

SANYO

No.3870

2SA1823

PNP Epitaxial Planar Silicon Transistor

20V/8A Switching Applications**Features**

- Adoption of MBIT process.
- Low saturation voltage.
- Fast switching speed.
- Large current capacity.
- It is possible to make appliances more compact because it's height on board is 9.5mm.
- Meets radial taping.

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

			unit
Collector-to-Base Voltage	V_{CB0}	-25	V
Collector-to-Emitter Voltage	V_{CE0}	-20	V
Emitter-to-Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-8	A
Collector Current (Pulse)	I_{CP}	-12	A
Base Current	I_B	-1.5	A
Collector Dissipation	P_C	1.5	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

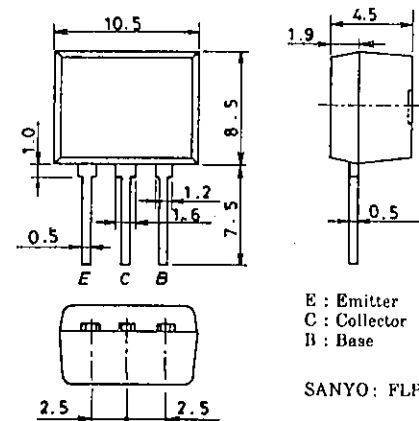
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$			-1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-1	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	100*		400*	
	$h_{FE}(2)$	$V_{CE} = -2\text{V}, I_C = -6\text{A}$	60			
Gain-Bandwidth Product	f_T	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$		200		MHz

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* : The 2SA1823 is classified by 500mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400
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Package Dimensions 2084
(unit : mm)**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

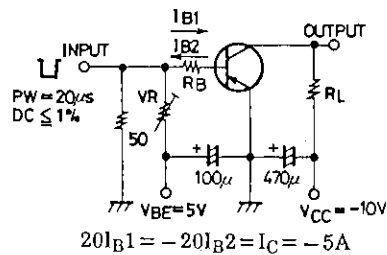
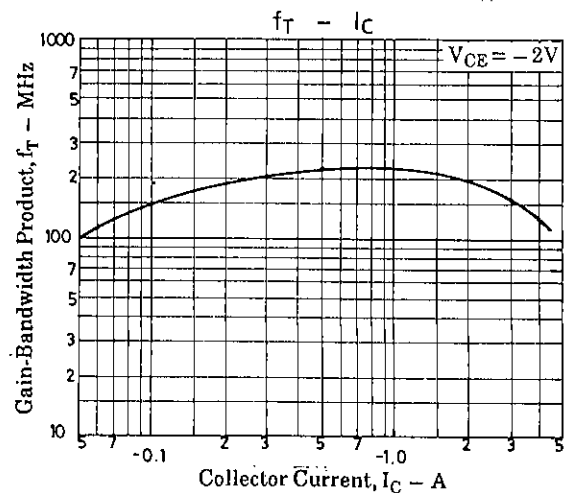
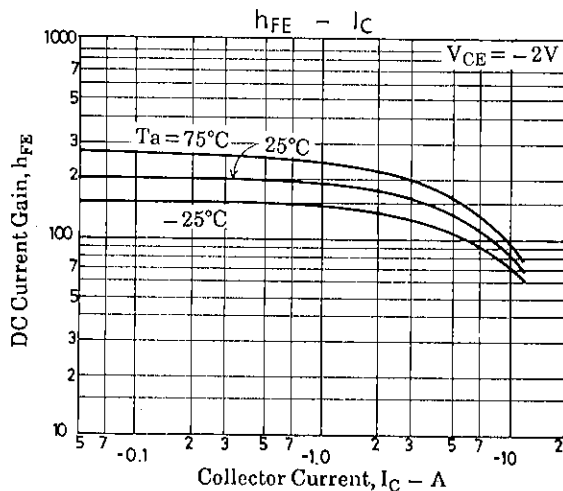
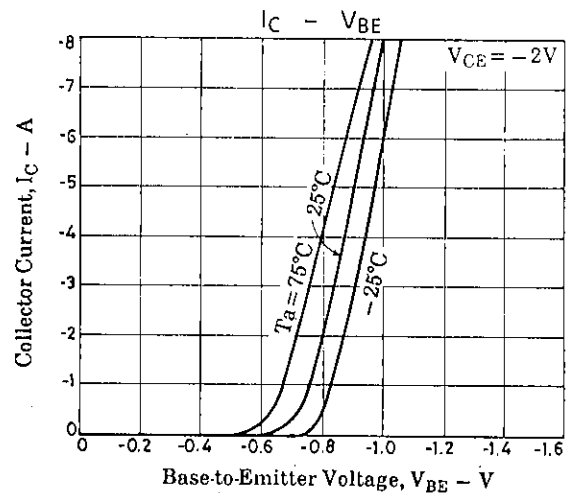
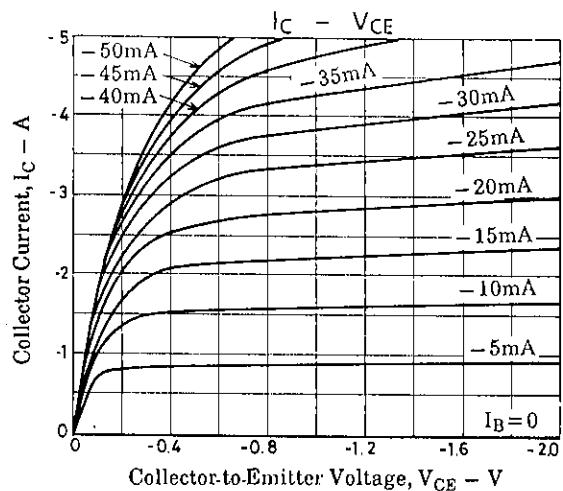
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

