

<b>SANYO</b>	No. 677D	<b>2SB816/2SD1046</b>
Silicon PNP/NPN Planar Type Transistor FOR LF POWER AMP, 50W OUTPUT, LARGE POWER SWITCHING		

**Features**

- Capable of being mounted easily because of one-point fixing type plastic molded package (Interchangeable with TO-3)
- Wide ASO because of built-in ballast resistance
- Good dependence of  $f_T$  on current and good HF characteristic

( ): 2SB816

**Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$**

			unit
Collector-to-Base Voltage	V <sub>CB0</sub>	(-)150	V
Collector-to-Emitter Voltage	V <sub>CE0</sub>	(-)120	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)8	A
Peak Collector Current	i <sub>cp</sub>	(-)12	A
Collector Dissipation	P <sub>C</sub>	T <sub>c</sub> =25°C	80 W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-40 to +150	°C

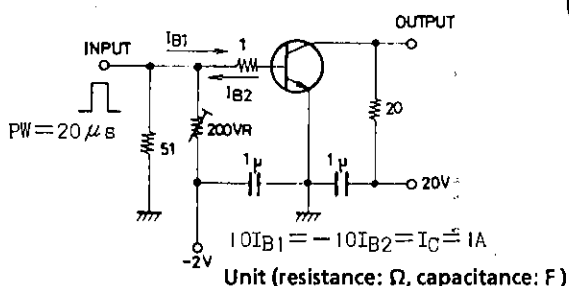
**Electrical Characteristics at  $T_a=25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</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> =(-)4V, I <sub>C</sub> =0			(-)0.1	mA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)1A	60*		200*	
	h <sub>FE</sub> (2)	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)5A	20			
Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)1A		15		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> =(-)10V, f=1MHz		(220)		pF
				160		
Base to Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)1A			1.5	V
Collector to Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =(-)5A, I <sub>B</sub> =(-)0.5A		1.0	2.0	V
C-B Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =(-)5mA, I <sub>E</sub> =0	(-)150			V
C-E Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =(-)5mA, R <sub>BE</sub> =∞	(-)120			V
		I <sub>C</sub> =(-)50mA, R <sub>BE</sub> =∞	(-)120			V
E-B Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =(-)5mA, I <sub>C</sub> =0	(-)6			V
Turn-on Time	t <sub>on</sub>	At specified	(0.22)	0.22		μs
Fall Time	t <sub>f</sub>	test circuit	(0.37)	1.02		μs
Storage Time	t <sub>stg</sub>		(0.93)	6.66		μs

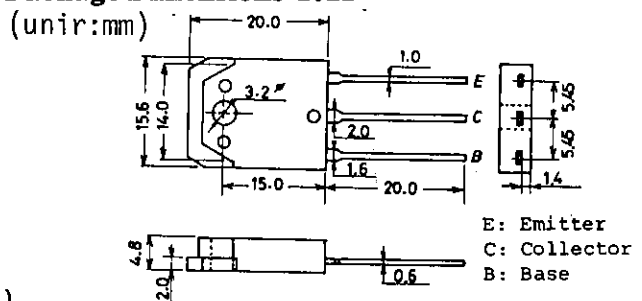
\* The 2SB816/2SD1046 are classified by 1A h<sub>FE</sub> as follows:

