

<b>SANYO</b>	No.1028B	<b>2SB912/2SD1229</b>
	PNP/NPN Epitaxial 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.

( ) : 2SB912

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

			unit
Collector-to-Base Voltage	V <sub>CB0</sub>	(-)70	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>	(-)60	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)10	A
Collector Current (Pulse)	I <sub>CP</sub>	(-)15	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**

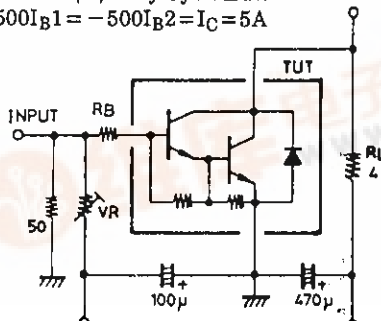
			min	typ	max	unit
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> = (-)40V, I <sub>E</sub> = 0			(-)0.1	mA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = (-)5V, I <sub>C</sub> = 0			(-)3.0	mA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)5A	2000	5000		
Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = (-)5V, I <sub>C</sub> = (-)5A		20		MHz
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = (-)5A, I <sub>B</sub> = (-)10mA		0.9(-)1.5		V
				(-1.0)		
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = (-)5A, I <sub>B</sub> = (-)10mA		(-)2.0		V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = (-)5mA, I <sub>E</sub> = 0	(-)70			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = (-)50mA, R <sub>BE</sub> = ∞	(-)60			V
Rise Time	t <sub>on</sub>	See specified Test Circuit.		(0.5)0.6		μs
Storage Time	t <sub>stg</sub>	"		(1.5)3.0		μs
Fall Time	t <sub>f</sub>	"		(1.7)1.8		μs

**Specified Test Circuit**

(For PNP, the polarity is reversed.)

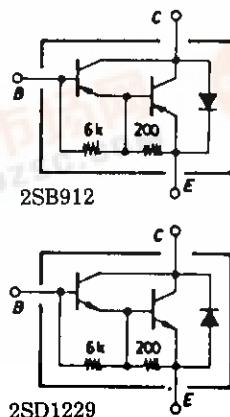
PW = 50μs, Duty Cycle ≤ 1%

500I<sub>B1</sub> = -500I<sub>B2</sub> = I<sub>C</sub> = 5A



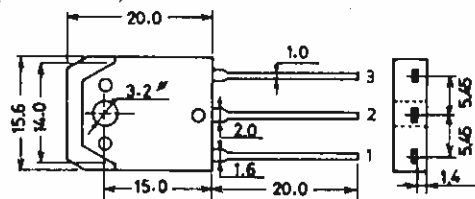
Unit (Resistance : Ω, Capacitance : F)