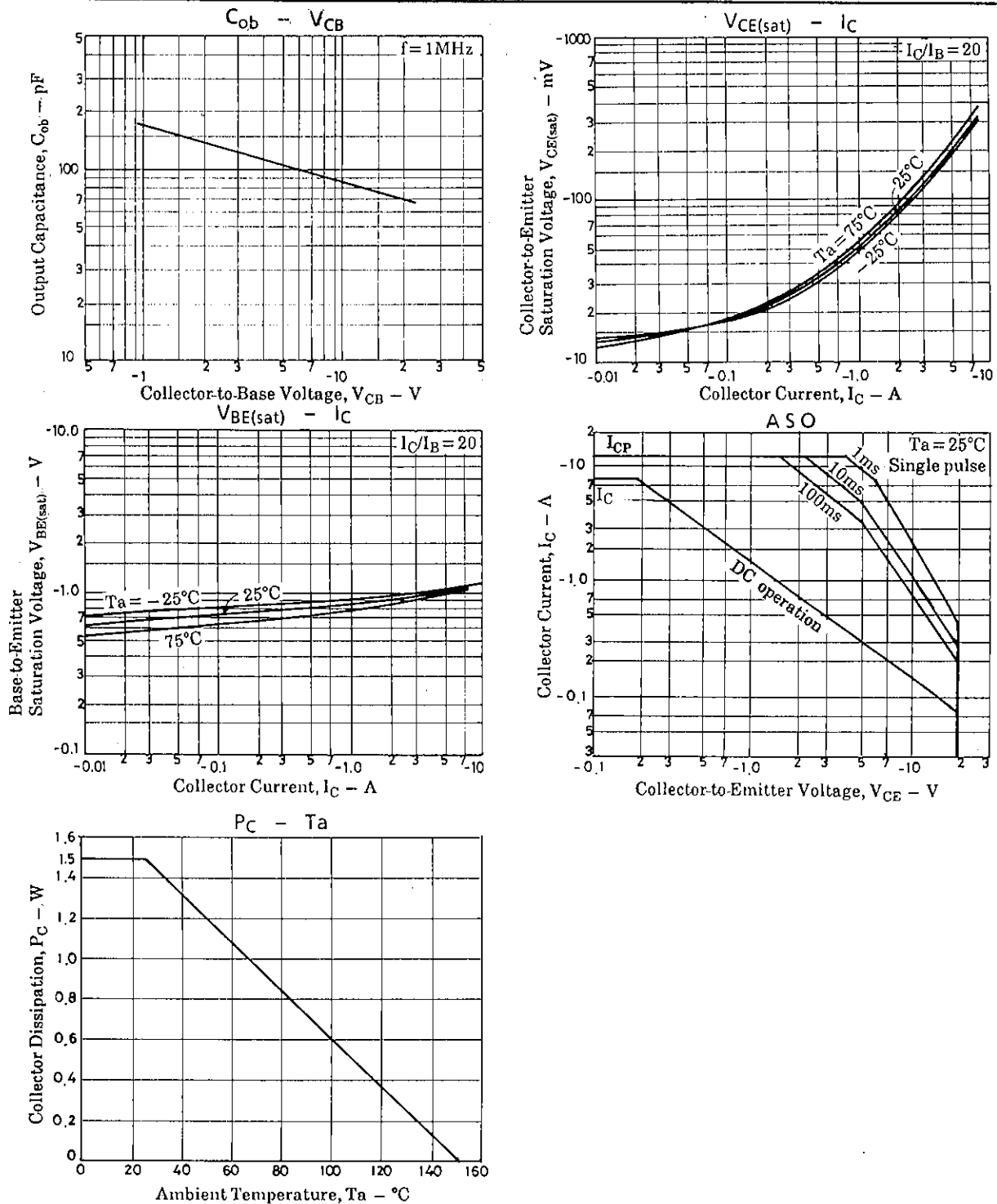
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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -5A, I_B = -250mA$		-220	-400	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -5A, I_B = -250mA$		-1	-1.3	V
Output Capacitance	C_{ob}	$V_{CB} = -10V, f = 1MHz$		85		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-25			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Turn-on Time	t_{on}	See specified Test Circuit.		30		ns
Storage Time	t_{stg}	"		200		ns
Fall Time	t_f	"		15		ns

Switching Time Test Circuit

Unit (resistance: Ω , capacitance: F)



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