

<b>SANYO</b>	No.1034B	<b>2SB913/2SD1230</b>
	PNP/NPN Planar Silicon Darlington Transistors	
<b>Driver Applications</b>		

**Applications**

- Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

**Features**

- High DC current gain.
- High current capacity and wide ASO.
- Low saturation voltage.

( ) : 2SB913

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

			unit
Collector-to-Base Voltage	V <sub>CB0</sub>	(-)110	V
Collector-to-Emitter Voltage	V <sub>CE0</sub>	(-)100	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)8	A
Collector Current (Pulse)	I <sub>CP</sub>	(-)12	A
Collector Dissipation	P <sub>C</sub>	2.5	W
		60	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

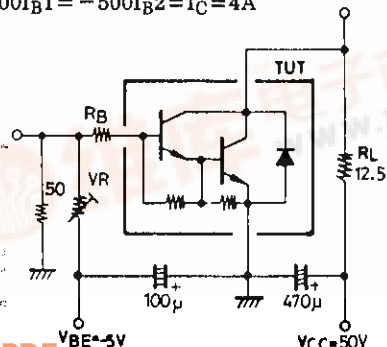
T<sub>c</sub> = 25°C

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

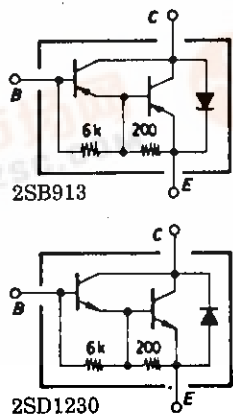
			min	typ	max	unit
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> = (-)80V, I <sub>E</sub> = 0			(-)0.1	mA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = (-)5V, I <sub>C</sub> = 0			(-)3	mA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = (-)3V, I <sub>C</sub> = (-)4A	1500	4000		
Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = (-)5V, I <sub>C</sub> = (-)4A		20		MHz
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = (-)4A, I <sub>B</sub> = (-)8mA		0.9(-)1.5		V
				(-1.0)		
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = (-)4A, I <sub>B</sub> = (-)8mA		(-)2.0		V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = (-)5mA, I <sub>E</sub> = 0	(-)110			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = (-)50mA, R <sub>BE</sub> = ∞	(-)100			V
Rise Time	t <sub>on</sub>	See specified Test Circuit.	(0.7)0.6			μs
Storage Time	t <sub>stg</sub>	"	(1.4)4.8			μs
Fall Time	t <sub>f</sub>	"	(1.5)1.6			μs

**Specified Test Circuit**

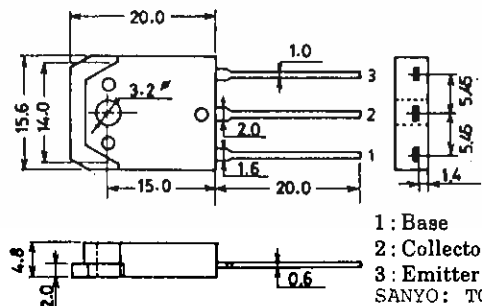
(For PNP, the polarity is reversed.)  
 PW = 50μs, Duty Cycle ≤ 1%  
 500I<sub>B1</sub> = -500I<sub>B2</sub> = I<sub>C</sub> = 4A