**Electrical Connection**



**Package Dimensions 2022A**

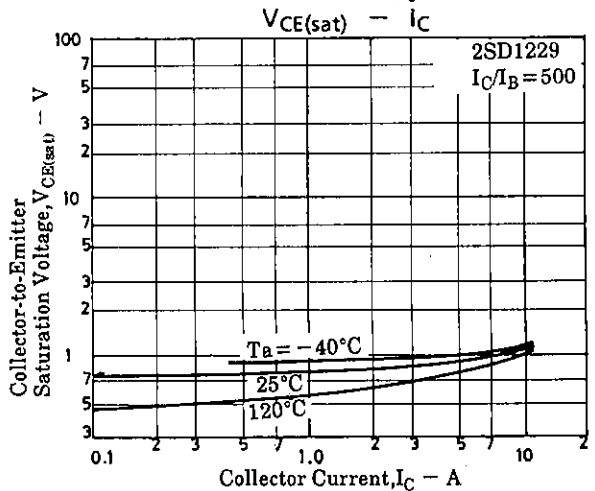
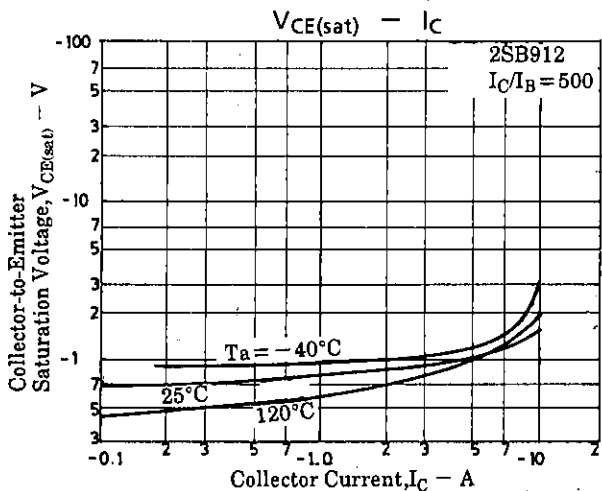
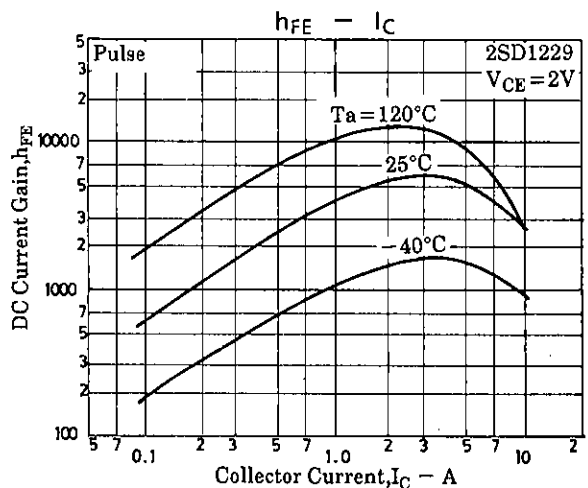
