

<b>SANYO</b>	No.5049	2SA1898
		PNP Epitaxial Planar Silicon Transistor
		DC/DC Converter

**Applications**

- High-speed switching.

**Features**

- Adoption of FBET and MBIT processes.
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.

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

			unit
Collector-to-Base Voltage	V <sub>CB0</sub>	-15	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>	-15	V
Emitter-to-Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current	I <sub>C</sub>	-3	A
Collector Current (Pulse)	I <sub>CP</sub>	-5	A
Base Current	I <sub>B</sub>	-600	mA
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**

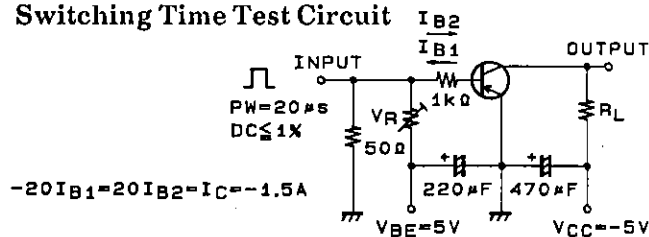
			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = -12V, I <sub>E</sub> = 0			-1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = -3V, I <sub>C</sub> = 0			-1	μA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> = -2V, I <sub>C</sub> = -0.5A	100*		280*	
	h <sub>FE</sub> (2)	V <sub>CE</sub> = -2V, I <sub>C</sub> = -3A	50			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -0.3A		300		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, f = 1MHz		28		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -1.5A, I <sub>B</sub> = -75mA	-0.25	-0.5		V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -1.5A, I <sub>B</sub> = -75mA	-0.95	-1.2		V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0	-15			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA, R <sub>BE</sub> = ∞	-15			V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0	-5			V
Turn-ON time	t <sub>on</sub>	See specified Test Circuit.		30	60	ns
Storage Time	t <sub>stg</sub>	"		100	200	ns
Turn-OFF time	t <sub>off</sub>	"		120	220	ns

\* The 2SA1898 is classified by 500A h<sub>FE</sub> as follows:

