PNP/NPN Epitaxial Planar Silicon Transistors



2SB1120

High-Current Driver Applications

Applications

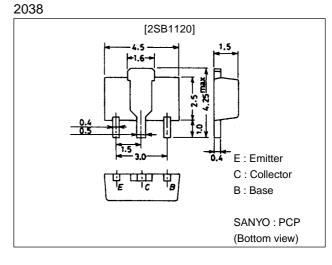
· Strobes, voltage regulators, relay drivers, lamp drivers.

Features

- Low collector-to-emitter saturation voltage : $V_{--} = 0.45 V_{--}$
- $V_{CE(sat)max} = -0.45V.$
- · Large current capacity : I_C =-2.5A, I_{CP} =-5A.
- Very small size making it easy to provide highdensity, small-sized hybrid IC's.

Package Dimensions

unit:mm



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		-20	V
Collector-to-Emitter Voltage	VCEO		-10	V
Emitter-to-Base Voltage	V _{EBO}		-7	V
Collector Current	۱ _C		-2.5	Α
Collector Current (Pulse)	ICP		-5	Α
Collector Dissipation	PC		500	mW
		Mounted on ceramic board (250mm ² ×0.8mm)	1.3	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
Faldilleter			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =-16V, I _E =0			-100	nA
Emitter Cutoff Current	IEBO	V _{EB} =-4V, I _C =0			-100	nA
DC Current Gain	h _{FE} 1	V _{CE} =-2V, I _C =-500mA	100*		560*	
	h _{FE} 2	V _{CE} =-2V, I _C =-3A	70			
Gain-Bandwidth Product	fT	V _{CE} =-10V, I _C =-50mA		250		MHz

 \ast ; The 2SB1120 is classified by 500mA h_{FE} as follows :

100

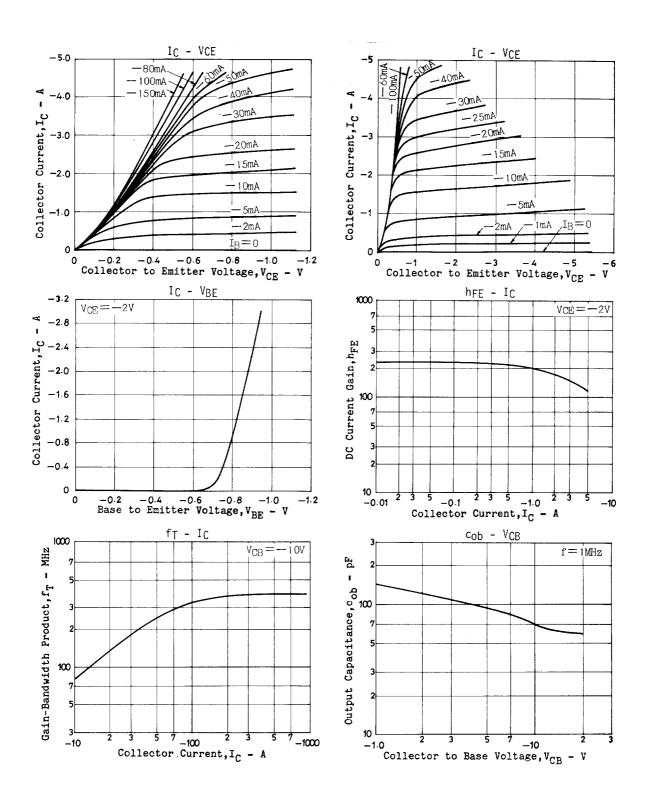
Marking BC h_{FE} rank : E, F, G

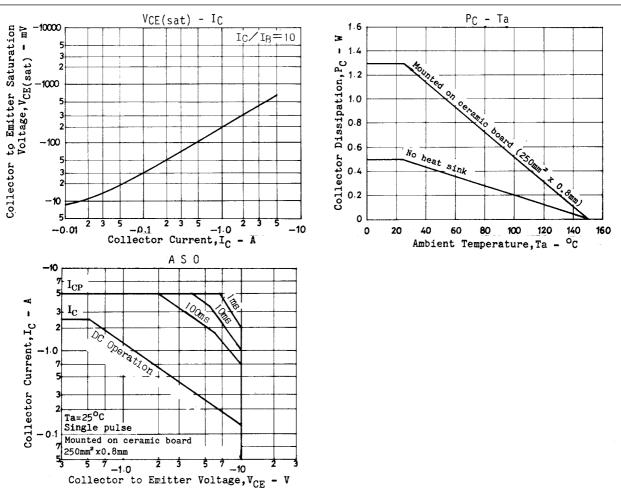
Е	200	160	F	320	280	G	560

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Parameter	Symbol	Conditions	Ratings			Unit
Falametei			min	typ	max	Unit
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-1.5A, I _B =(-)0.15A		-0.25	-0.45	V
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =-10μA, I _E =0	-20			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =−1mA, R _{BE} =∞	-10			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0	-7			V
Output Capacitance	Cob	V _{CB} =-10V, f=1MHz		70		pF





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