

<b>SANYO</b>	No.3130	<b>2SB1324/2SD1998</b>
	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

( ): 2SB1324

**Absolute Maximum Ratings at Ta = 25°C**

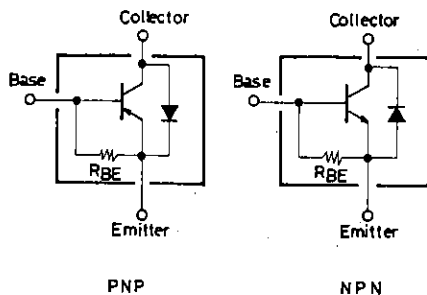
			unit
Collector to Base Voltage	V <sub>CB0</sub>	(- )40	V
Collector to Emitter Voltage	V <sub>CEO</sub>	(- )30	V
Emitter to Base Voltage	V <sub>EBO</sub>	(- )6	V
Collector Current	I <sub>C</sub>	(- )3	A
Collector Current(Pulse)	I <sub>CP</sub>	(- )5	A
Collector Dissipation	P <sub>C</sub> (Mounted on ceramic board 250mm <sup>2</sup> ×0.8mm)	1.5	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics at Ta = 25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = (-)30V, I <sub>E</sub> = 0			(- )1.0	μA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)0.5A	70			
	h <sub>FE</sub> (2)	V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)2A	50			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)0.5A		100		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> = (-)10V, f = 1MHz		(55)40		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = (-)2A, I <sub>B</sub> = (-)100mA		0.2	0.5	V
				(-0.25)	(-0.6)	
B-E Saturation Voltage	V <sub>BE(sat)</sub>	V <sub>CE</sub> = (-)2V, I <sub>B</sub> = (-)100mA			(- )1.5	V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = (-)10μA, I <sub>E</sub> = 0	(- )40			V
C-E Breakdown Voltage	V <sub>(BR)CEO(1)</sub>	I <sub>C</sub> = (-)10μA, R <sub>BE</sub> = ∞	(- )40			V
	V <sub>(BR)CEO(2)</sub>	I <sub>C</sub> = (-)10mA, R <sub>BE</sub> = ∞	(- )30			V
Diode Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 0.5A			1.5	V
Base to Emitter Resistance	R <sub>BE</sub>			0.8		kΩ

