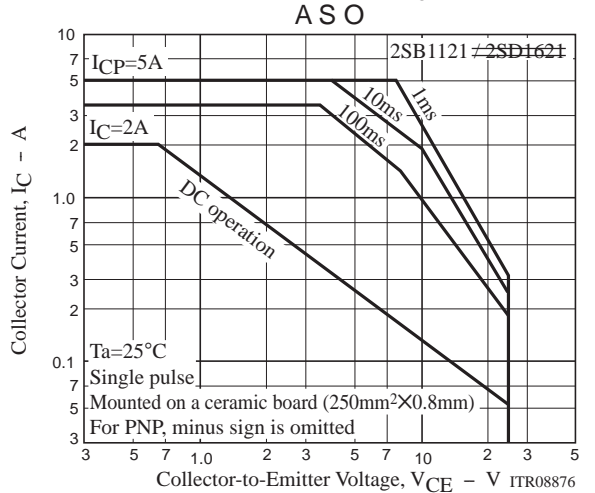
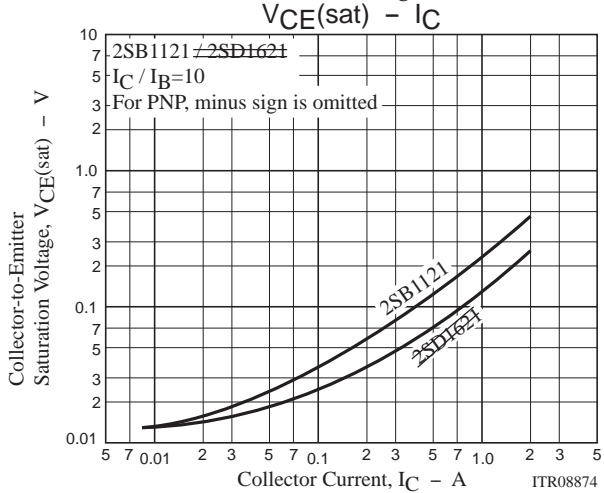
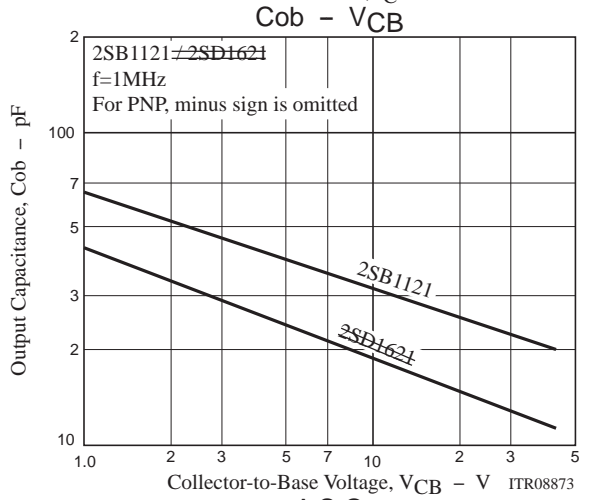
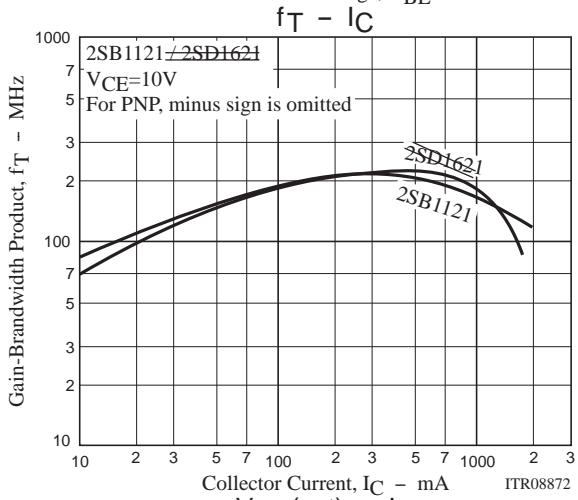
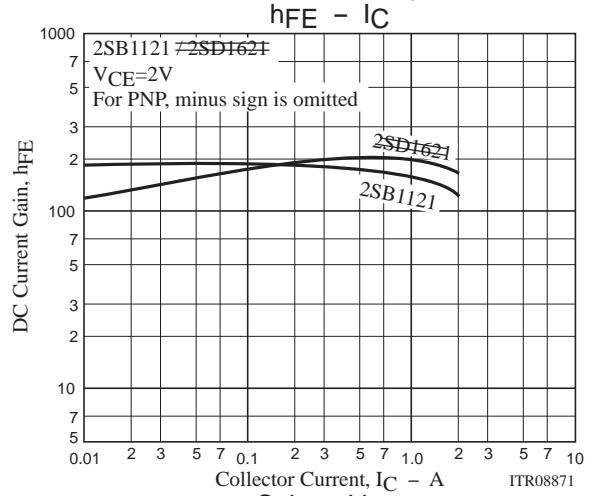
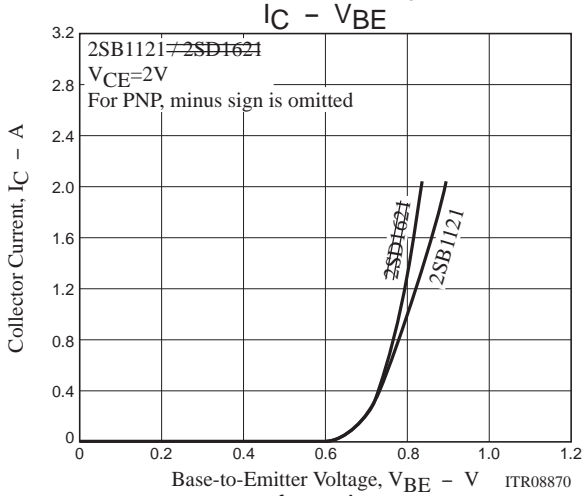
