

<b>SANYO</b>	No.3176A	<b>2SB1397/2SD2100</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 base and emitter.
- Large current capacity.
- Small-sized package making it easy to provide high-density, small-sized hybrid ICs.

( ) : 2SB1397

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

			unit
Collector to Base Voltage	V <sub>CB0</sub>	(-)25	V
Collector to Emitter Voltage	V <sub>CEO</sub>	(-)20	V
Emitter to Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)2	A
Collector Current(Pulse)	I <sub>CP</sub>	(-)4	A
Collector Dissipation	P <sub>C</sub>	Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm)	1.3 W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	- 55 to + 150	°C

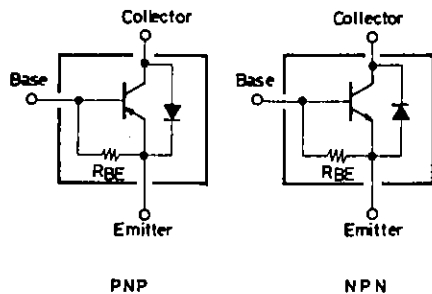
**Electrical Characteristics at Ta = 25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = (-)20V, 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		(300)200		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = (-)10V, f = 1MHz		(40)25		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = (-)1A, I <sub>B</sub> = (-)50mA		(-)0.25	(-)0.5	V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = (-)1A, I <sub>B</sub> = (-)50mA			(-)1.5	V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = (-)10μA, I <sub>E</sub> = 0	(-)25			V
C-E Breakdown Voltage	V <sub>(BR)CEO(1)</sub>	I <sub>C</sub> = (-)10μA, R <sub>BE</sub> = ∞	(-)25			V
	V <sub>(BR)CEO(2)</sub>	I <sub>C</sub> = (-)10mA, R <sub>BE</sub> = ∞	(-)20			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>			1.6		kΩ

Marking 2SB1397 : BP

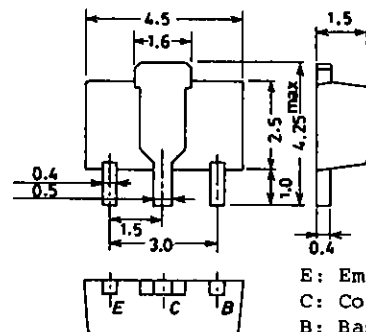
2SD2100 : DP

**Electrical Connection**



**Package Dimensions 2038**

(unit : mm)



(Bottom View)

