

SANYO	No. 2019A	2SB1124/2SD1624
	PNP/NPN Epitaxial Planar Silicon Transistors High-Current Switching Applications	

Applications

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

Features

- . Adoption of FBIT, MBIT processes.
- . Low collector-to-emitter saturation voltage.
- . Fast switching speed.
- . Large current capacity and wide ASO

(): 2SB1124

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CB0}	(-)60	V
Collector to Emitter Voltage	V_{CE0}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)3	A
Collector Current(Pulse)	I_{CP}	(-)6	A
Collector Dissipation	P_C	500	mW
	Mounted on ceramic board (250mm ² x 0.8mm)	1.5	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_{CBO}	$V_{CB}=(-)40V, I_E=0$		(-)1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$		(-)1	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)2V, I_C=(-)100mA$	100*	560*	
	$h_{FE}(2)$	$V_{CE}=(-)2V, I_C=(-)3A$	35		
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)50mA$		150	MHz
Output Capacitance	c_{ob}	$V_{CB}=(-)10V, f=1MHz$		(39)	pF
				25	pF

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*:The 2SB1124/2SD1624 are classified by 100mA h_{FE} as follows:

100 R	200	140 S	280	200 T	400	280 U	560
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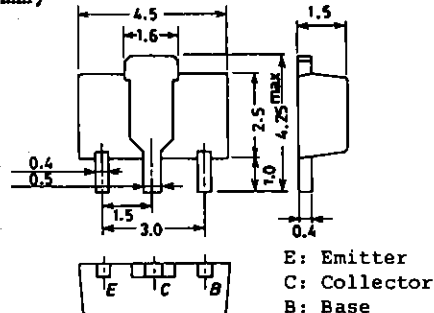
Marking 2SB1124:BG

2SD1624:DG

h_{FE} rank : R, S, T, U

Package Dimensions 2038

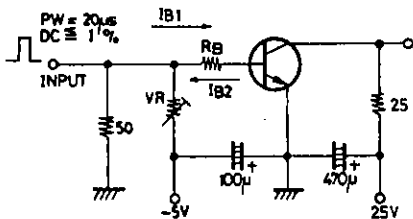
(unit:mm)



E: Emitter
C: Collector
B: Base

SANYO: PCP
(Bottom View)

Switching Time Test Circuit



$10I_{B1} = -10I_{B2} = I_C = 1A$

(For PNP, the polarity is reversed.)

Unit (Resistance : Ω , Capacitance : F)

