

<b>SANYO</b>	No.2926A	<b>2SA1641</b>
	PNP 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 2SA1641-used set smaller

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

			unit
Collector to Base Voltage	V <sub>CB0</sub>	-25	V
Collector to Emitter Voltage	V <sub>CEO</sub>	-20	V
Emitter to Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current	I <sub>C</sub>	-8	A
Collector Current(Pulse)	I <sub>CP</sub>	-12	A
Base Current	I <sub>B</sub>	-1.5	A
Collector Dissipation	P <sub>C</sub>	1	W
		15	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

Tc = 25°C

**Electrical Characteristics at Ta = 25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = -20V, I <sub>E</sub> = 0			-1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = -4V, I <sub>C</sub> = 0			-1	μA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> = -2V, I <sub>C</sub> = -500mA	100※		400※	
	h <sub>FE</sub> (2)	V <sub>CE</sub> = -2V, I <sub>C</sub> = -6A	60			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -500mA		200		MHz
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -5A, I <sub>B</sub> = -250mA	-220	-400		mV
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -5A, I <sub>B</sub> = -250mA	-1	-1.3		V
Collector Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> = -10V, f = 1MHz		85		pF
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0	-25			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA, R <sub>BE</sub> = ∞	-20			V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0	-5			V

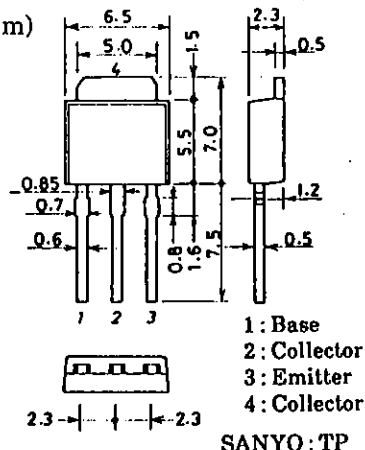
※ : The 2SA1641 is classified by 500mA h<sub>FE</sub> as follows :

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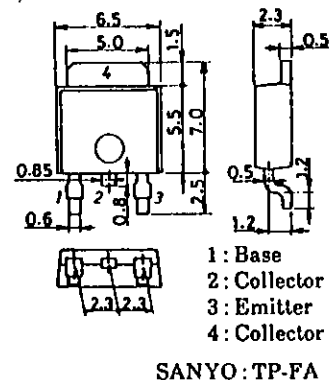
**Package Dimensions 2045B**

(unit : mm)



**Package Dimensions 2044B**

(unit : mm)