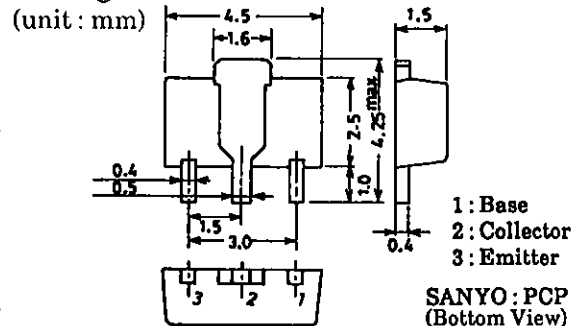
100 R 200	140 S 280
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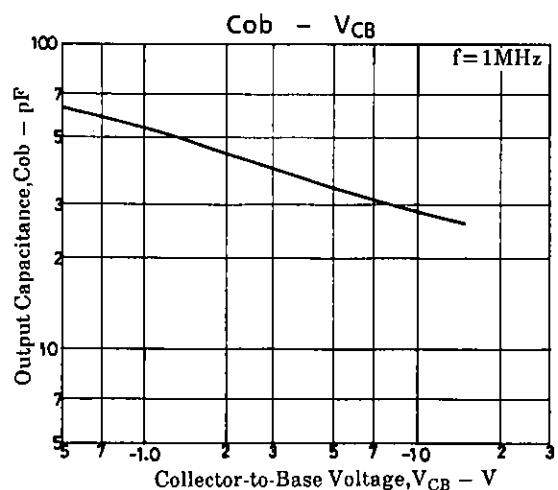
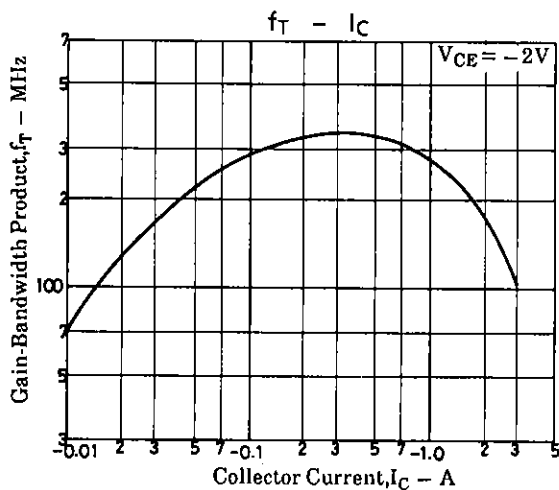
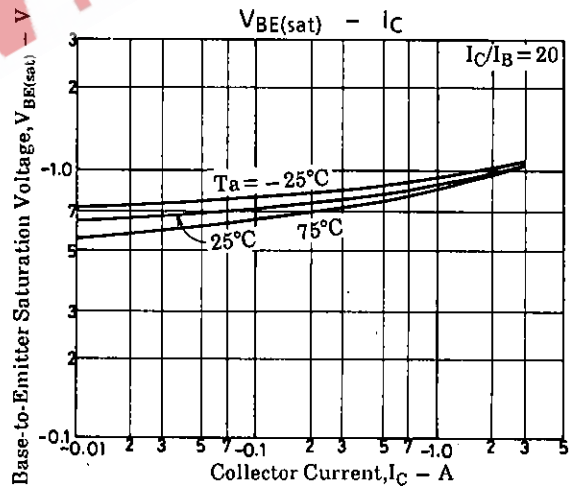
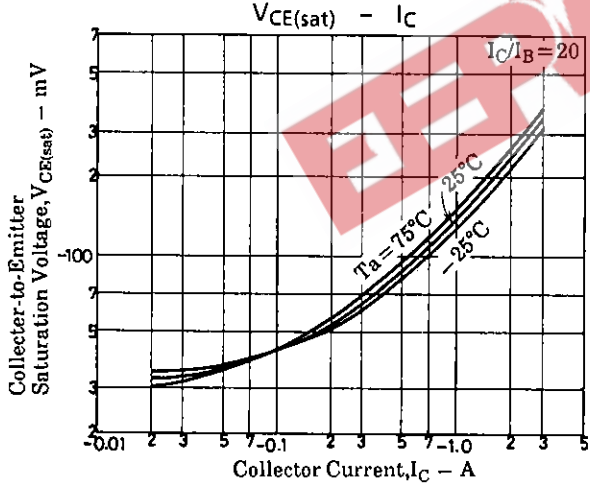
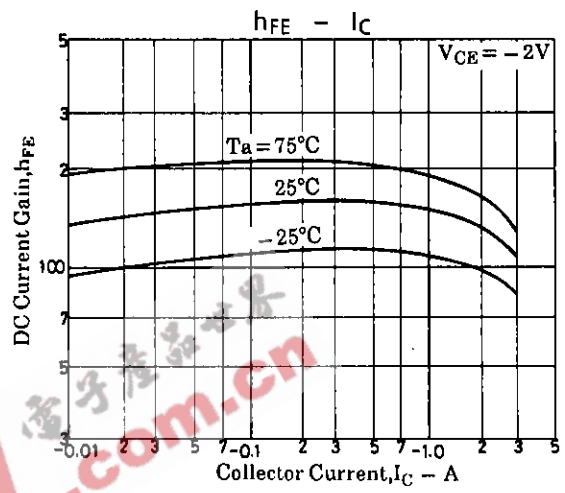
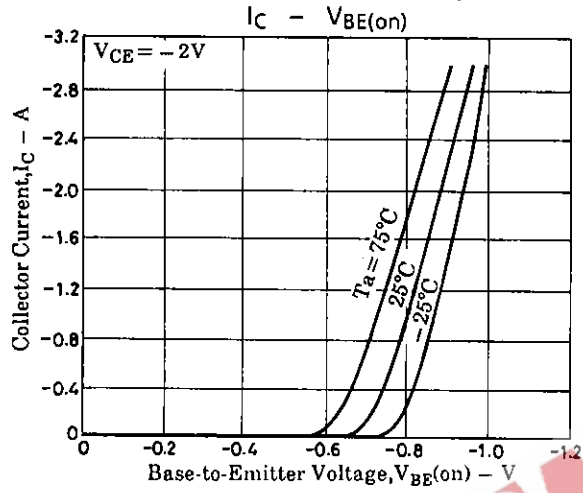
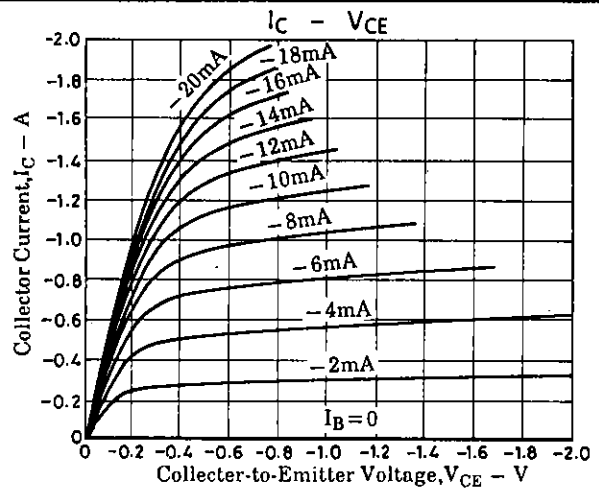
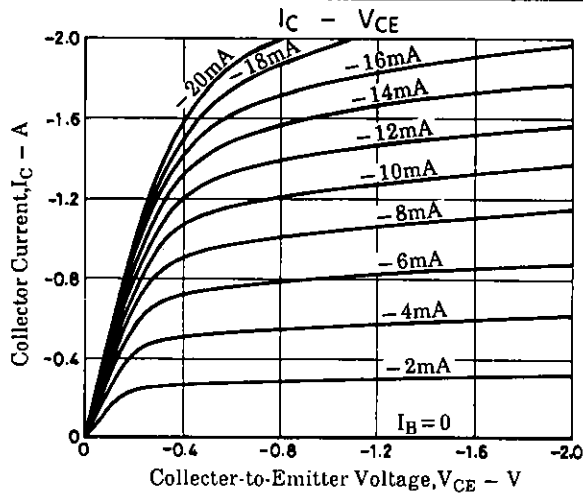
Marking: AN