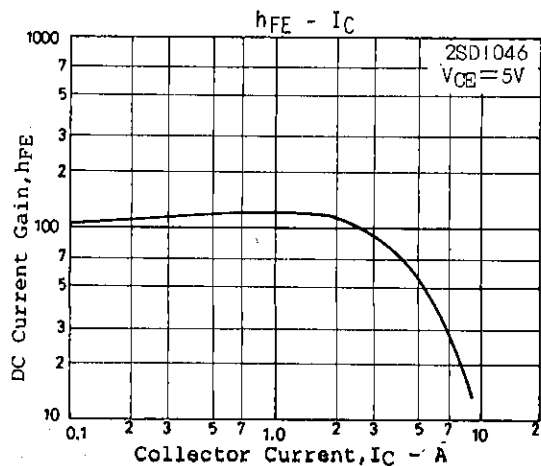
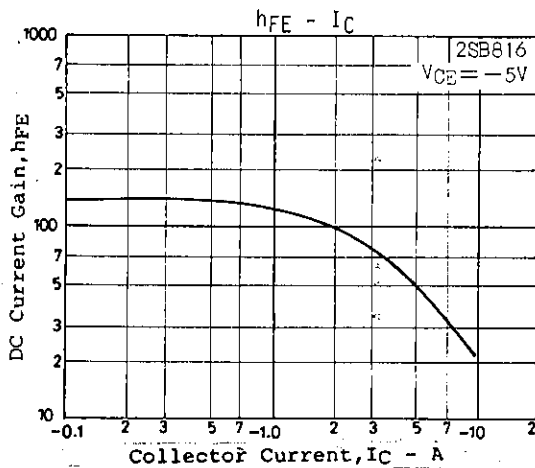
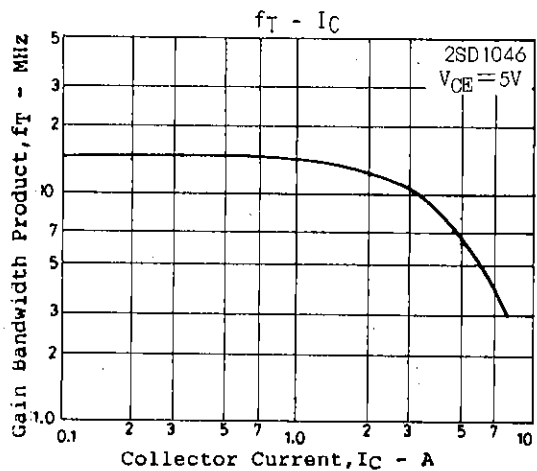
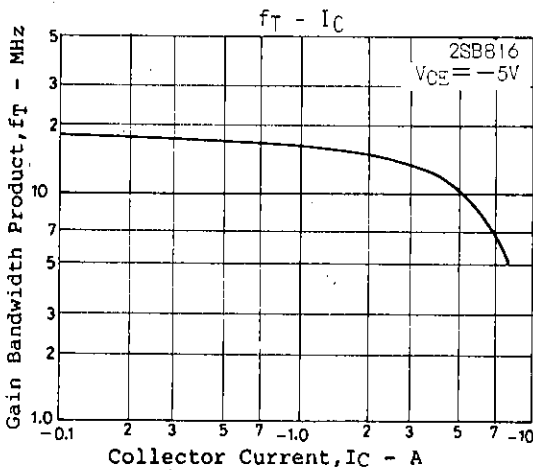
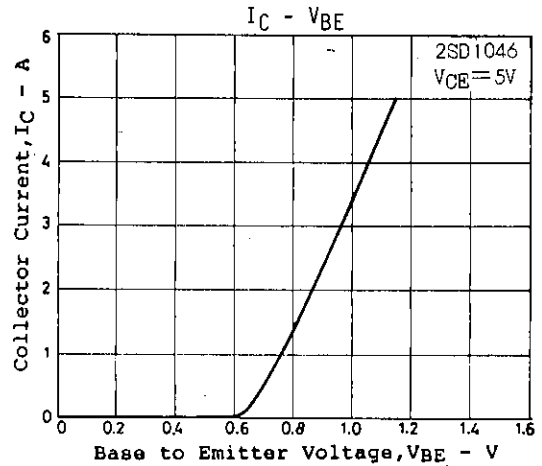
