Ordering number: EN 2930A

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 Ta = 25°C

				unit
Collector to Base Voltage	V_{CBO}		30	V
Collector to Emitter Voltage	V_{CEO}		20	V
Emitter to Base Voltage	V_{EBO}		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
		Tc = 25°C	15	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta = 25°C

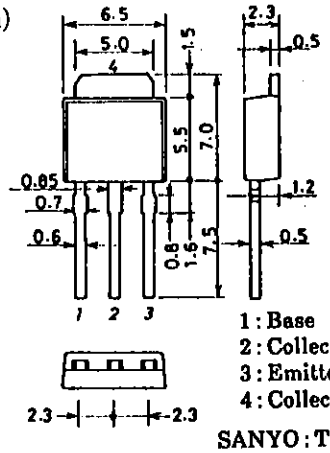
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 20V, I_E = 0			1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 4V, I_C = 0			1	μA
DC Current Gain	$h_{FE}(1)$	V_{CE} = 2V, I_C = 500mA	100※		400※	
	$h_{FE}(2)$	V_{CE} = 2V, I_C = 6A	70			
Gain-Bandwidth Product	f_T	V_{CE} = 2V, I_C = 500mA		250		MHz
Output Capacitance	c_{ob}	V_{CB} = 10V, f = 1MHz		60		pF
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
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C = 10μA, I_E = 0	30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10μA, 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

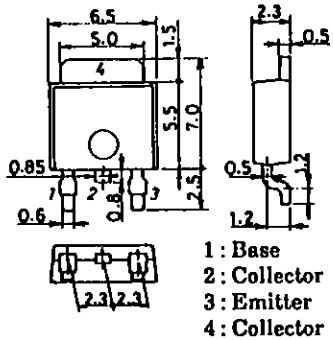
Package Dimensions 2045B
(unit : mm)



1 : Base
2 : Collector
3 : Emitter
4 : Collector

SANYO : TP

Package Dimensions 2044B
(unit : mm)



1 : Base
2 : Collector
3 : Emitter
4 : Collector

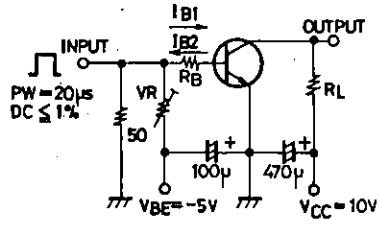
SANYO : TP-FA

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

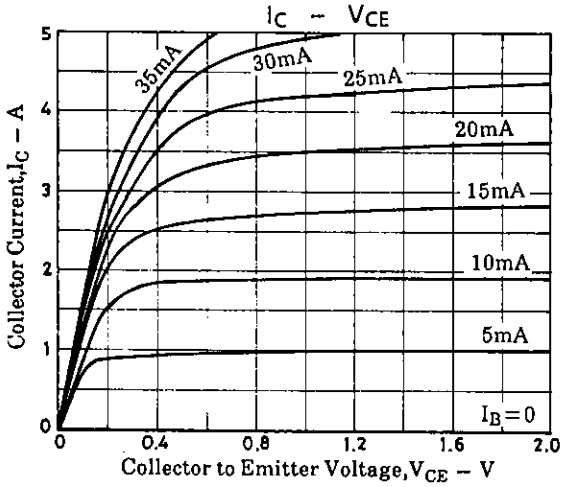
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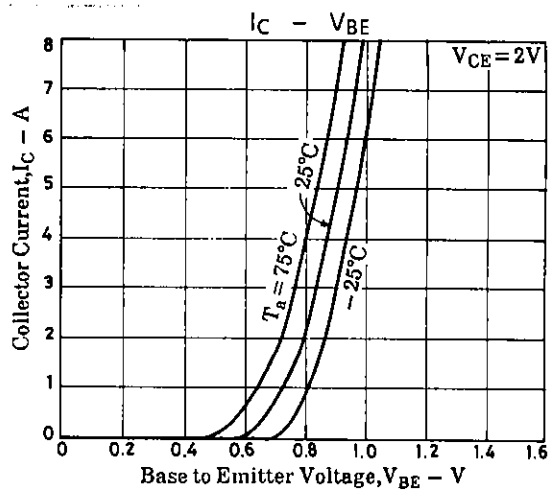
			min	typ	max	unit
Turn-on Time	t_{on}	See specified Test Circuit.		30	300	ns
Storage Time	t_{stg}	〃		250	1000	ns
Fall Time	t_f	〃		15	150	ns

