

<b>SANYO</b>	No.2531A	2SC4204
	NPN Epitaxial Planar Silicon Transistor	
High-h <sub>FE</sub> , AF Amp Applications		

**Applications**

- . AF amp, various drivers

**Features**

- . Adoption of MBIT process
- . High DC current gain (h<sub>FE</sub>=800 to 3200)
- . Large current capacity (I<sub>C</sub>=0.7A)
- . Low collector to emitter saturation voltage (V<sub>CE(sat)</sub> ≤ 0.5V)
- . High V<sub>EBO</sub> (V<sub>EBO</sub> ≥ 15V)

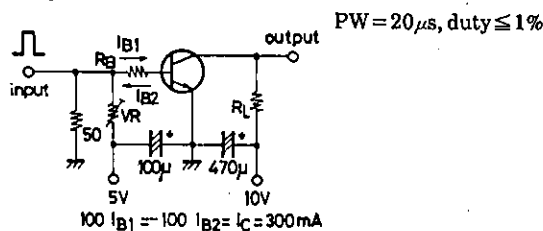
**Absolute Maximum Ratings at Ta=25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	30	V
Collector to Emitter Voltage	V <sub>CEO</sub>	25	V
Emitter to Base Voltage	V <sub>EBO</sub>	15	V
Collector Current	I <sub>C</sub>	0.7	A
Collector Current(Pulse)	I <sub>CP</sub>	1.5	A
Collector Dissipation	P <sub>C</sub>	0.6	W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°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			0.1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =10V, I <sub>C</sub> =0			0.1	μA
DC Current Gain	h <sub>FE1</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =50mA	800	1500	3200	
	h <sub>FE2</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =500mA	600			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		270		MHz
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		9		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =10mA	0.15	0.50		V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =10mA	0.9	1.2		V
C-B Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =10μA, I <sub>E</sub> =0	30			V
C-E Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	25			V
E-B Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =10μA, I <sub>C</sub> =0	15			V
Turn-on Time	t <sub>on</sub>	See specified Test Circuit.		0.1		μs
Storage Time	t <sub>stg</sub>	"		0.6		μs
Fall Time	t <sub>f</sub>	"		0.06		μs

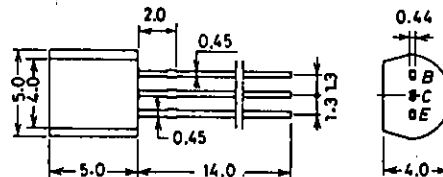
**Switching Time Test Circuit**



Unit(Resistance : Ω , Capacitance : F)