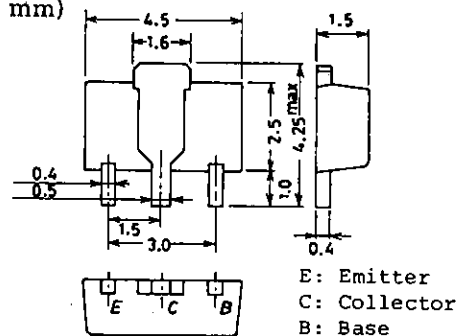
Marking 2SB1324: BL  
2SD1998: DM

**Electrical Connection**



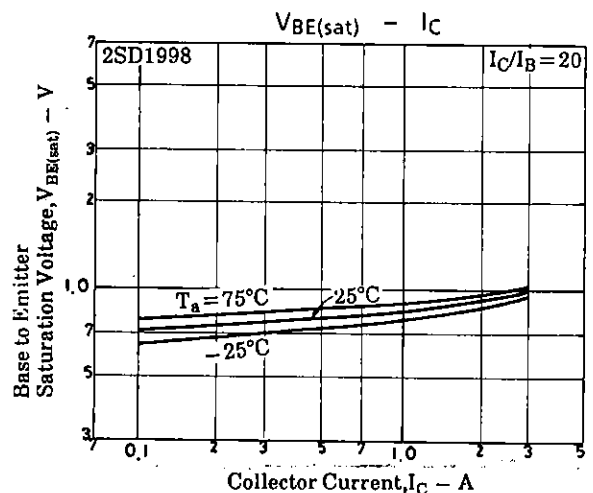
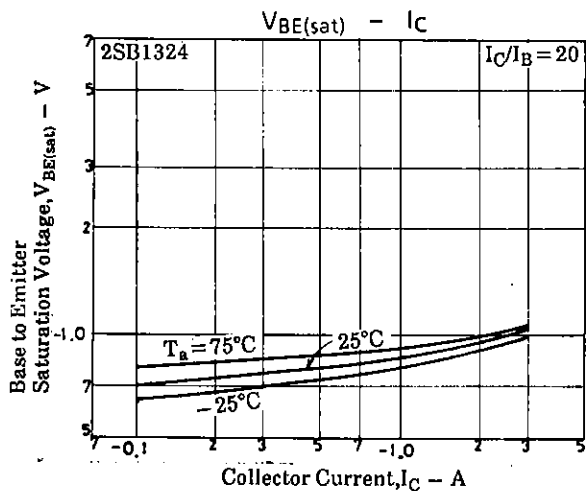
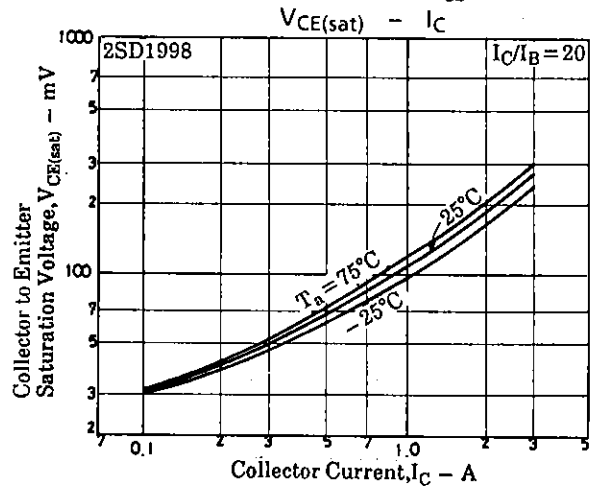
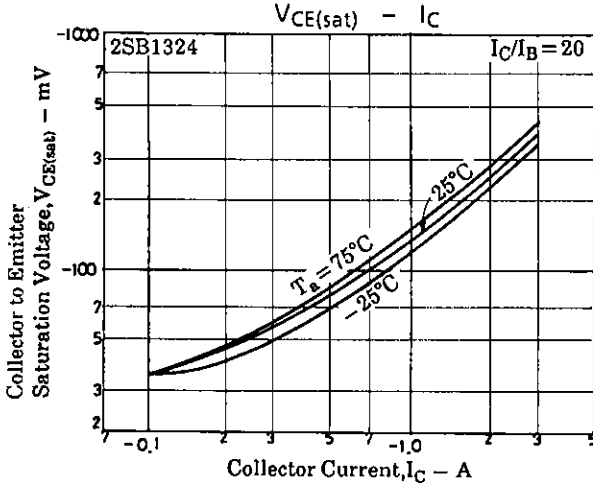
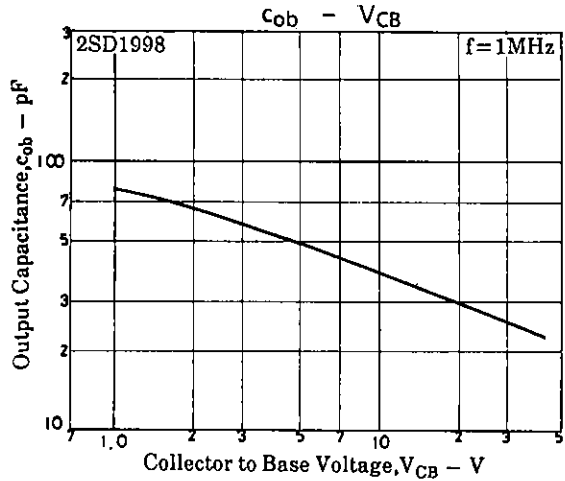
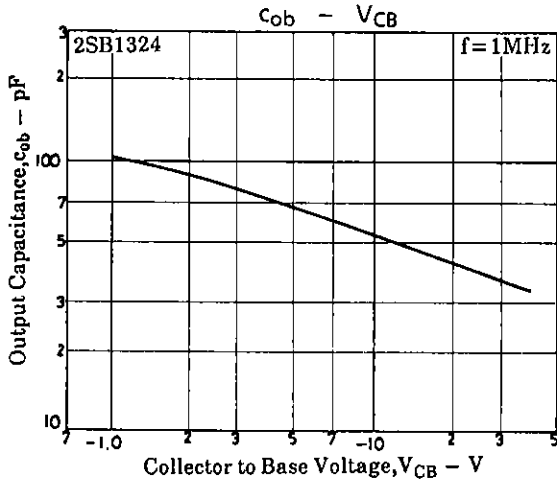
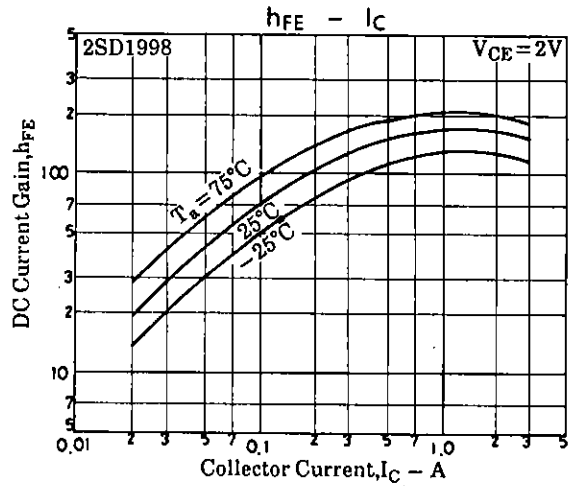
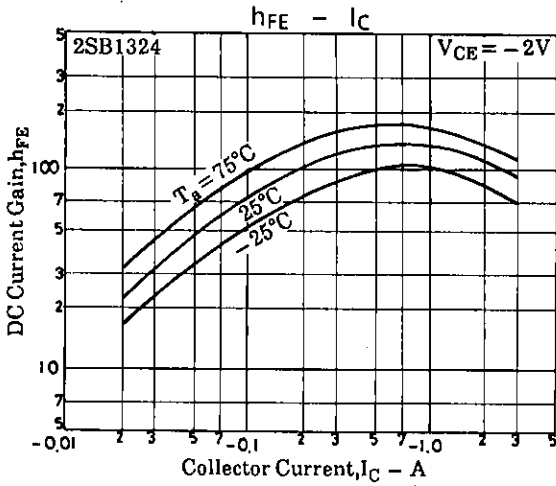
**Package Dimensions 2038**

