



SANYO Semiconductors

DATA SHEET

2SB1324 / 2SD1998 — PNP / NPN Epitaxial Planar Silicon Transistors

Compact Motor Driver Applications

Features

- Low saturation voltage.
- Contains diode between collector and emitter.
- Contains bias resistance between collector and emitter.
- Large current capacity.
- Small-sized package making it easy to provide high-density, small-sized hybrid ICs.

Specifications () : 2SB1324

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		(-)40	V
Collector-to-Emitter Voltage	VCEO		(-)30	V
Emitter-to-Base Voltage	VEBO		(-)6	V
Collector Current	IC		(-)3	A
Collector Current (Pulse)	ICP		(-)5	A
Collector Dissipation	PC	Mounted on a ceramic board (250mm ² ×0.8mm)	1.5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =(-)30V, I _E =0A			(-)1.0	μA
DC Current Gain	hFE1	V _{CE} =(-)2V, I _C =(-)0.5A	75			
	hFE2	V _{CE} =(-)2V, I _C =(-)2A	50			

Marking 2SB1324 : BL
2SD1998 : DM

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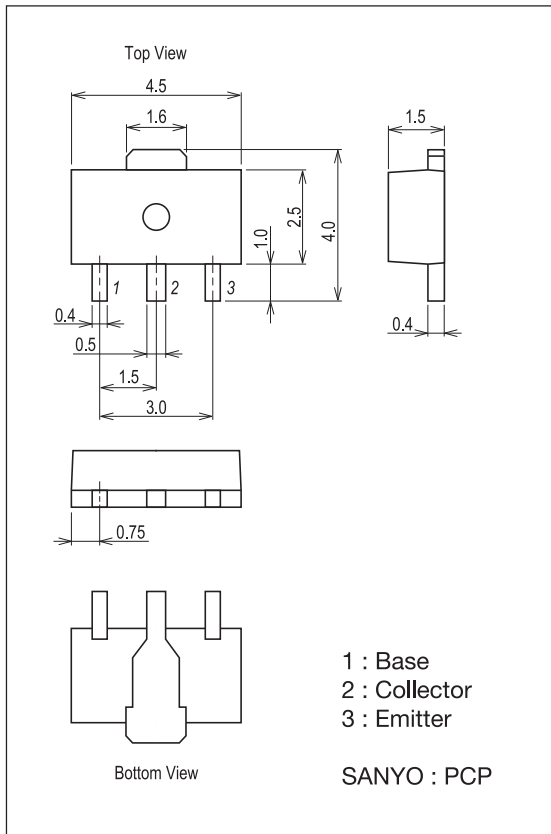
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)2V, I_C=(-)0.5A$		100		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(55)40		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)2A, I_B=(-)100mA$		(-0.25)0.2	(-0.6)0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)2A, I_B=(-)100mA$			(-)-1.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0A$	(-)-40			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO1}$	$I_C=(-)10\mu A, R_{BE}=\infty$	(-)-40			V
	$V_{(BR)CEO2}$	$I_C=(-)10\mu A, R_{BE}=\infty$	(-)-30			V
Diode Forward Voltage	V_F	$I_F=0.5A$			1.5	V
Base-to-Emitter Resistance	R_{BE}			0.8		$k\Omega$

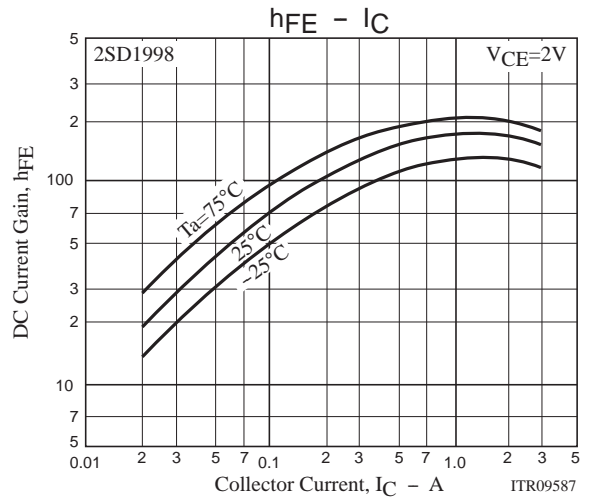
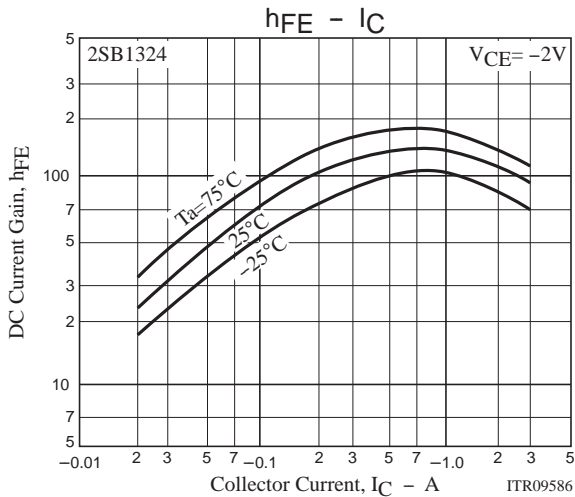
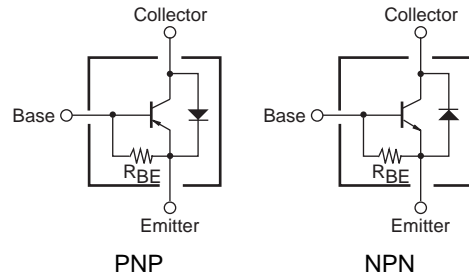
Package Dimensions

