PNP/NPN Epitaxial Planar Silicon Transistors



2SB1124/2SD1624

High Current Switching Applications

Applications

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

Features

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

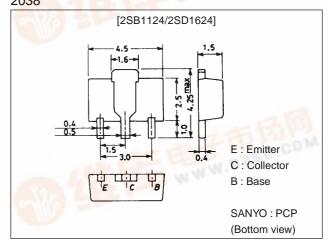
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Specifications

Absolute Maximum Ratings at Ta = 25°C

Package Dimensions

unit:mm 2038



Parameter	Symbol	Conditions Ratings		Unit
Collector-to-Base Voltage	V _{CBO}		(-)60	V
Collector-to-Emitter Voltage	VCEO		(-)50	V
Emitter-to-Base Voltage	V _{EBO}	pal .	(-)6	V
Collector Current	Ic		(-)3	Α
Collector Current (Pulse)	I _{CP}	- All (18 - 14	(–)6	Α
Collector Dissipation	PC	AND AND LOS V	500	mW
		Mounted on ceramic board (250mm²×0.8mm)	1.5	W
Junction Temperature	Tj	- MI (8)	150	°C
Storage Temperature	Tstg	O make	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions		Unit		
Falametel	Syllibol	Conditions	min	typ	max	Offit
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)40V, I _E =0			(-)1	μΑ
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			(-)1	μΑ
DC Current Gain	h _{FE} 1	V _{CE} =(-)2V, I _C =(-)100mA	100*	- 11	560*	107
	h _{FE} 2	V _{CE} =(-)2V, I _C =(-)3A	35			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA	W.M.	150		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(39)		pF
				25		pF

^{*;} The 2SB1124/2SD1624 are classified by 100mA hFE as follows

524 are classified by 100mA n _{FE} as follows:	100	R	200	140	S	280	200	Т	400	280	U	560	
CO.				•			•			•			

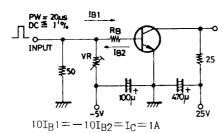
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SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters

2SB1124/2SD1624

Parameter	Symbol	Conditions		Ratings			
Faranielei	Symbol Conditions		min	typ	max	Unit	
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)2A, I _B =(-)100mA		(-0.35)	(-0.7)	V	
				0.19	0.5	V	
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)2A, I _B =(-)100mA		(-0.94)	(-)1.2	V	
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =(-)10μΑ, I _E =0	(–)60			V	
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =(−)1mA, R _{BE} =∞	(–)50			V	
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)10μΑ, I _C =0	(-)6			V	
Turn-ON Time	ton	See specified Test Circuit.		70		ns	
				(70)		ns	
Storage Time	t _{stg}	See specified Test Circuit.		650		ns	
				(450)		ns	
Fall Time	t _f	See specified Test Circuit.		35		ns	
				(35)		ns	

Switching Time Test Circuit

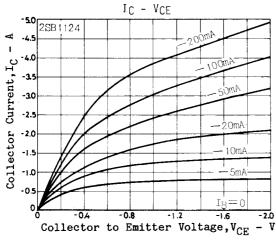


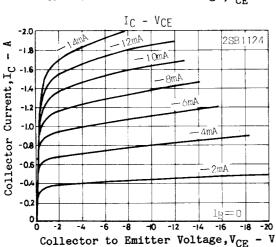
Marking 2SB1124:BG

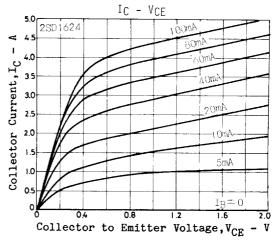
2SD1624:DG

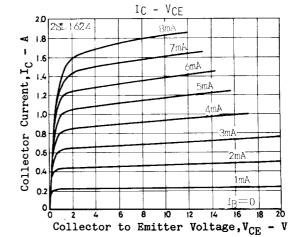
h_{FE} rank :R,S,T,U

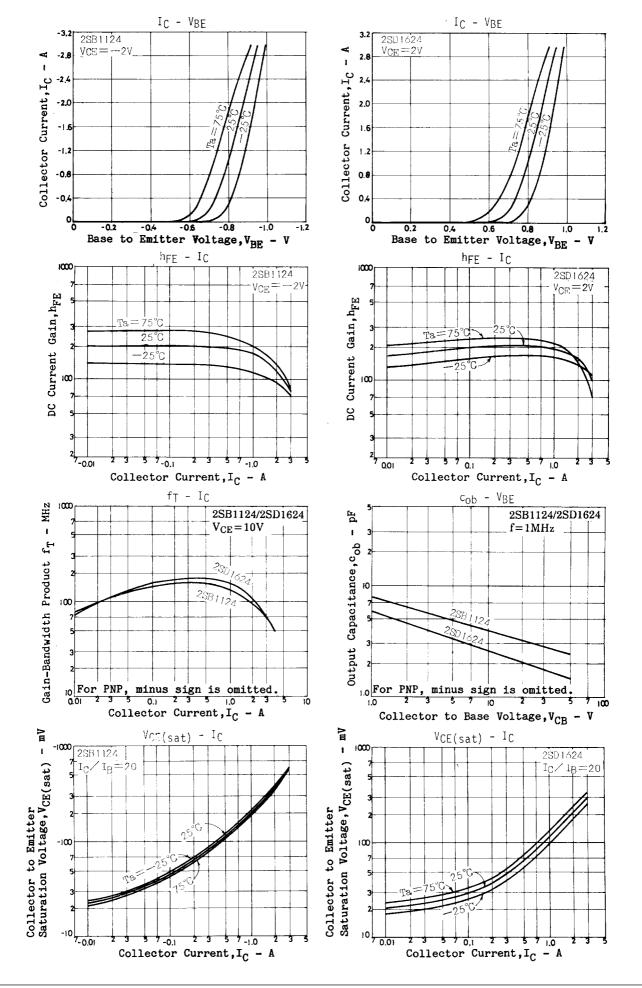
(For PNP, the polarity is reversed.) Unit (resistance: Ω , capacitance: F)



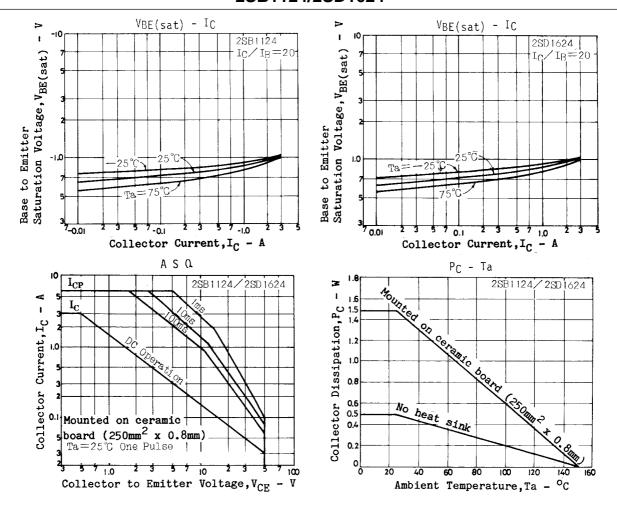








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