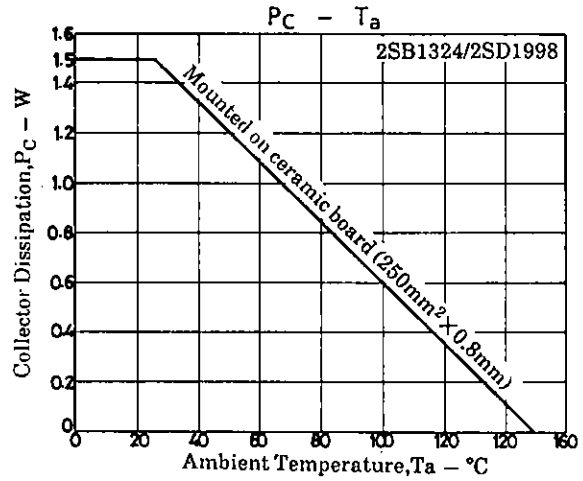
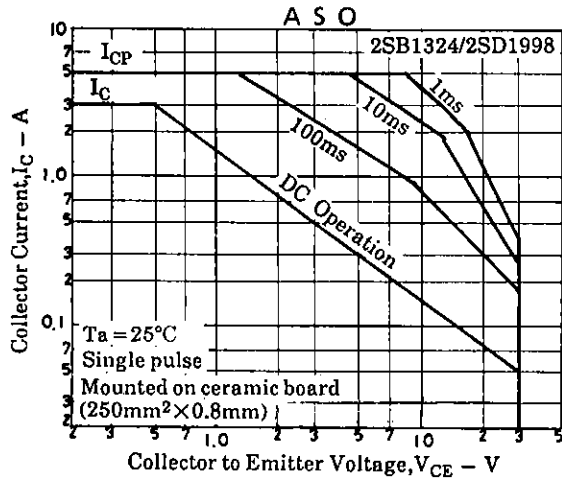
(unit: mm)



E: Emitter  
C: Collector  
B: Base

SANYO: PCP  
(Bottom View)





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