unit : mm (typ)

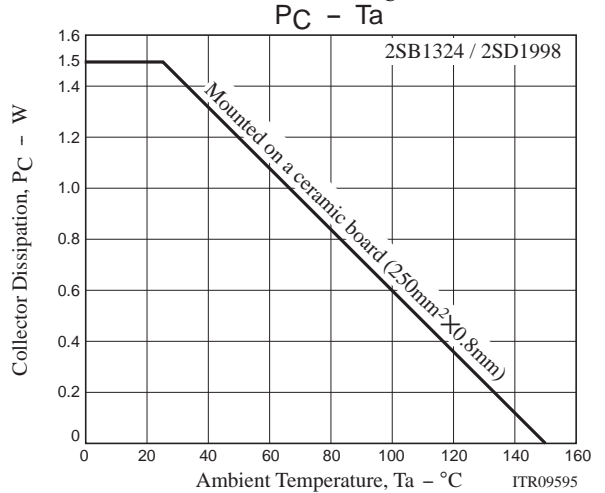
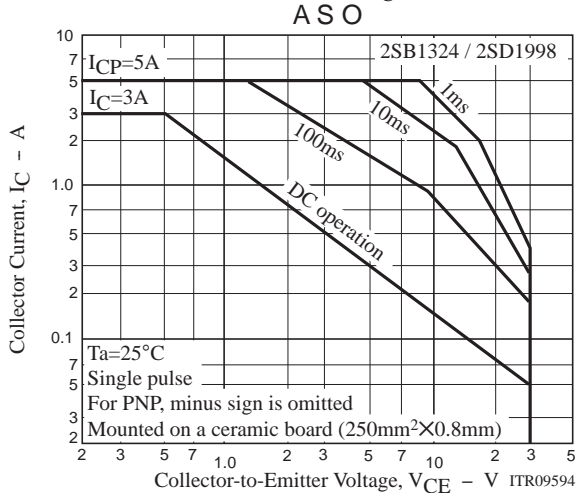
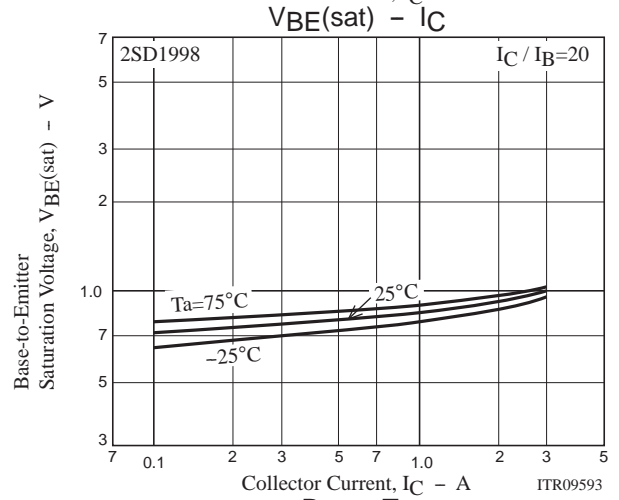
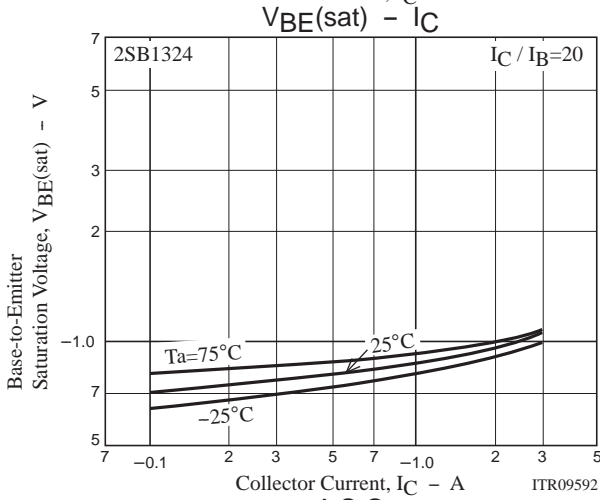
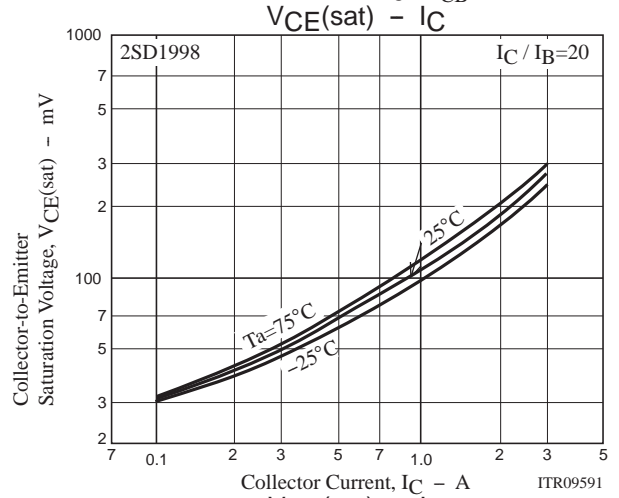
