

SANYO

No. 2930A

2SC4306

NPN Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Features

- Adoption of FBET, MBIT processes.
- Low saturation voltage.
- Fast switching speed.
- Large current capacity.
- Small and slim package making it easy to make 2SC4306-used set smaller

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

			unit
Collector to Base Voltage	V_{CB0}	30	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	W
		15	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

 $T_c = 25^\circ\text{C}$ **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※	
	$h_{FE}(2)$	$V_{CE} = 2\text{V}, I_C = 6\text{A}$	70			
Gain-Bandwidth Product	f_T	$V_{CE} = 2\text{V}, I_C = 500\text{mA}$		250		MHz
Output Capacitance	c_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		60		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 5\text{A}, I_B = 250\text{mA}$		220	400	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 5\text{A}, I_B = 250\text{mA}$		1	1.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	5			V

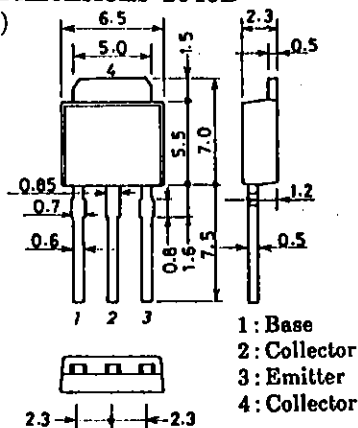
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※ : The 2SC4306 is classified by 500mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400
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Package Dimensions 2045B

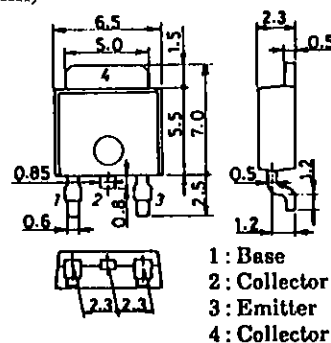
(unit : mm)



SANYO: TP

Package Dimensions 2044B

(unit : mm)