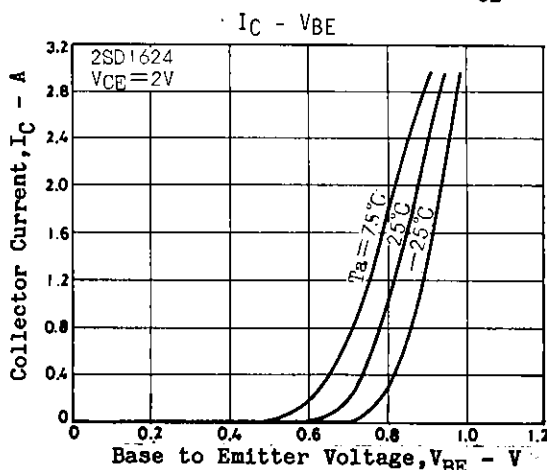
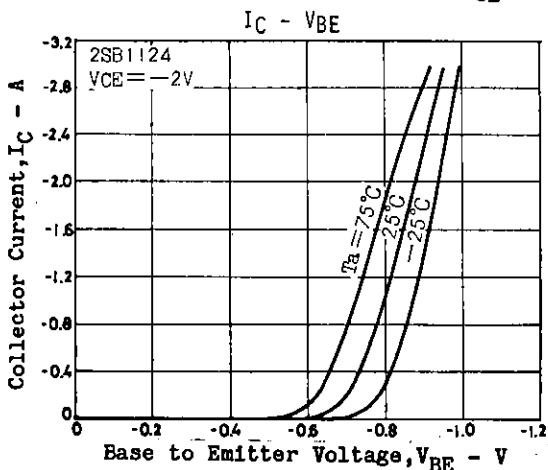
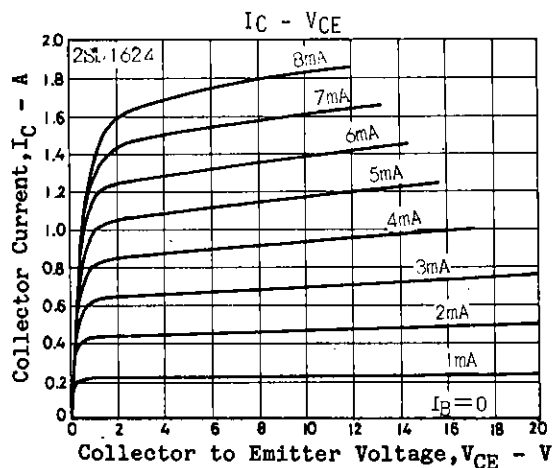
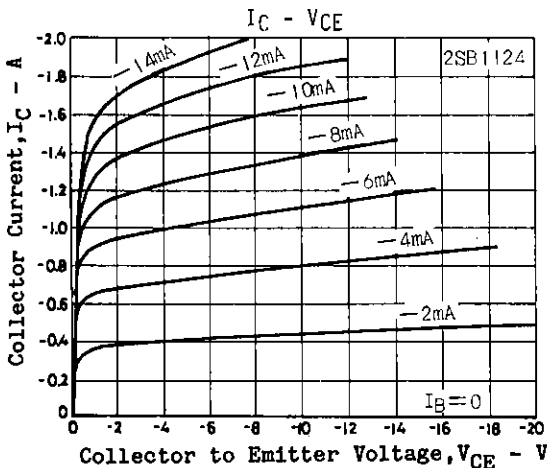
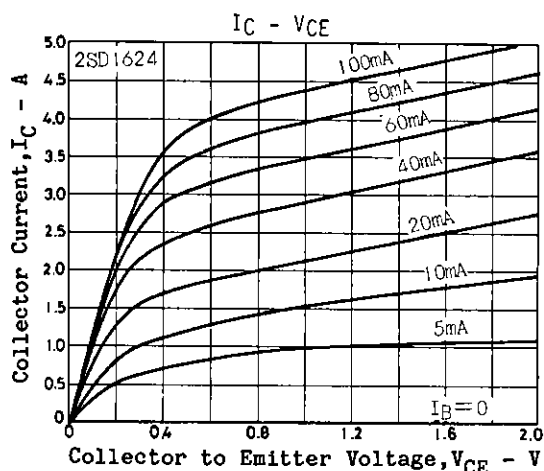
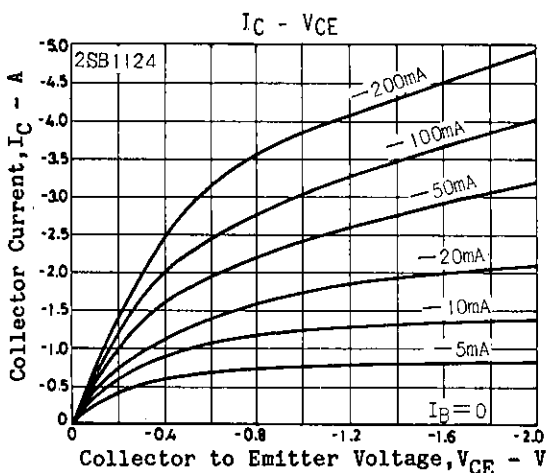
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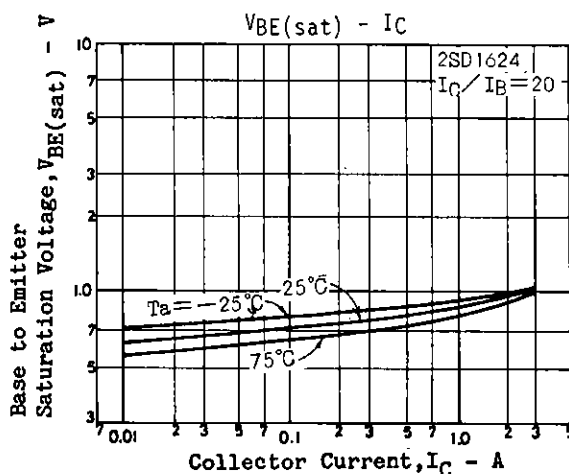
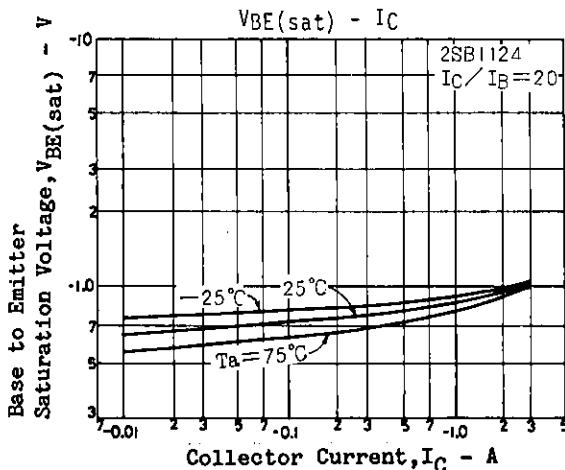
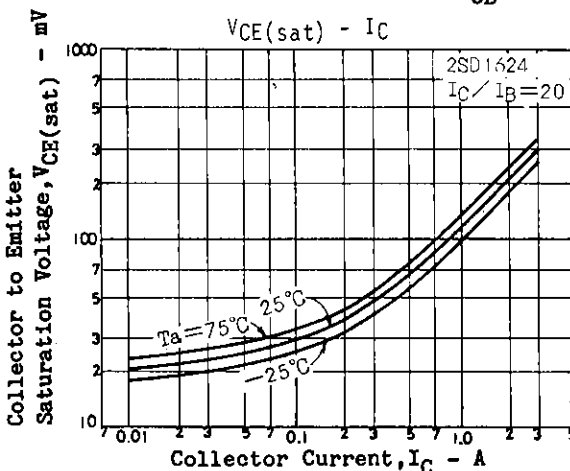
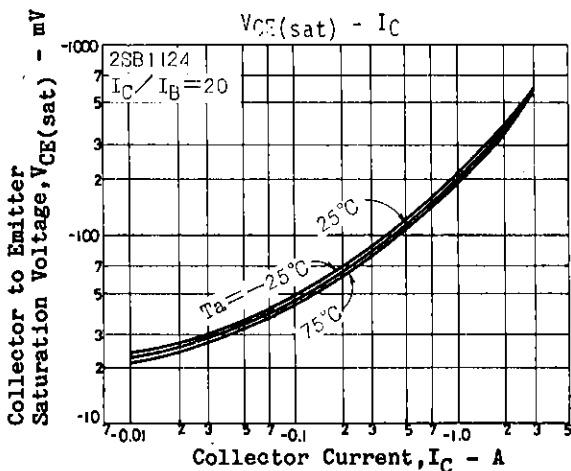