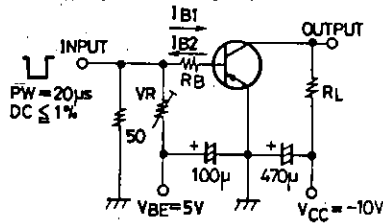


2SA1641

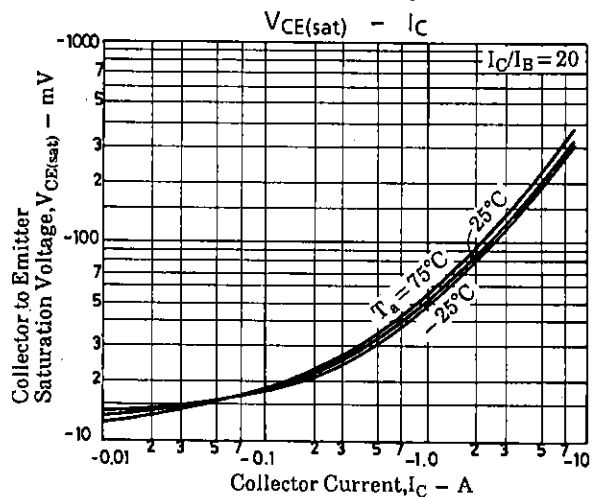
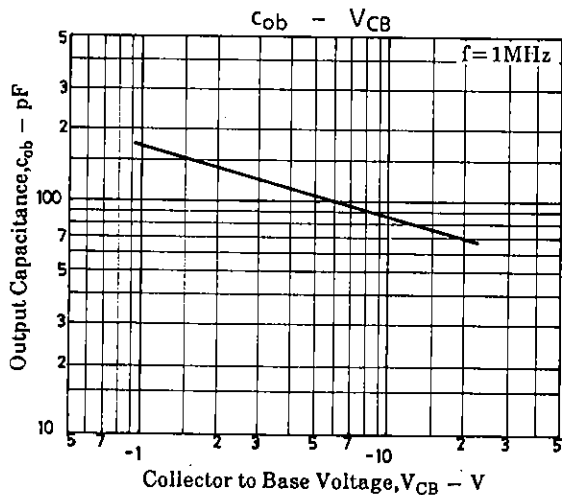
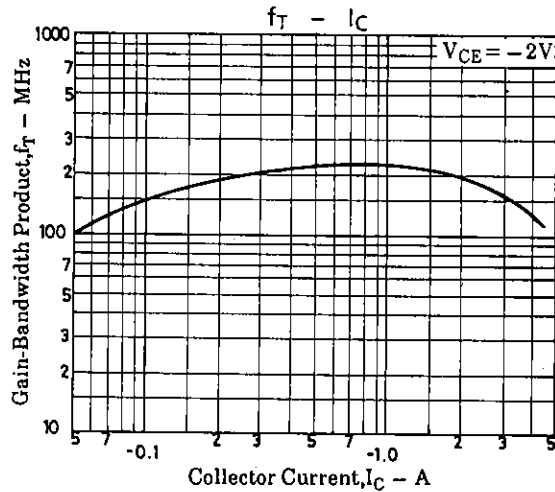
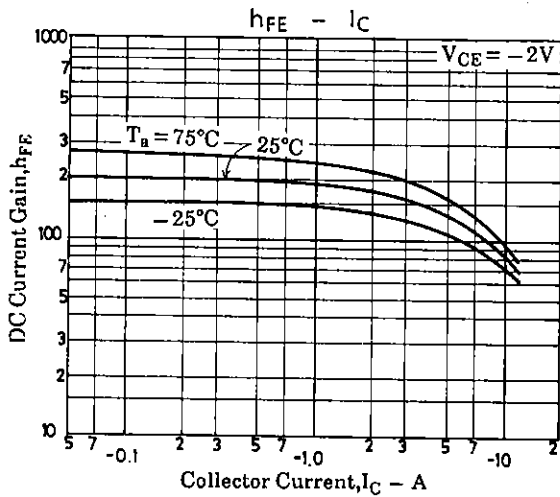
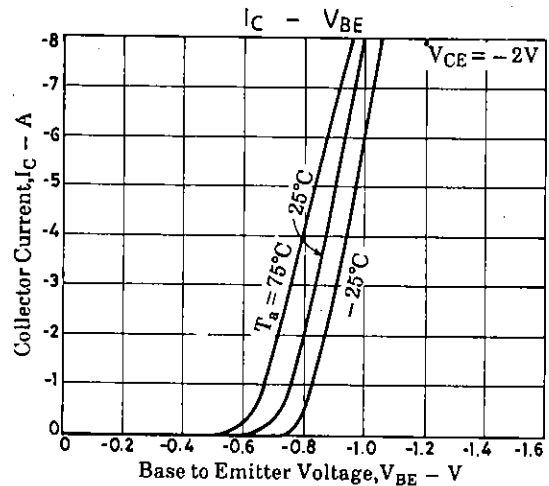
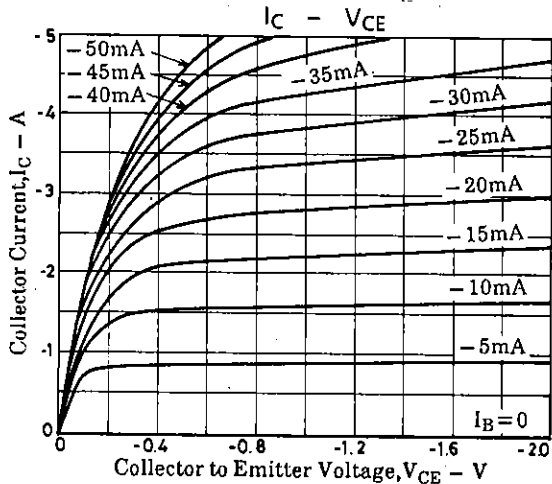
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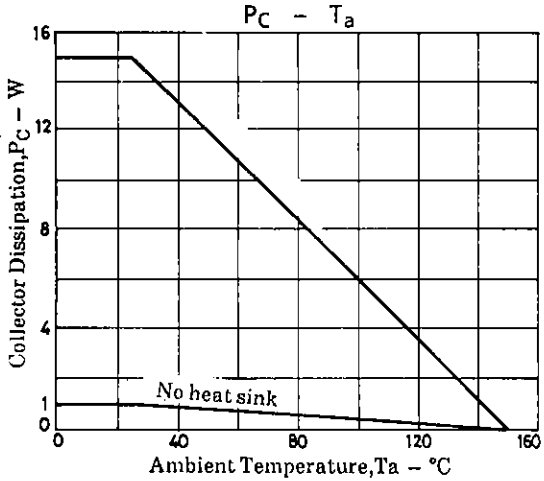
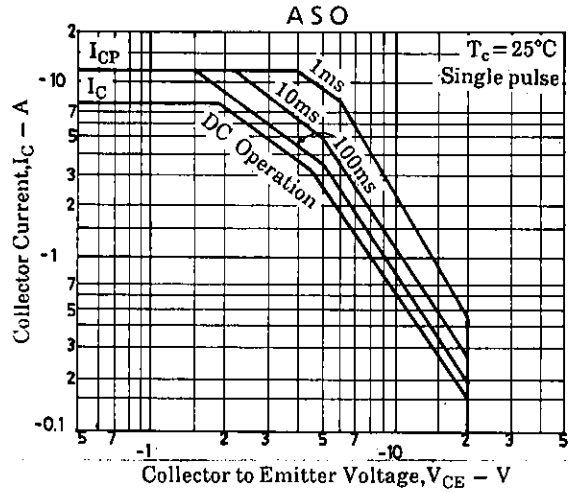
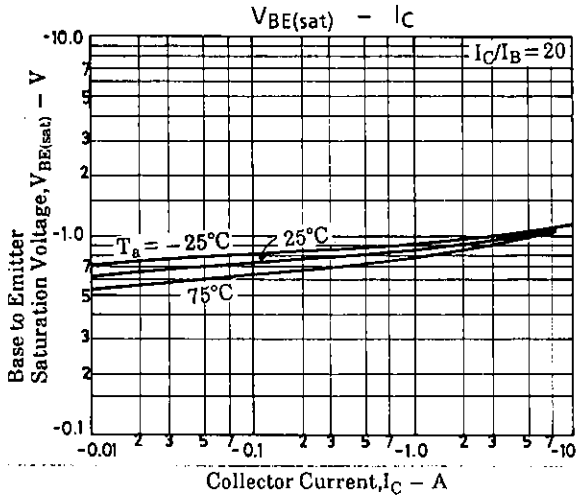
			min	typ	max	unit
Turn-on Time	$t_{on}$	See specified Test Circuit.		30	300	ns
Storage Time	$t_{stg}$	"		200	800	ns
Fall Time	$t_f$	"		15	150	ns

Switching Time Test Circuit



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





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