SANYO: TP-FA

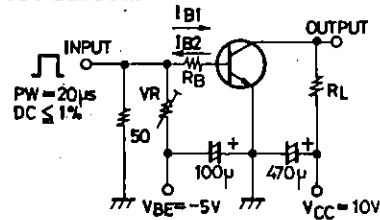
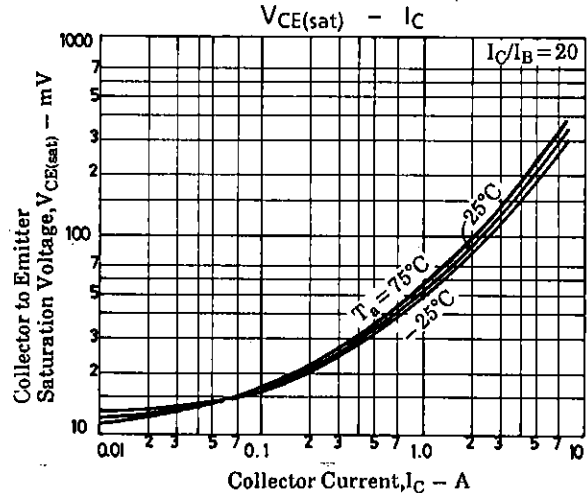
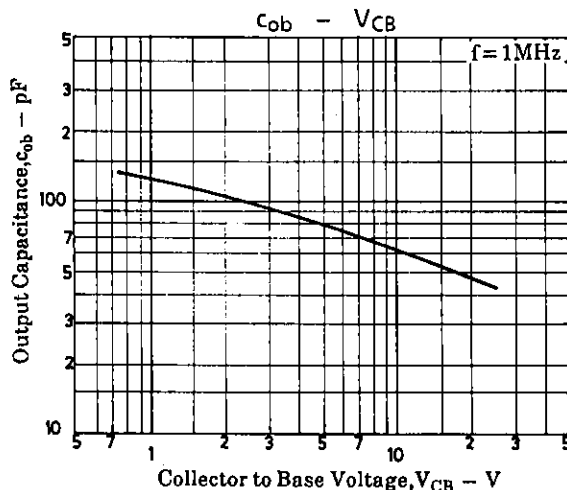
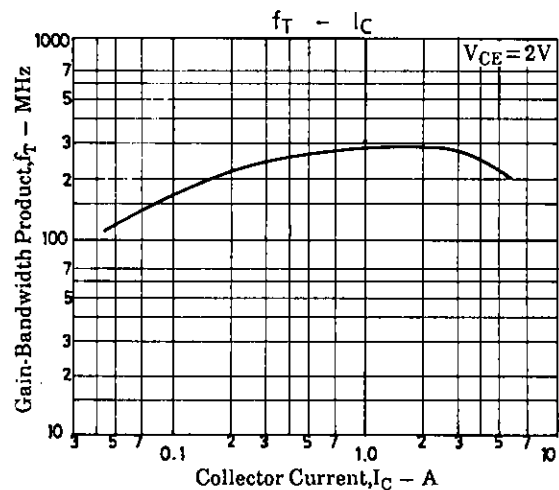
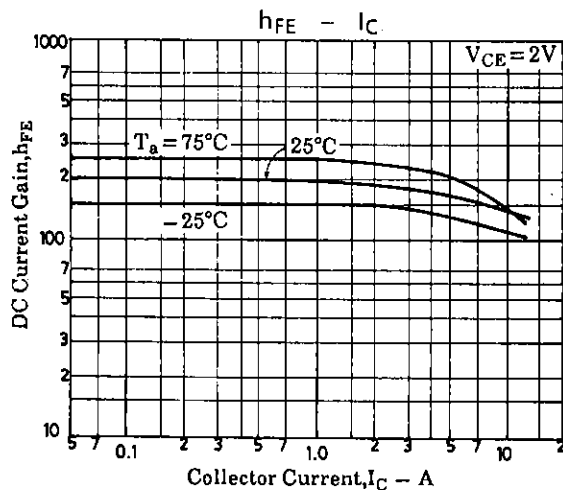
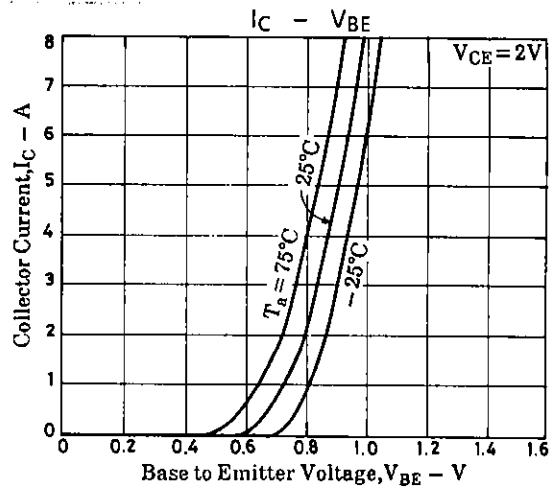
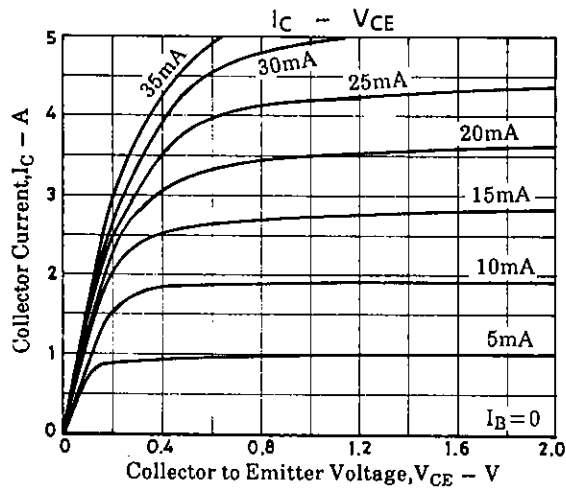
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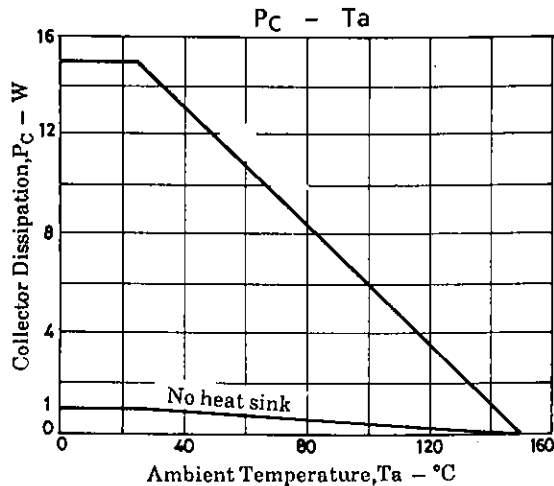
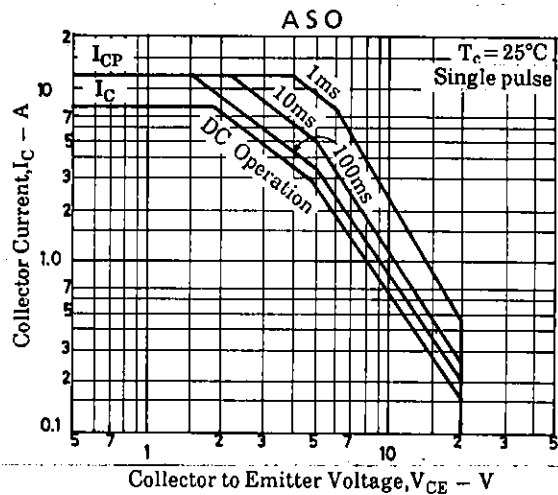
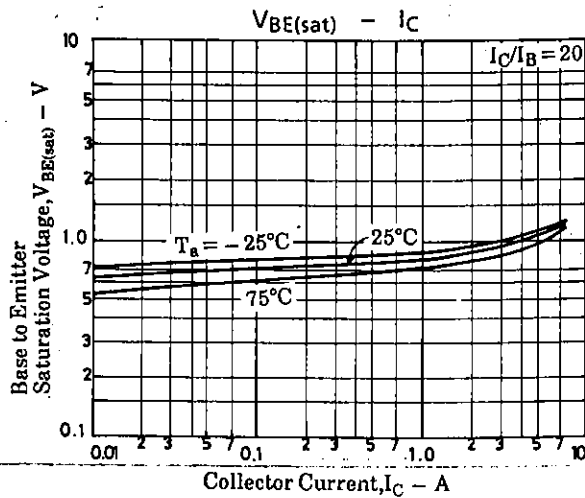
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			min	typ	max	unit
Turn-on Time	t_{on}	See specified Test Circuit.		30	300	ns
Storage Time	t_{stg}	"		250	1000	ns
Fall Time	t_f	"		15	150	ns

Switching Time Test Circuit


 $20I_{B1} = -20I_{B2} = I_C = 5A$ Unit (Resistance : Ω , Capacitance : F)




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