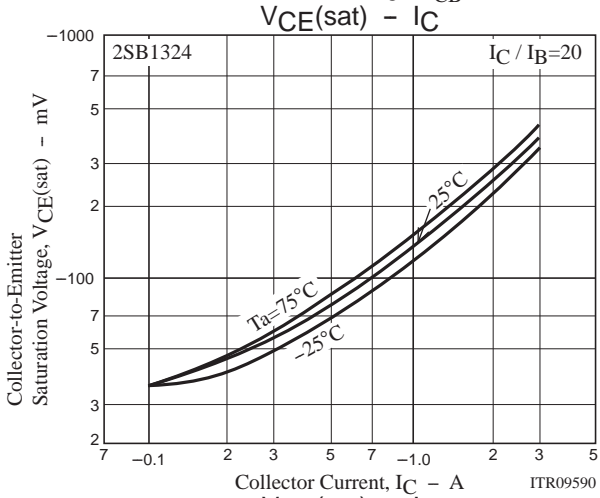
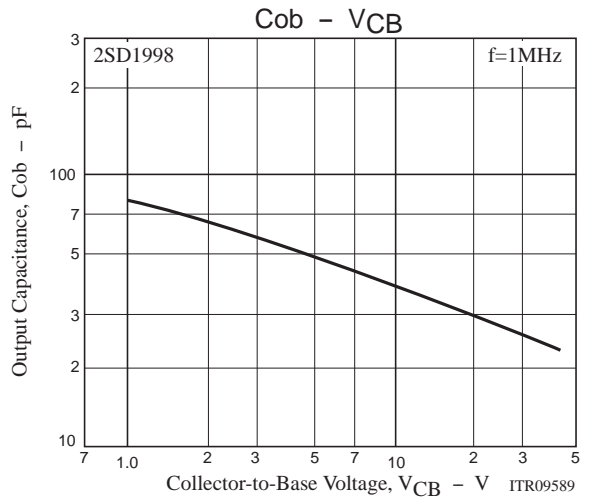
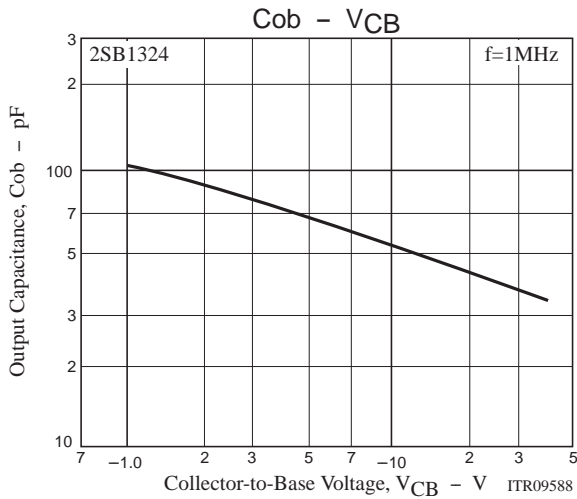
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Electrical Connection



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