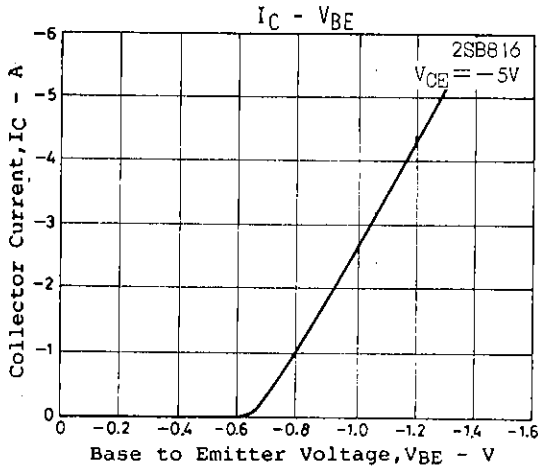
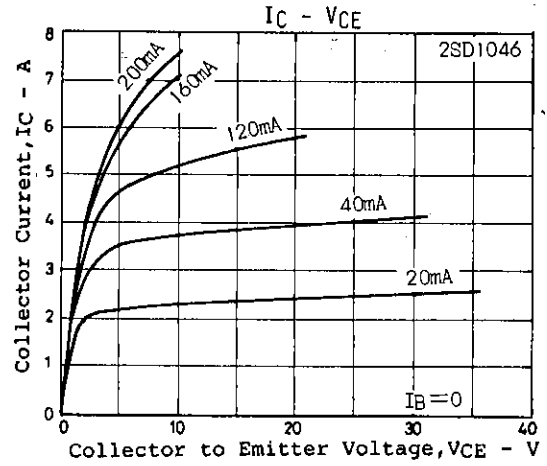
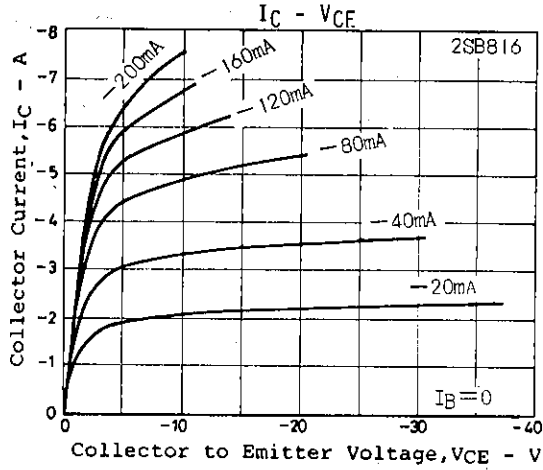
60	D	120	100	E	200
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**Switching Time Test Circuit**