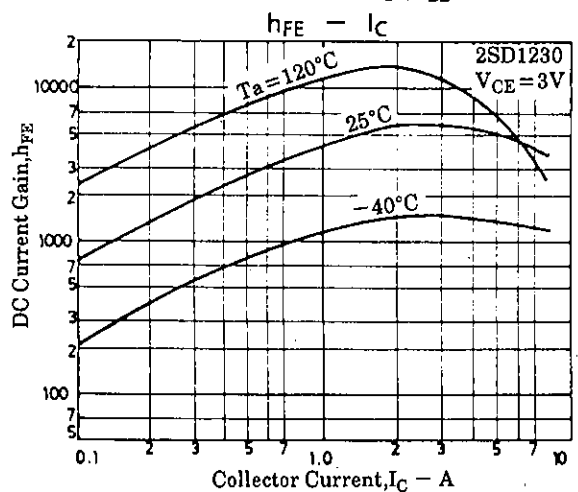
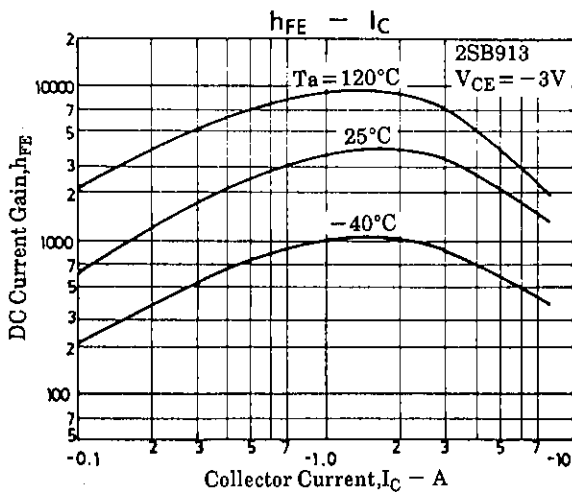
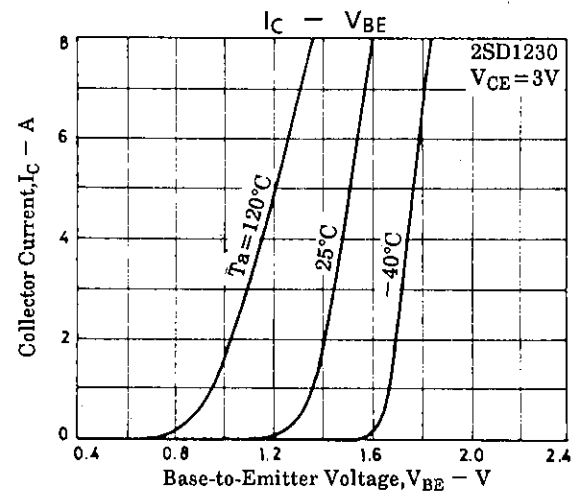
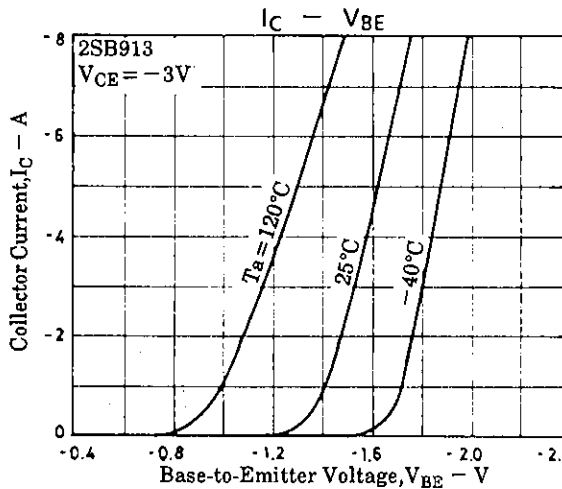
