

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 Ta = 25°C

Collector-to-Base Voltage	V _{CB0}	-25	V	unit
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	°C	
Storage Temperature	T _{stg}	-55 to +150	°C	

Electrical Characteristics at Ta = 25°C

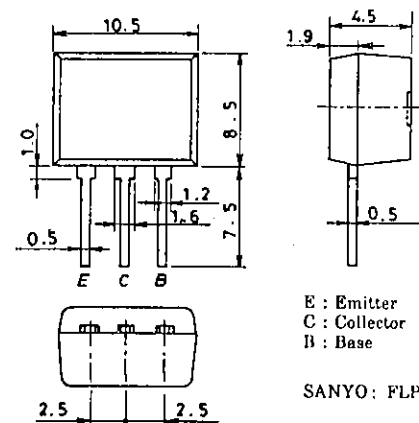
			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} = -20V, I _E = 0			-1	μA
Emitter Cutoff Current	I _{EB0}	V _{EB} = -4V, I _C = 0			-1	μA
DC Current Gain	h _{FE} (1)	V _{CE} = -2V, I _C = -500mA	100*		400*	
	h _{FE} (2)	V _{CE} = -2V, I _C = -6A	60			
Gain-Bandwidth Product	f _T	V _{CE} = -2V, I _C = -500mA		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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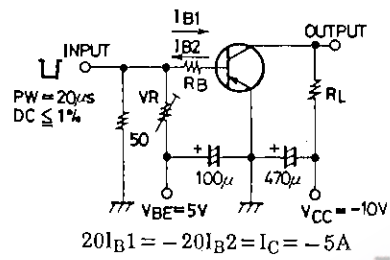
Package Dimensions 2084
(unit : mm)