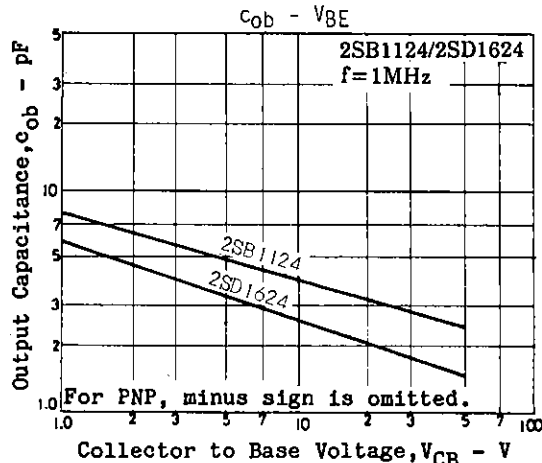
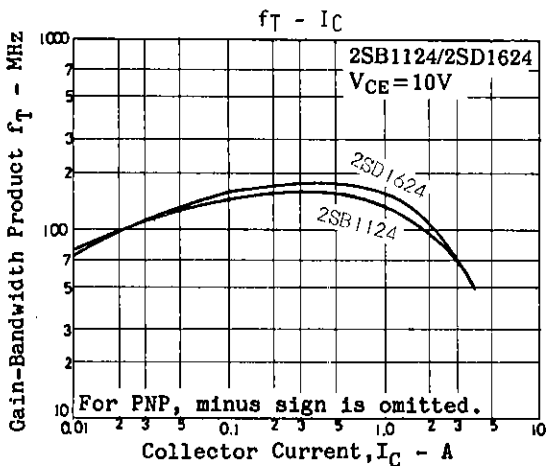
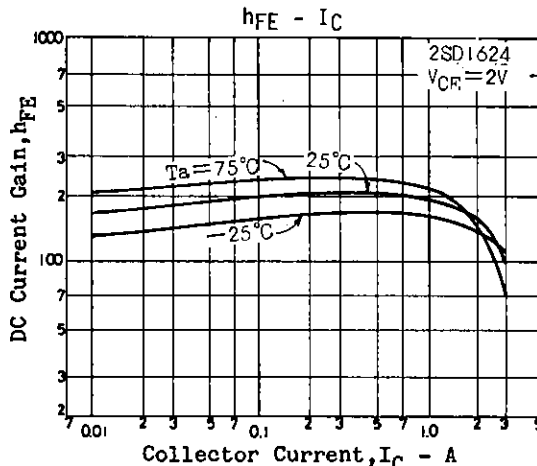
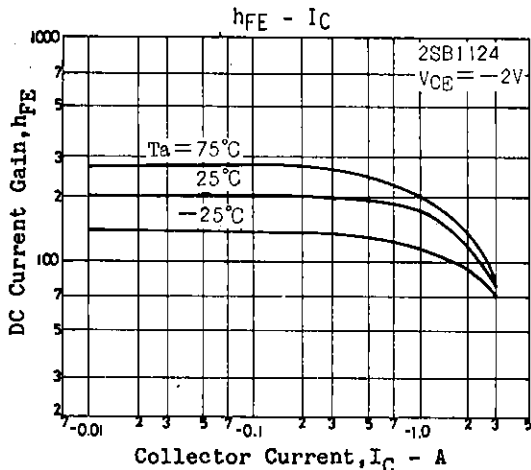
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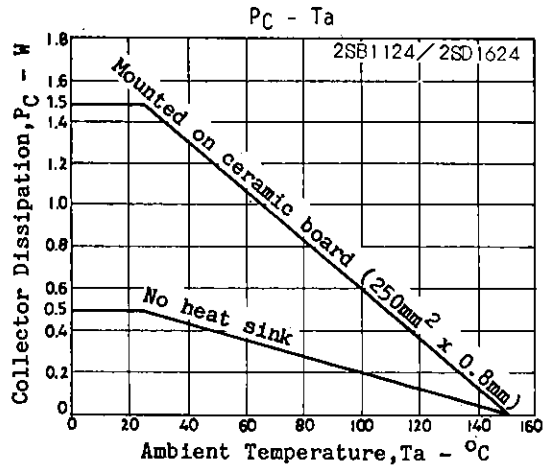
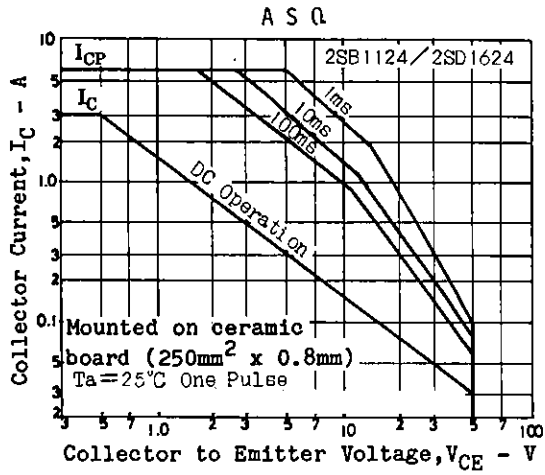
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)2A, I_B=(-)100mA$	(-0.35)	(-0.7)		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)2A, I_B=(-)100mA$	(-0.94)	(-1.2)		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)	60		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)	50		V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-)	6		V
Turn-on Time	t_{on}	See specified Test Circuit.(70)				ns
		"		70		ns
Storage Time	t_{stg}	"	(450)			ns
		"		650		ns
Fall Time	t_f	"	(35)			ns
		"		35		ns



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