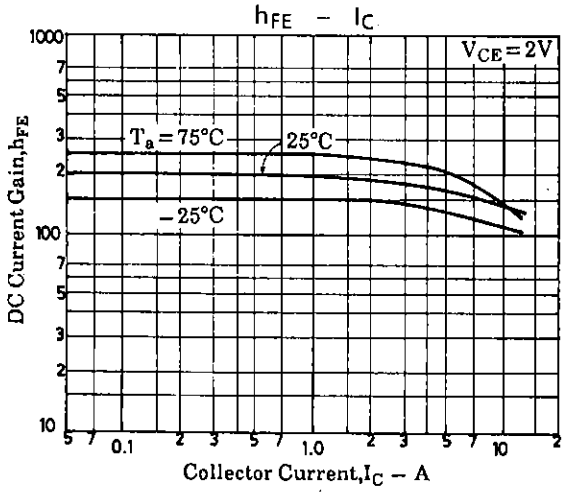
Switching Time Test Circuit

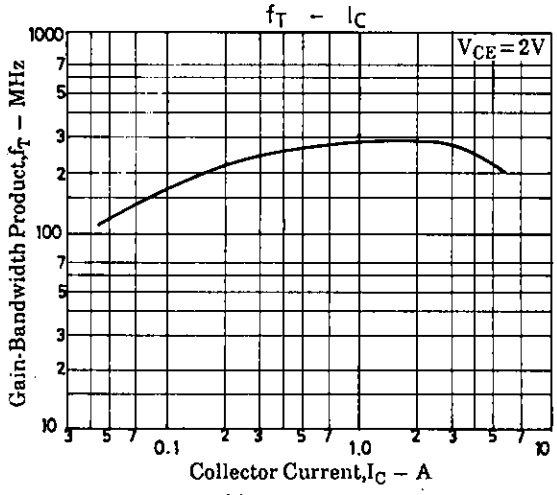


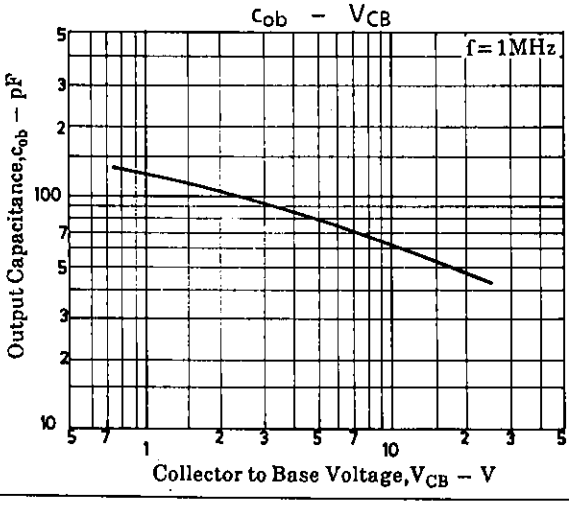
$20I_{B1} = -20I_{B2} = I_C = 5A$ Unit (Resistance : Ω, Capacitance : F)

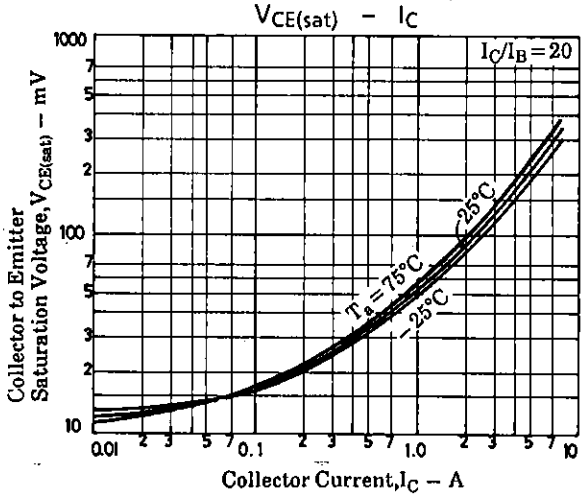


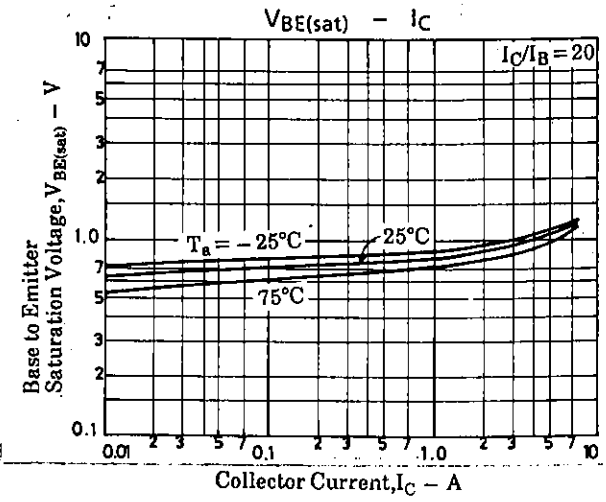


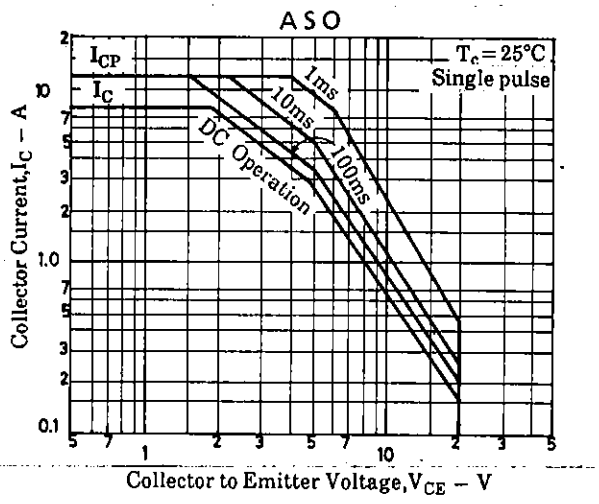


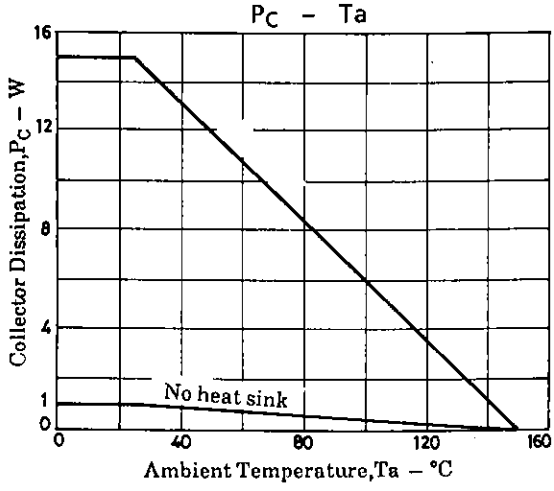












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