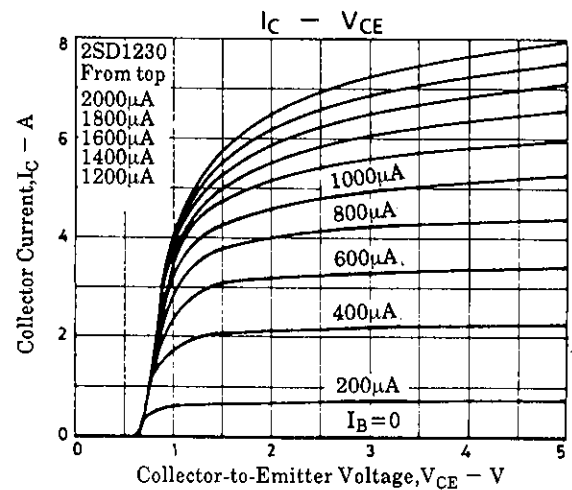
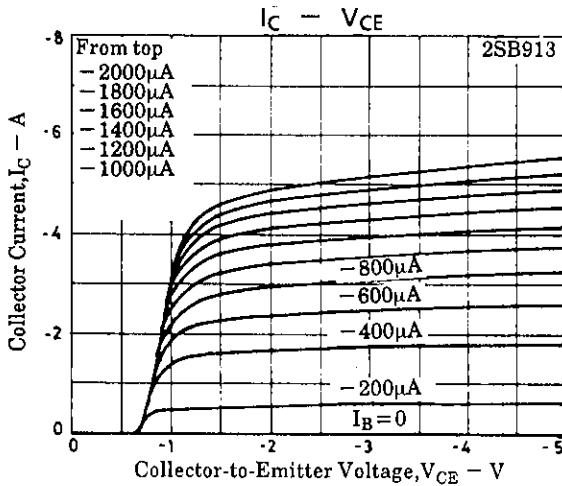
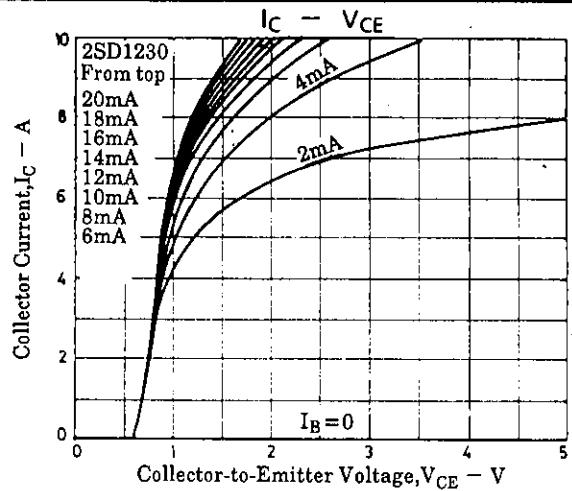
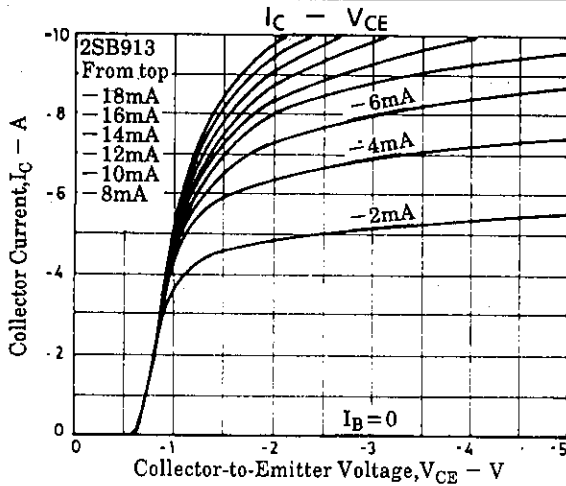
**Electrical Connection**