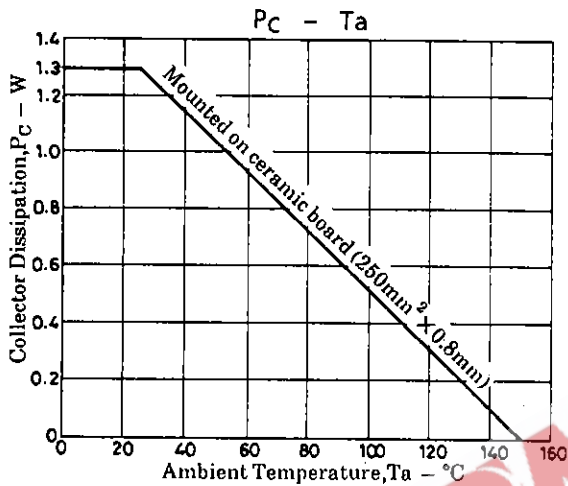
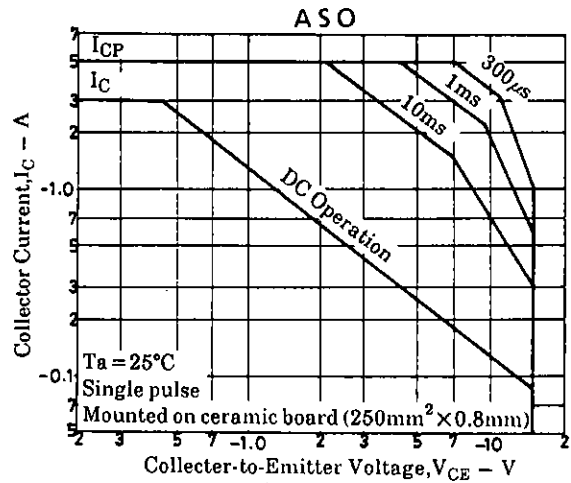
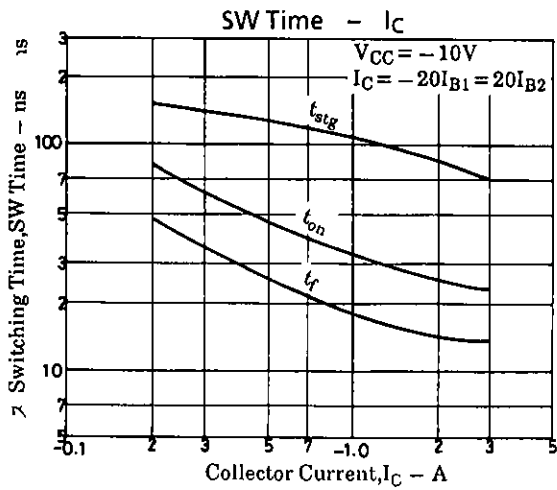
**Switching Time Test Circuit**



**Package Dimensions 2038A**







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