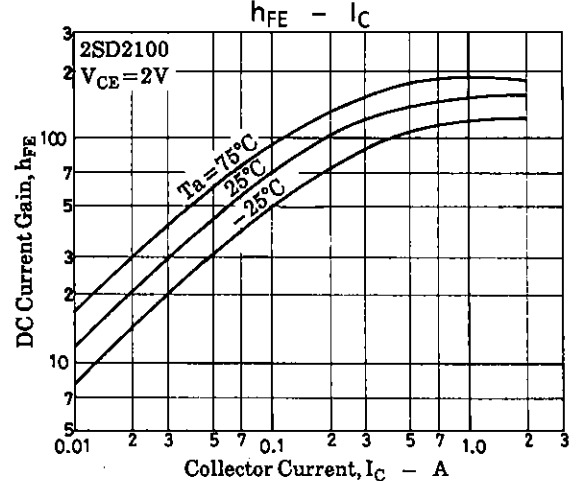
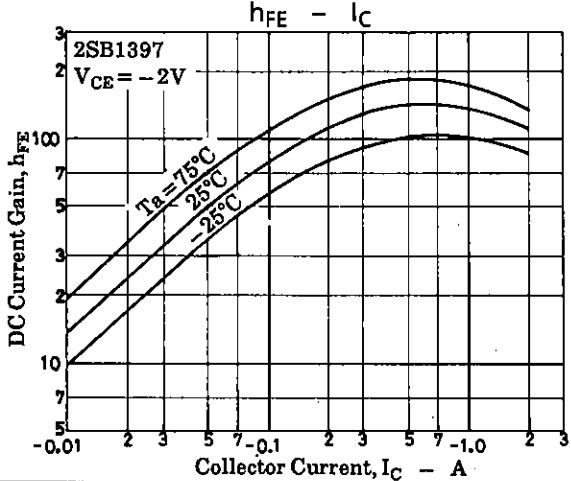
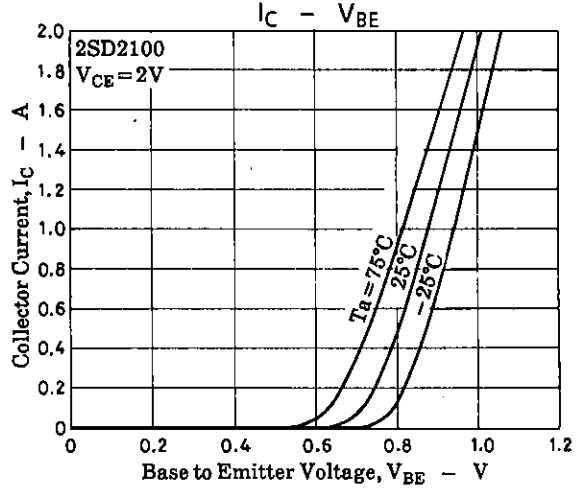
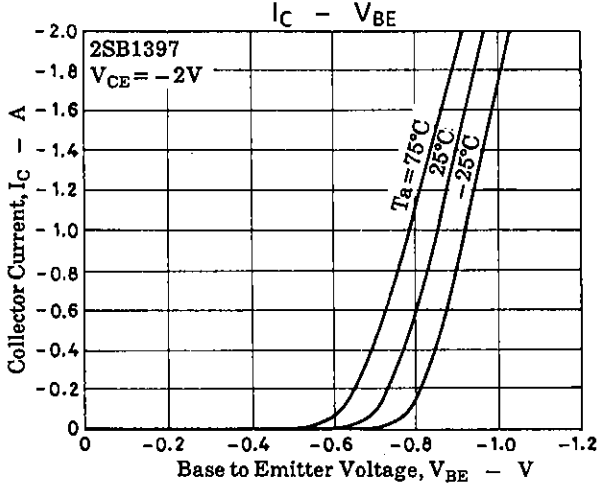
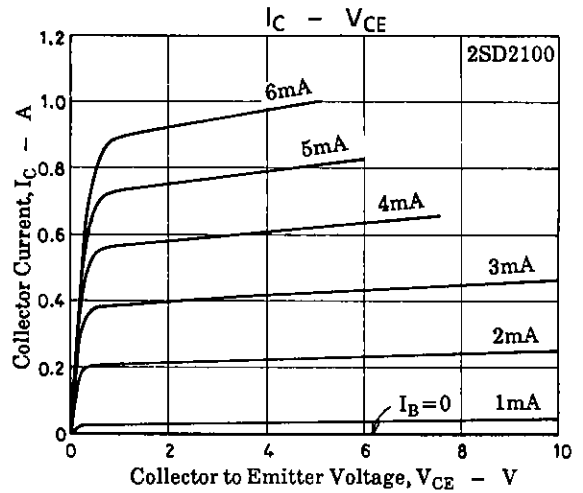
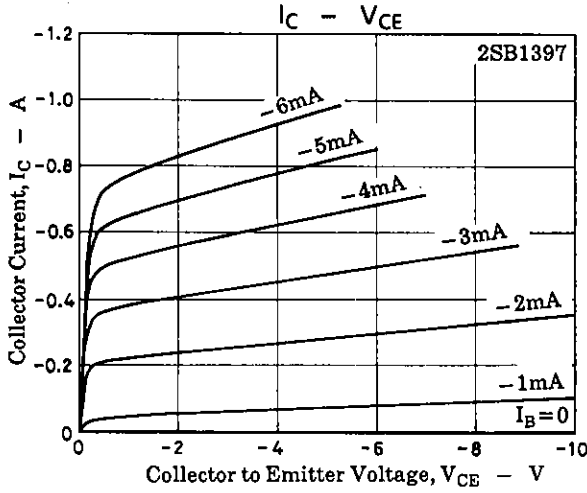
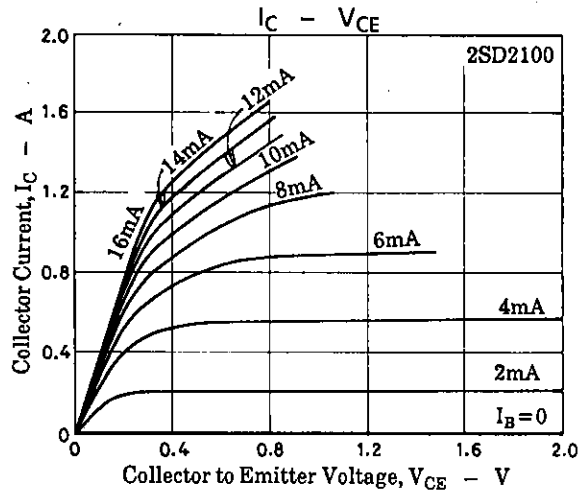
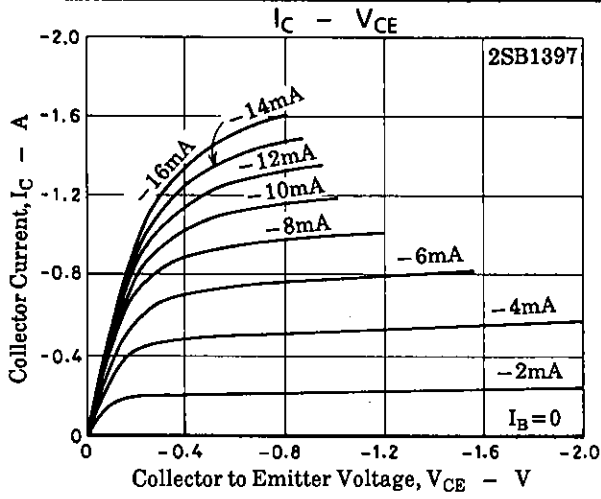
E: Emitter  
C: Collector  
B: Base

