



No.2266A

2SB1270/2SD1906

PNP/NPN Epitaxial Planar Type  
Silicon Transistors

HIGH-CURRENT SWITCHING APPLICATIONS

**Applications**

- . Suitable for relay drivers, high-speed inverters, converters, and other general high-current switching applications

**Features**

- . Suitable for sets whose height is restricted
- . Low collector to emitter saturation voltage
- . Large current capacity

( ): 2SB1270

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

			unit
Collector to Base Voltage	V <sub>CB0</sub>	(-)90	V
Collector to Emitter Voltage	V <sub>CE0</sub>	(-)80	V
Emitter to Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)5	A
Peak Collector Current	i <sub>cp</sub>	(-)9	A
Collector Dissipation	P <sub>C</sub>	1.65	W
		30	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

Tc=25°C

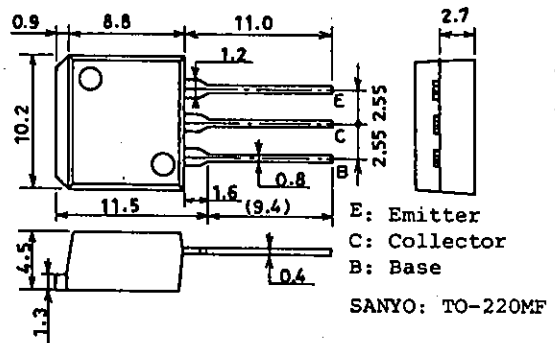
**Electrical Characteristics at Ta=25°C**

			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> =(-)4V, I <sub>C</sub> =0			(-)0.1	mA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> =(-)2V, I <sub>C</sub> =(-)1A	70*		280*	
	h <sub>FE</sub> (2)	V <sub>CE</sub> =(-)2V, I <sub>C</sub> =(-)3A	30			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)1A		20		MHz
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =(-)3A, I <sub>B</sub> =(-)0.3A			0.4	V
					(-0.5)	
C-B Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =(-)1mA, I <sub>E</sub> =0	(-)90			V
C-E Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =(-)1mA, R <sub>BE</sub> =∞	(-)80			V
E-B Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =(-)1mA, I <sub>C</sub> =0	(-)6			V
Turn-on Time	t <sub>on</sub>	See specified Test Circuit.	(0.2)0.1			μs
Storage Time	t <sub>stg</sub>	"	(0.7)1.2			μs
Fall Time	t <sub>f</sub>	"	(0.2)0.4			μs

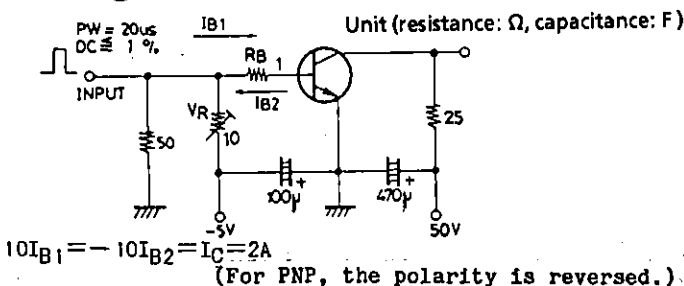
\*: The 2SB1270/2SD1906 are classified by 1A h<sub>FE</sub> as follows:

70	Q	140	100	R	200	140	S	280
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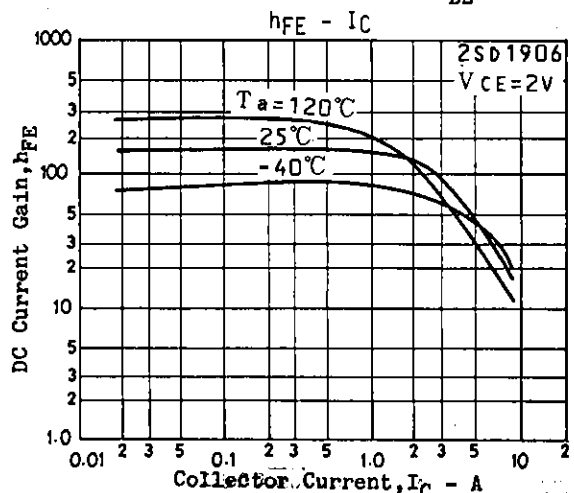
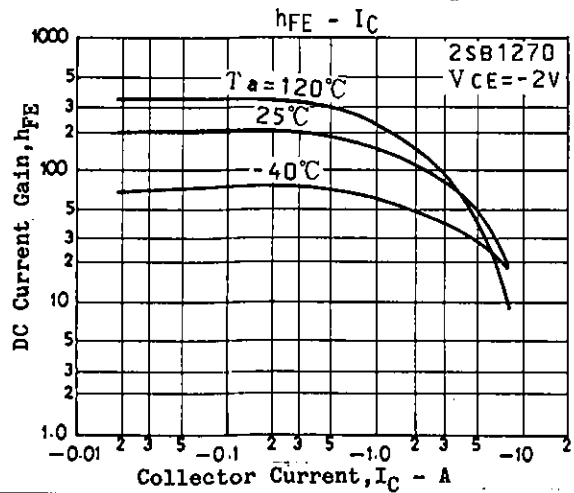
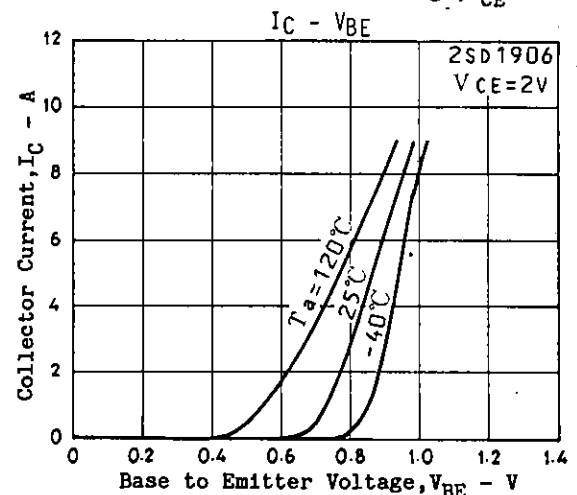
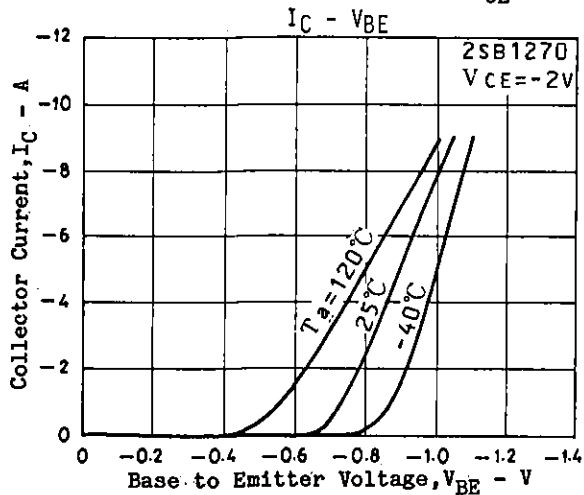