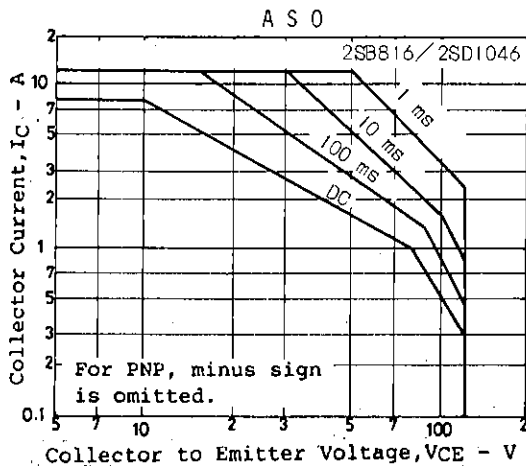
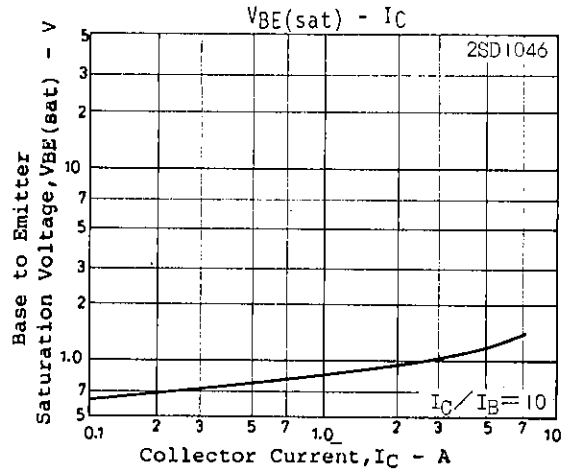
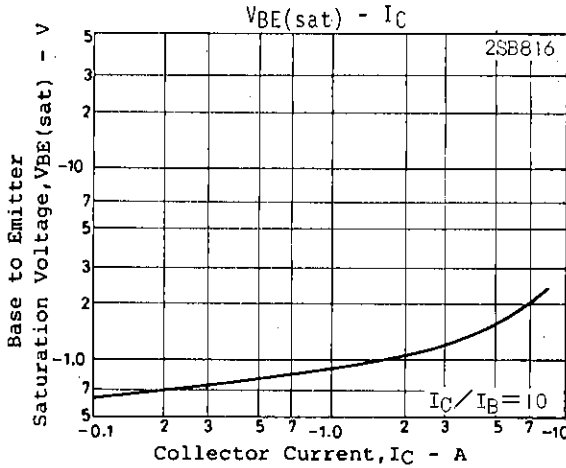
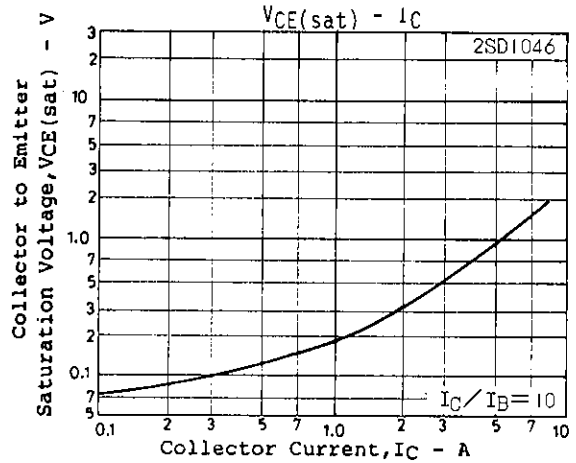
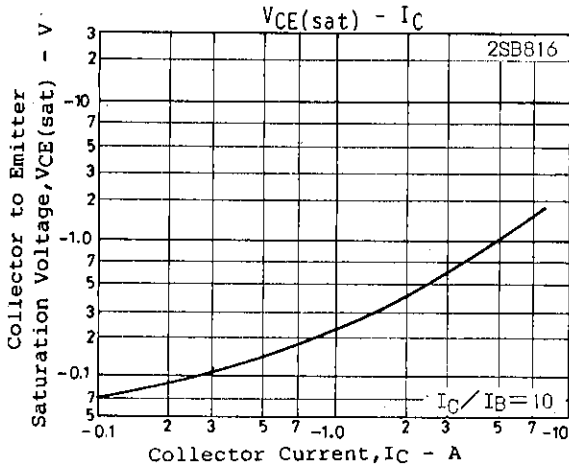
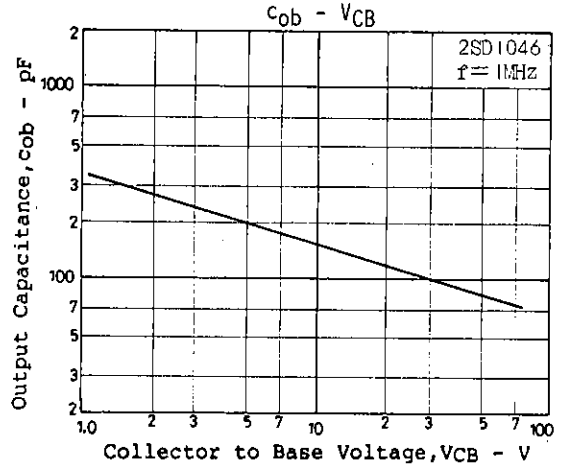
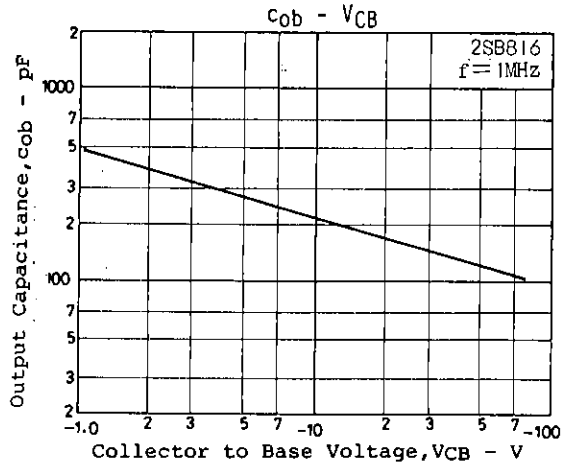


**Package Dimensions 2022**





2SB816/2SD1046



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