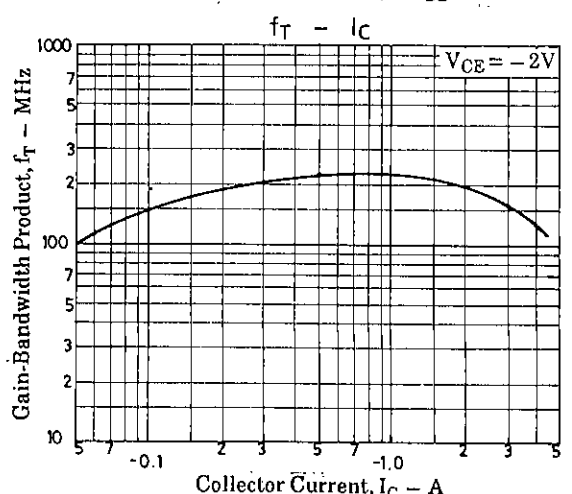
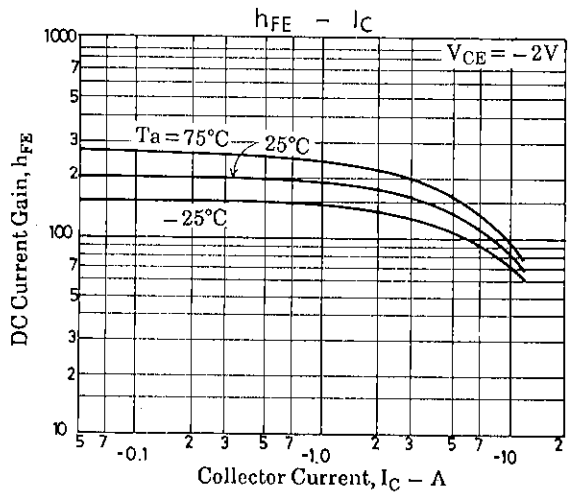
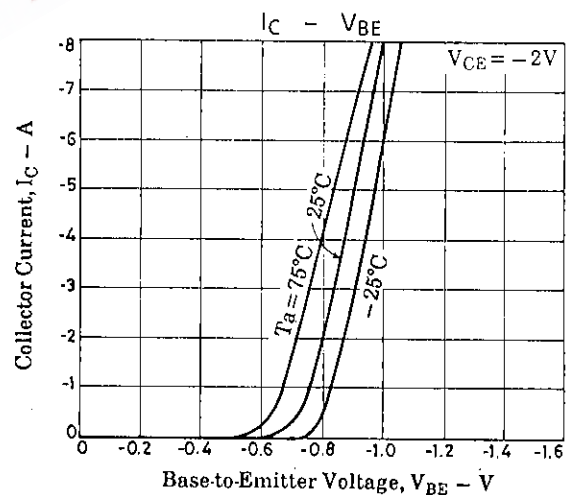
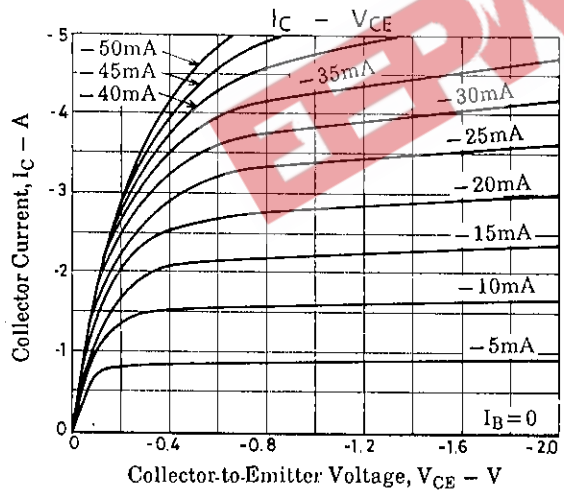
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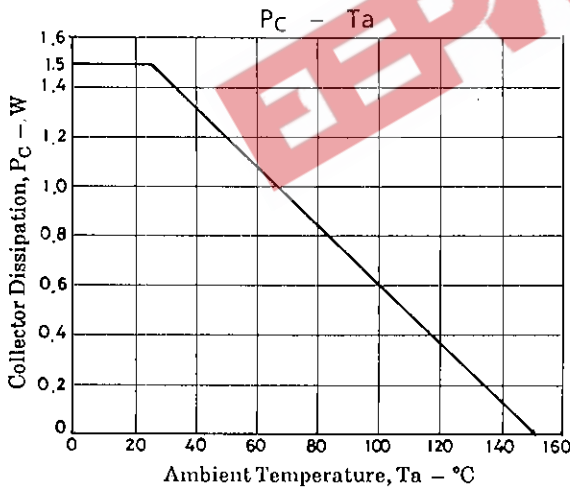
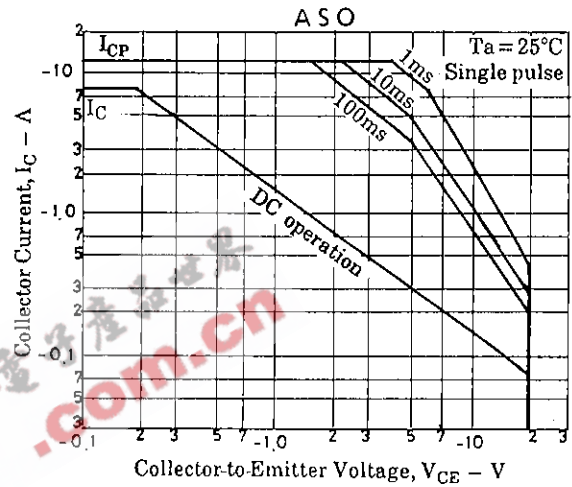
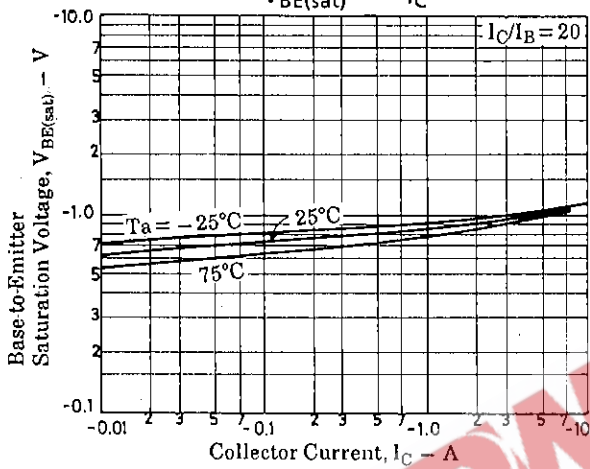
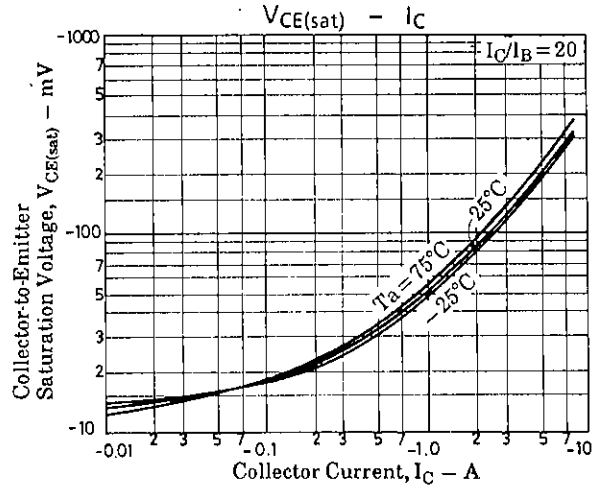
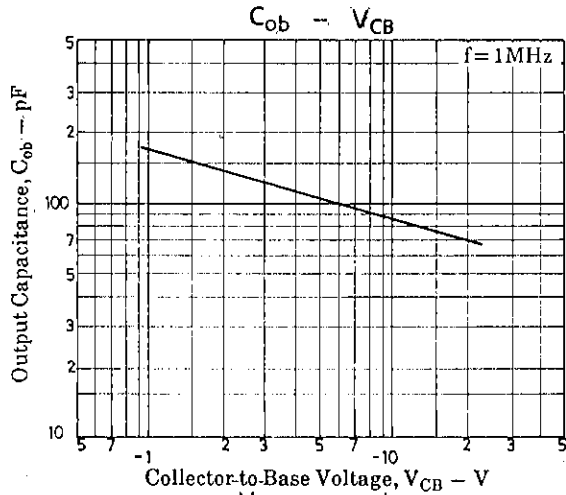
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = -5A, I_B = -250mA$		-220	-400	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = -5A, I_B = -250mA$		-1	-1.3	V
Output Capacitance	C_{ob}	$V_{CB} = -10V, f = 1MHz$		85		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-25			V
C-E 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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