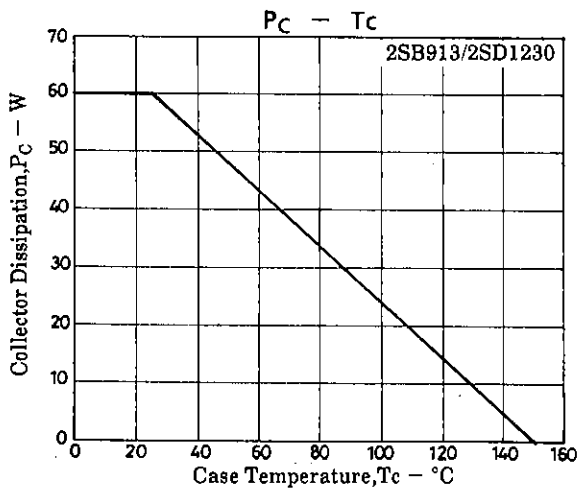
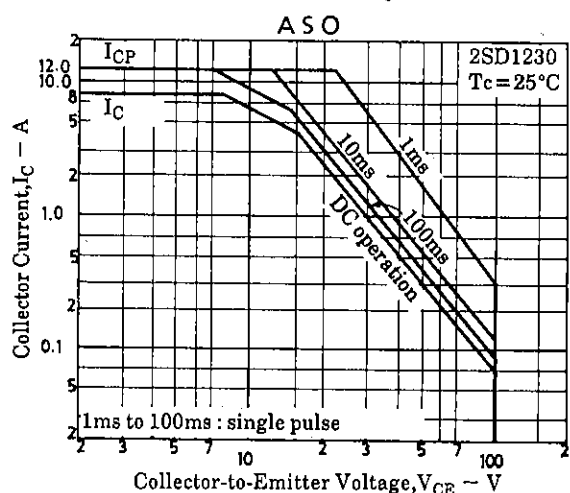
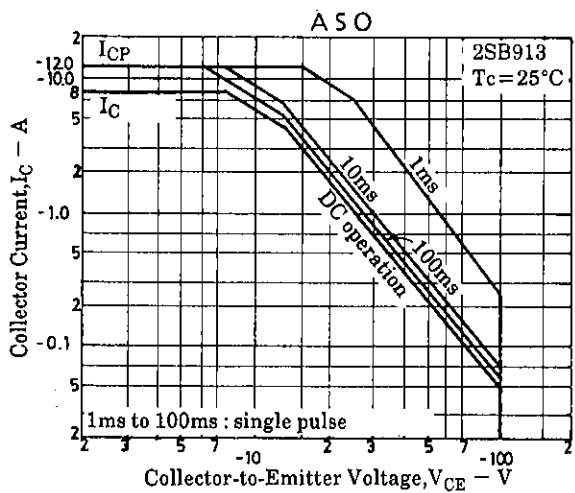
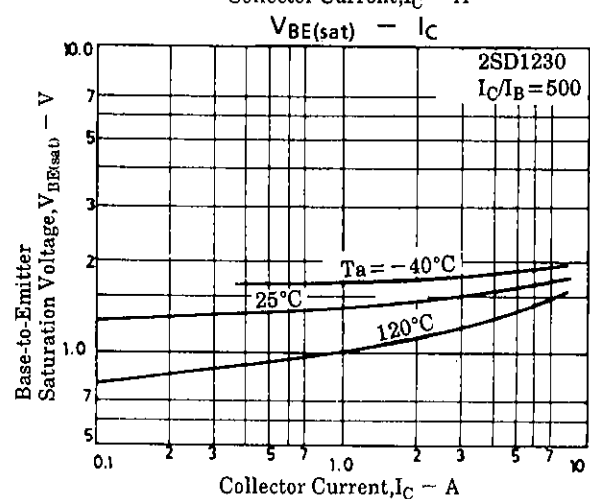
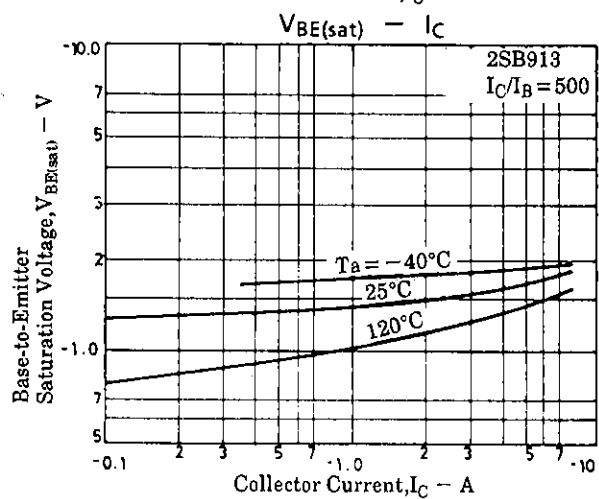
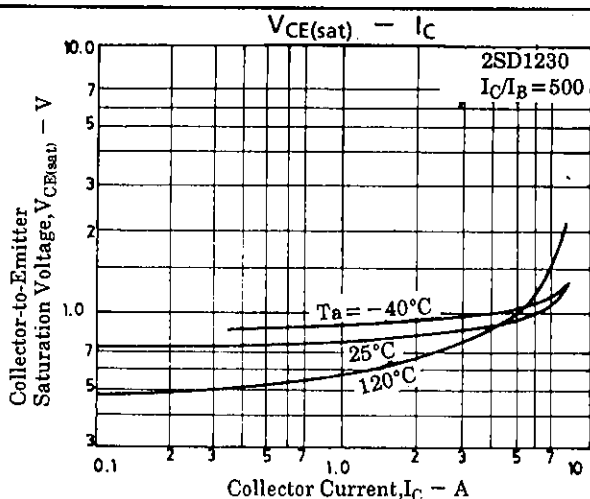
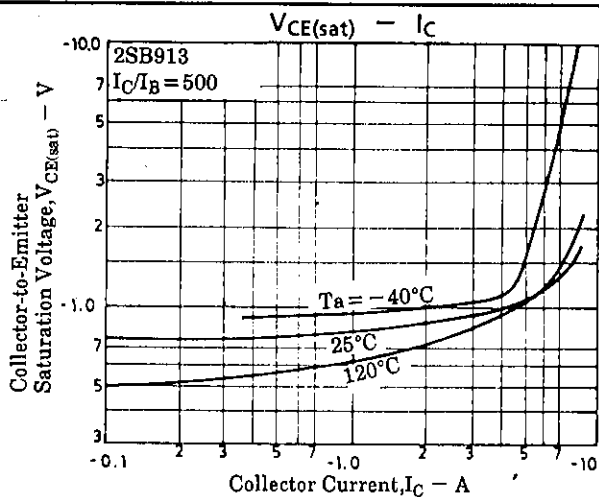
**Package Dimensions 2022A**  
(unit: mm)



2SB913/2SD1230



## 2SB913/2SD1230



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