SANYO: PCP

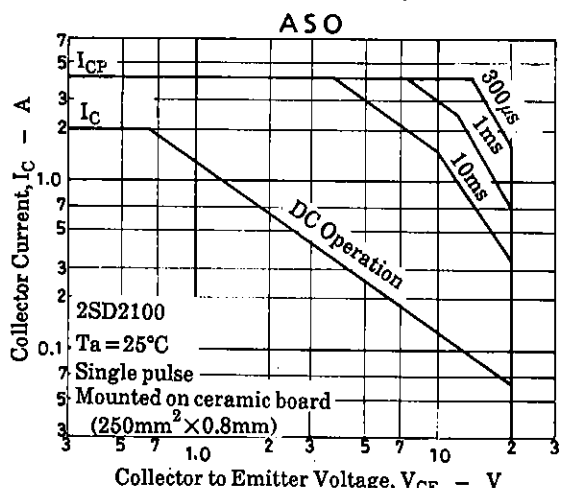
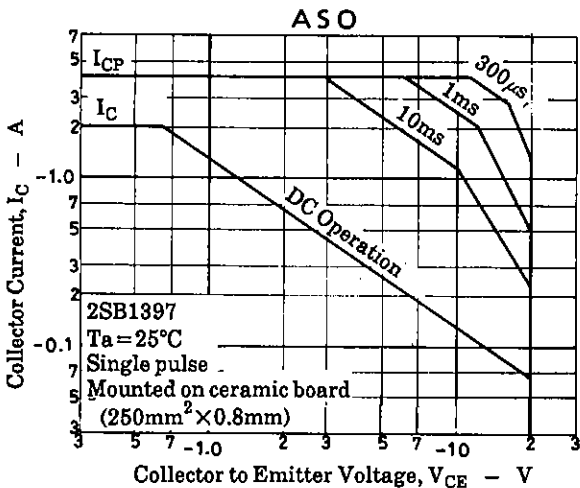
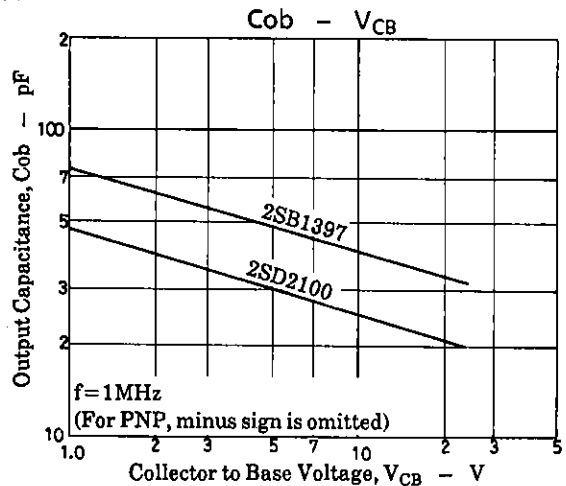
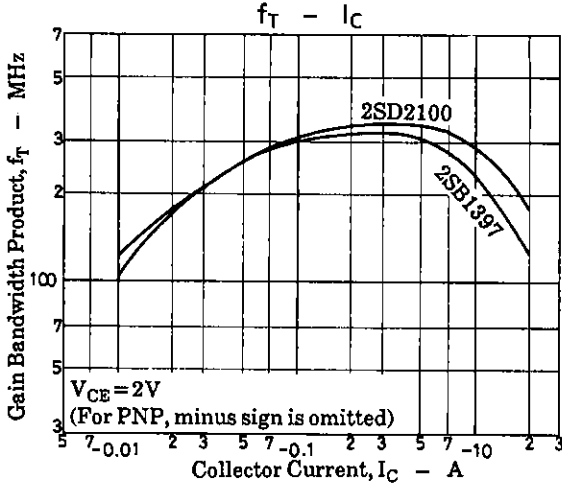
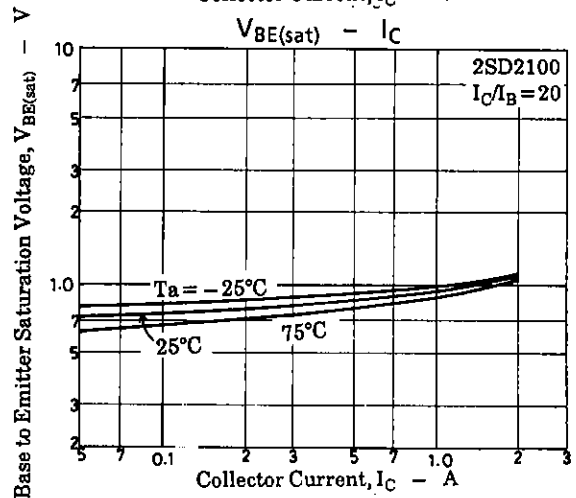
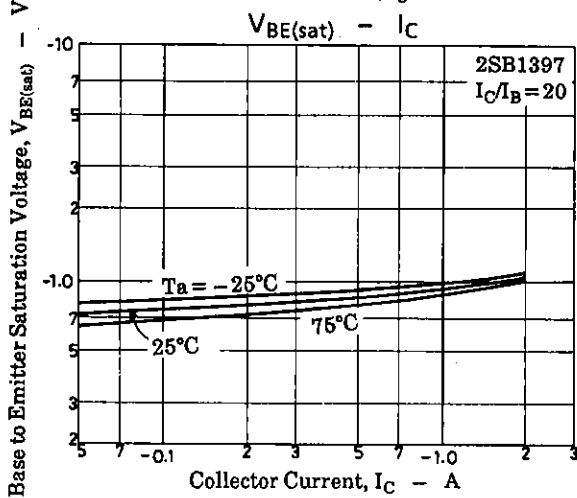