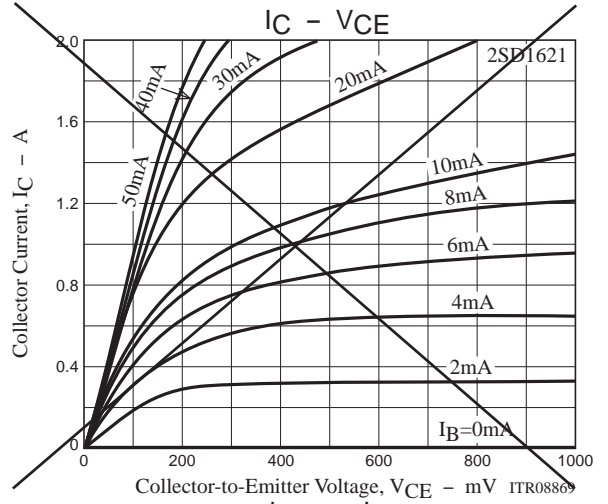
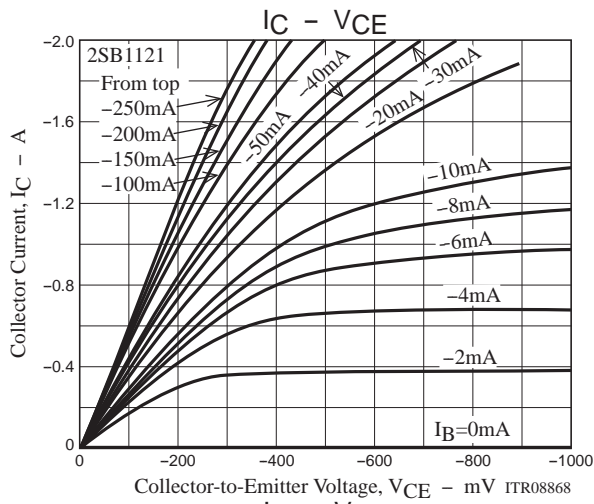
Package Dimensions

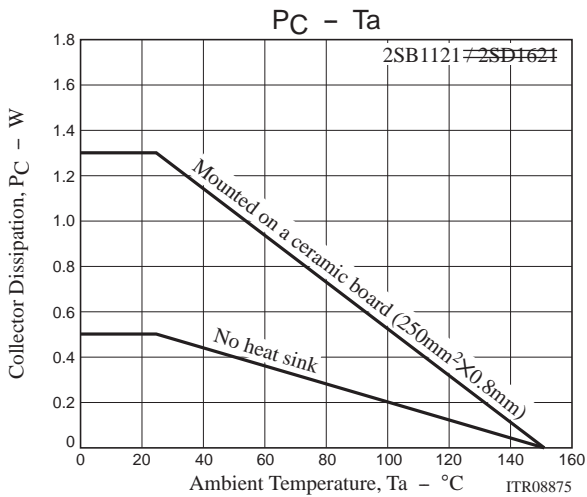


Switching Time Test Circuit



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