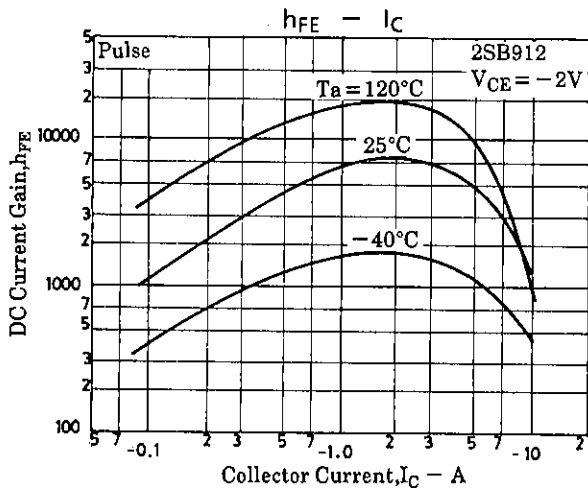
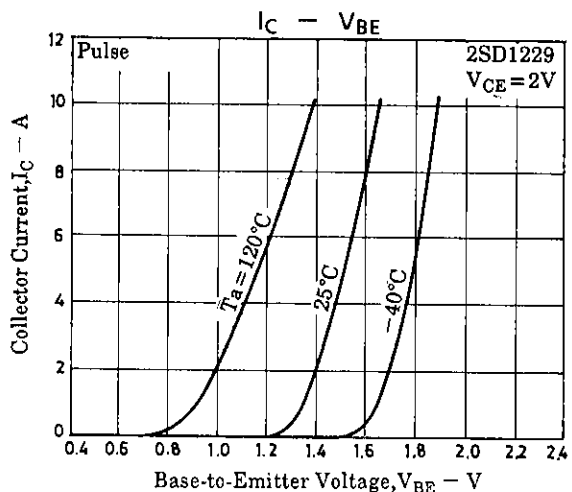
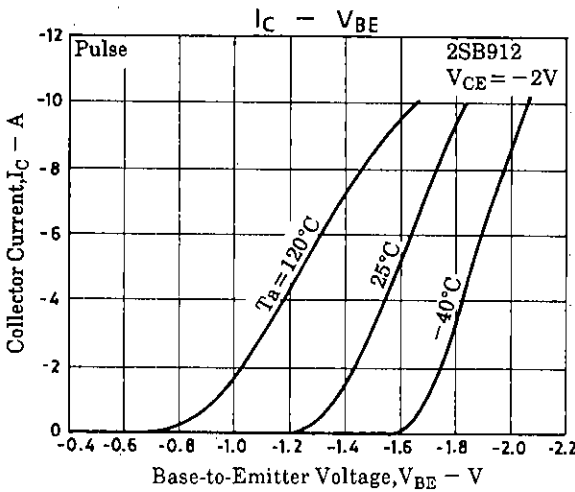
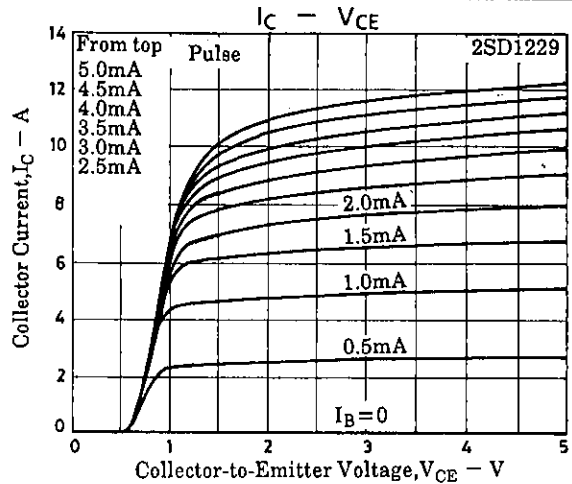
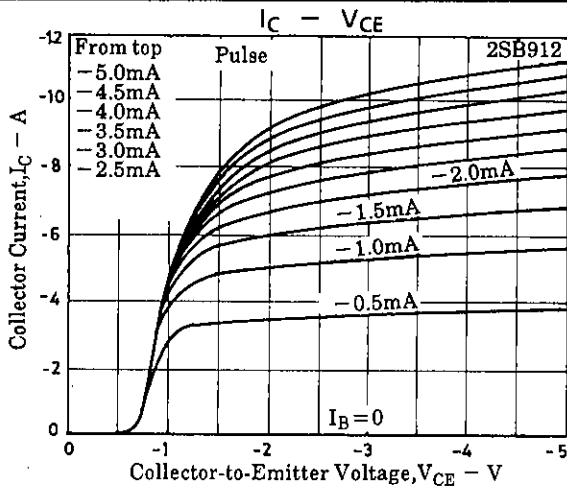
(unit : mm)