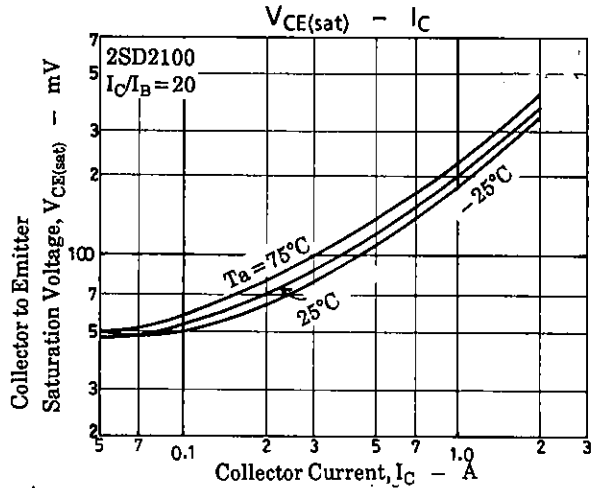
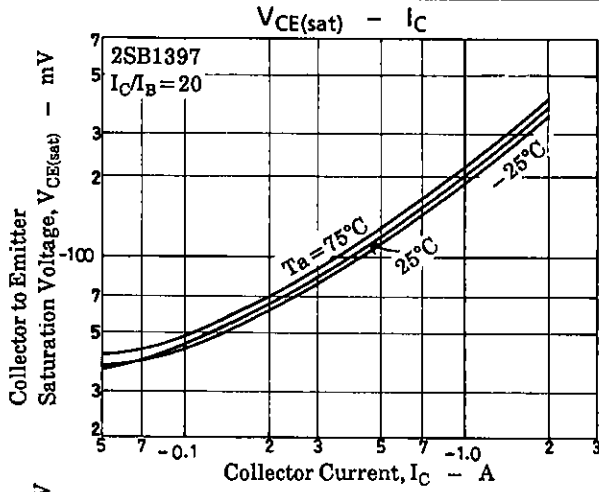
**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

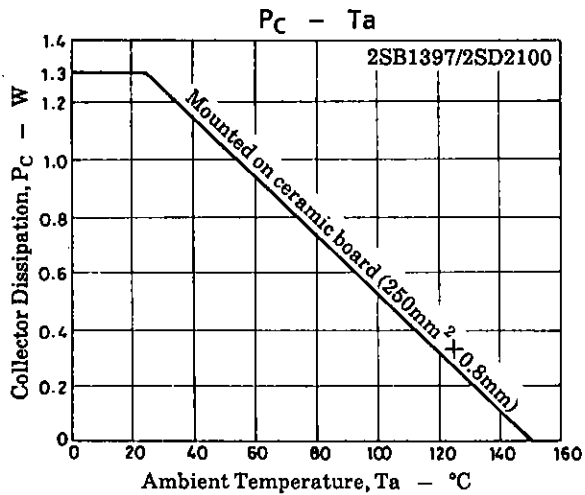
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