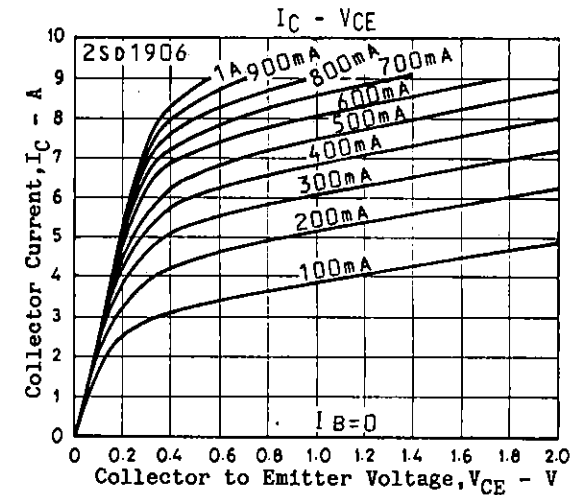
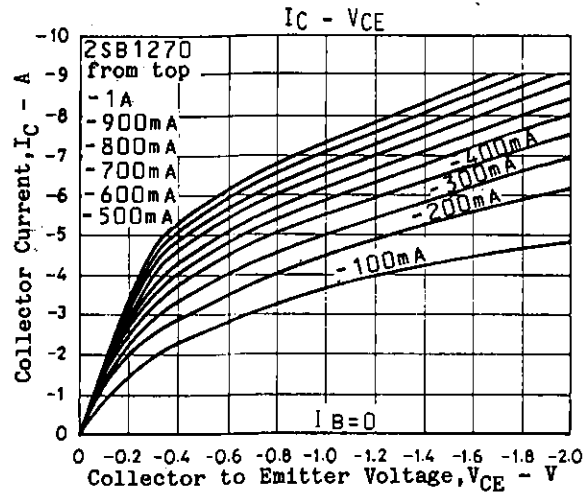
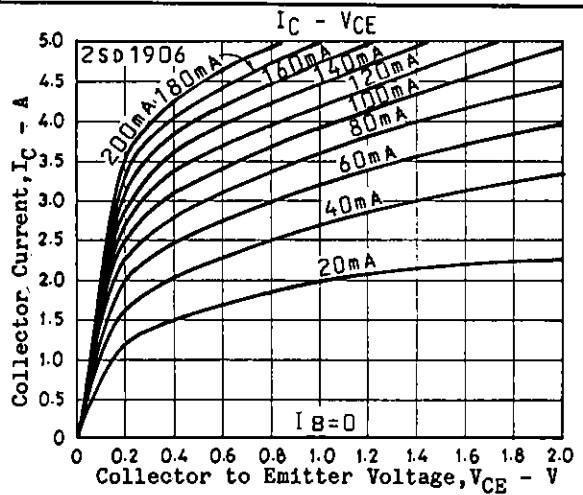
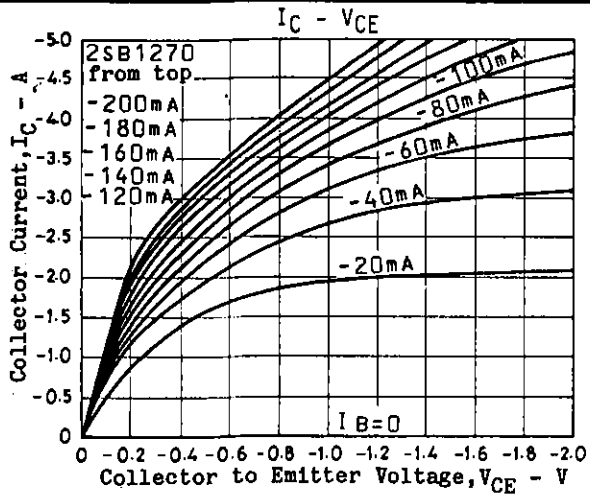
**Package Dimensions 2049B**  
(unit: mm)