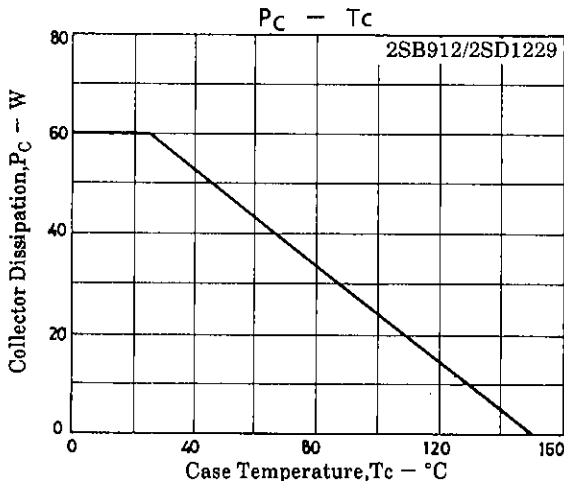
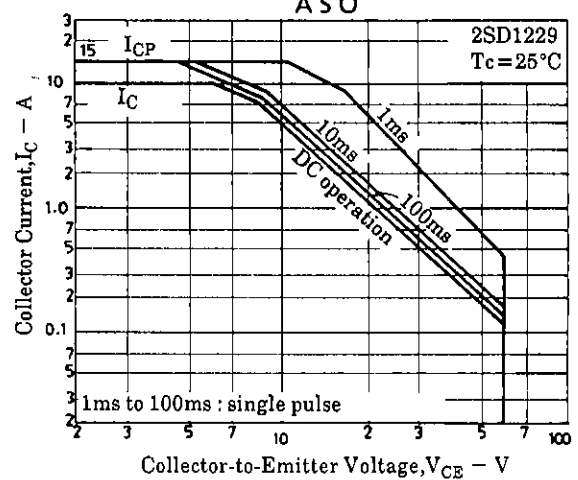
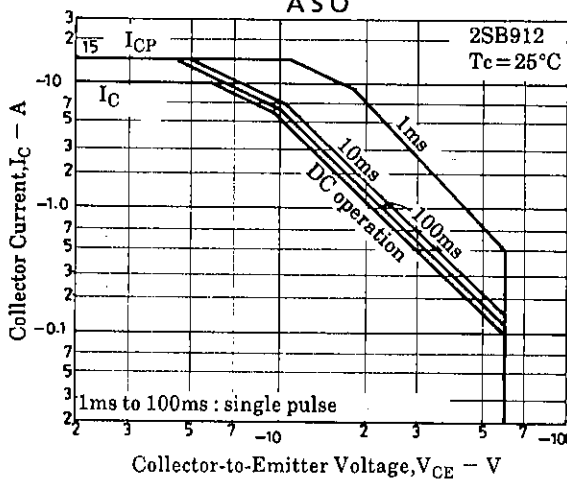
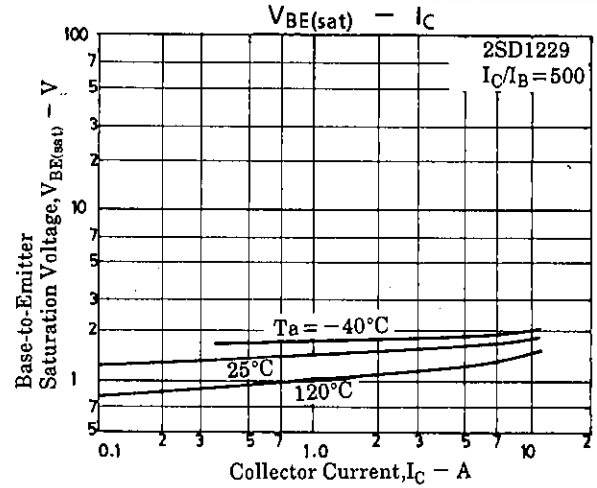
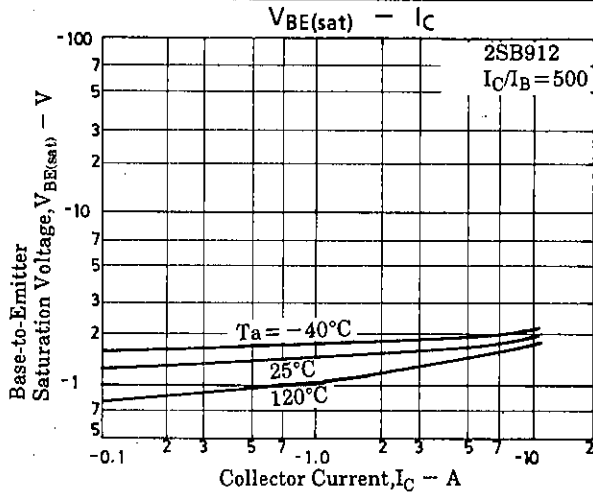
1 : Base  
2 : Collector  
3 : Emitter

SANYO: TO3PB

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