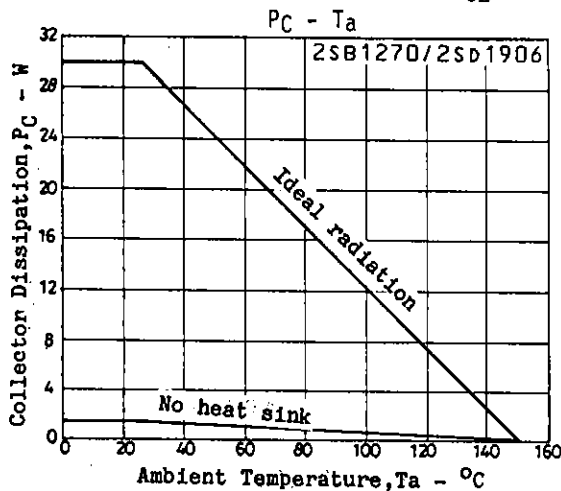
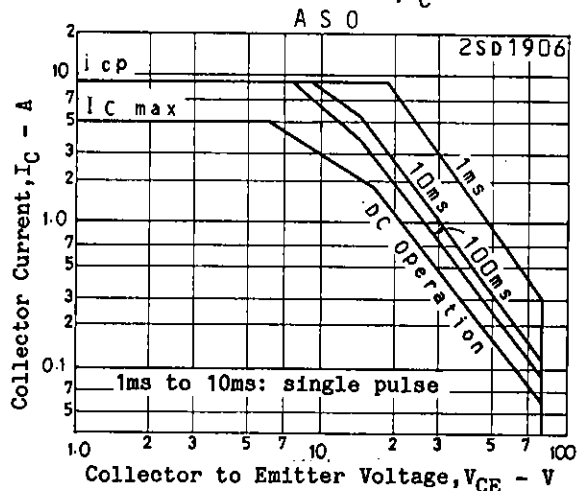
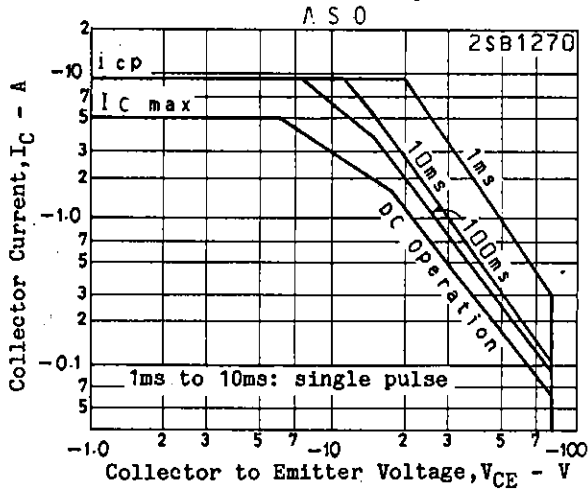
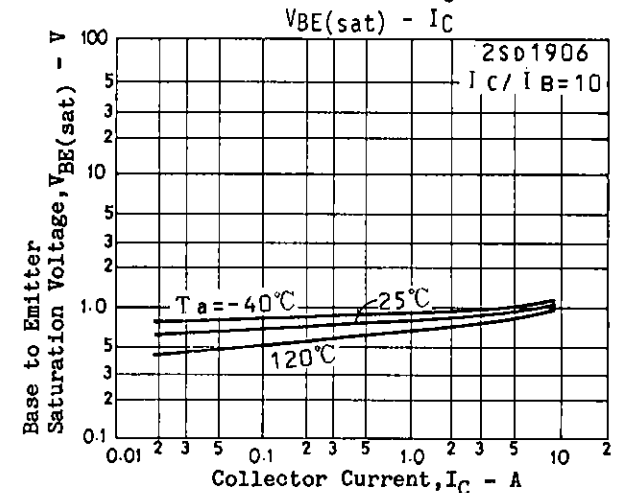
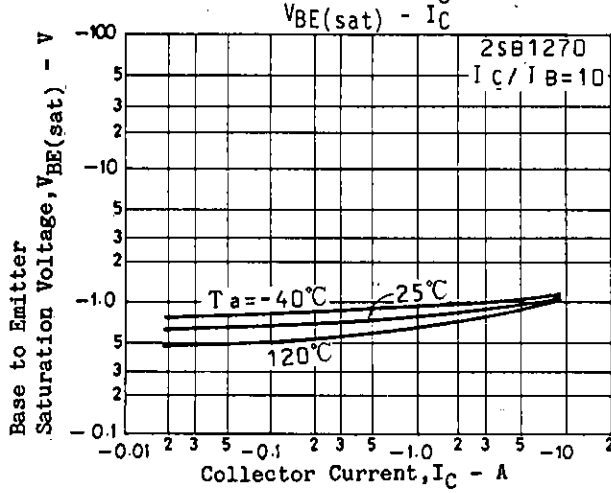
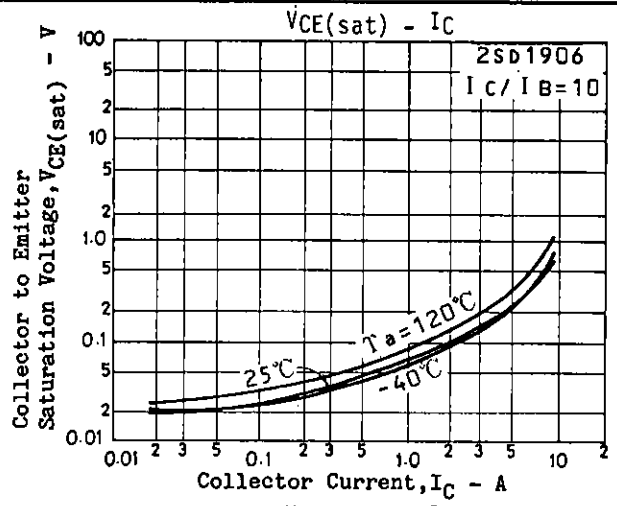
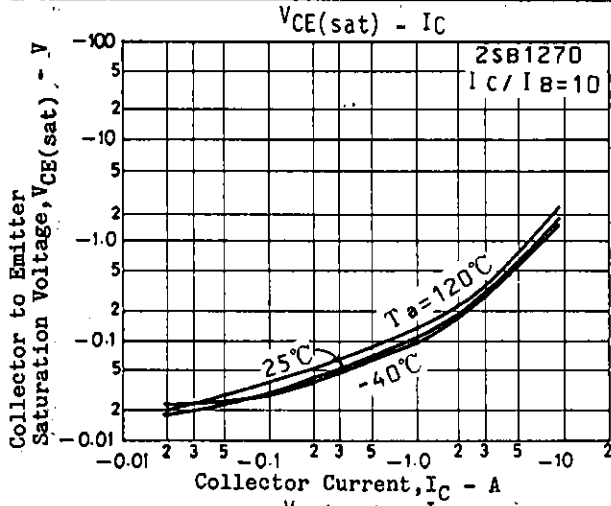
**Switching Time Test Circuit**



2SB1270/2SD1906



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