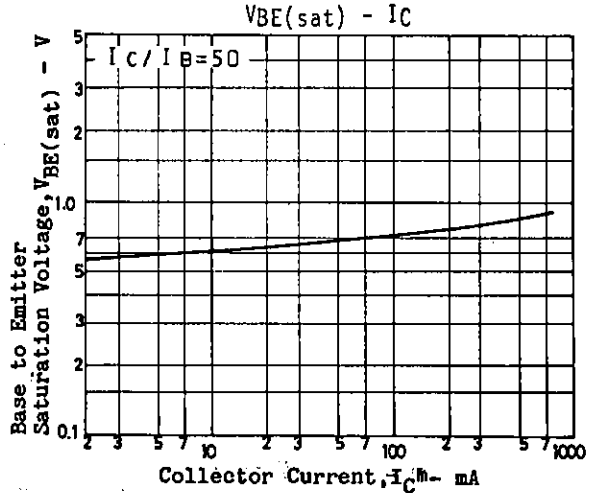
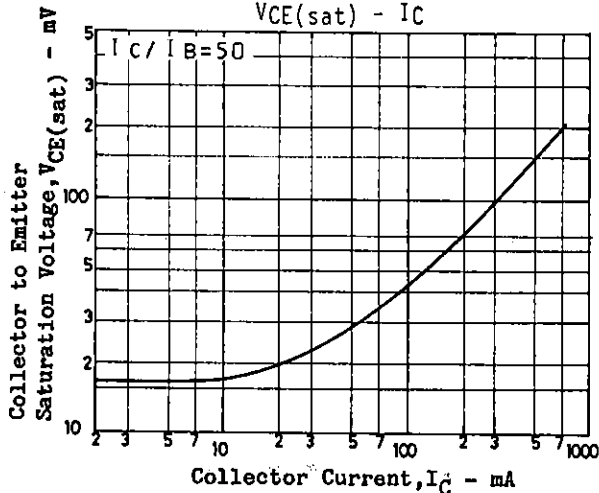
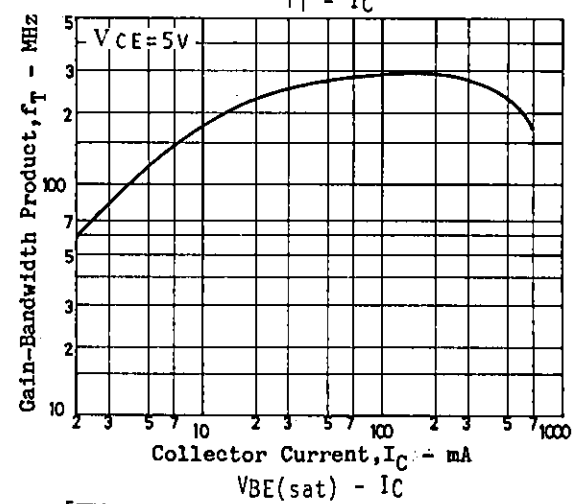
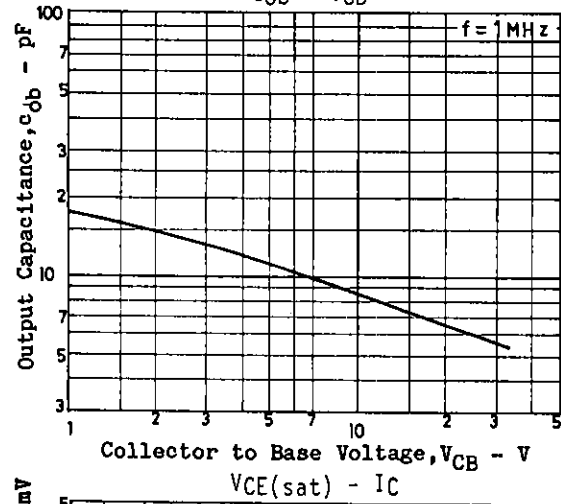
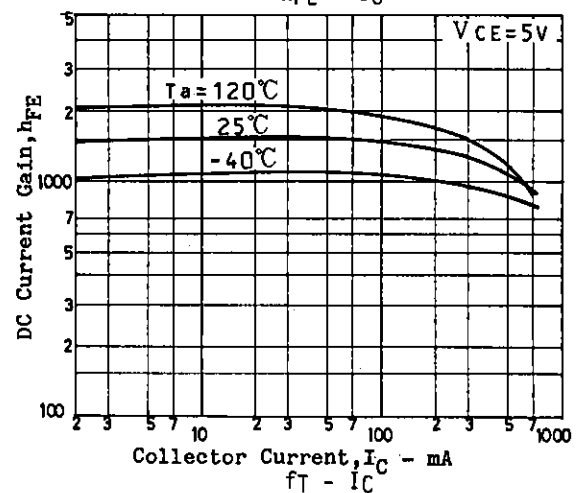
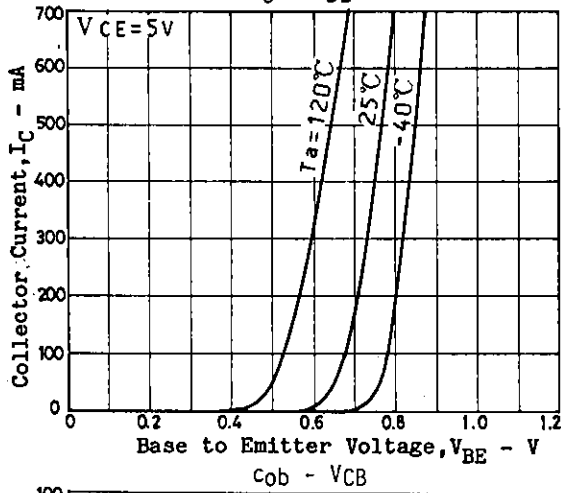
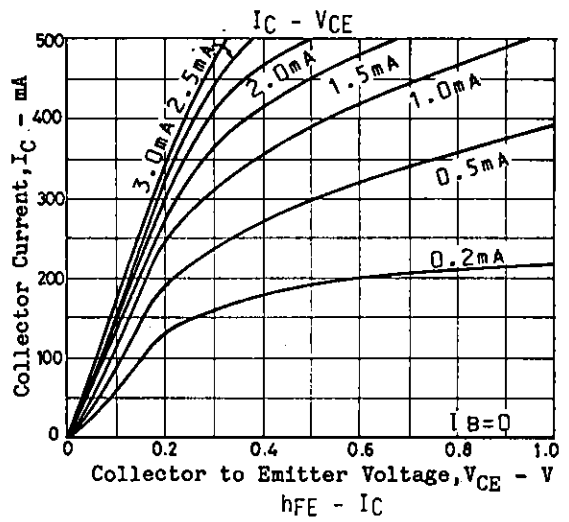
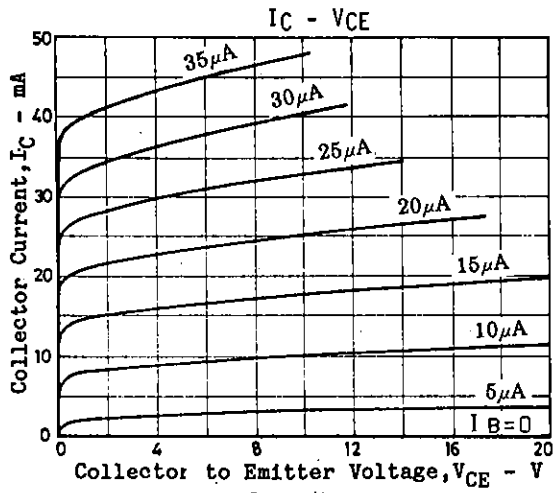
**Package Dimensions 2003A**

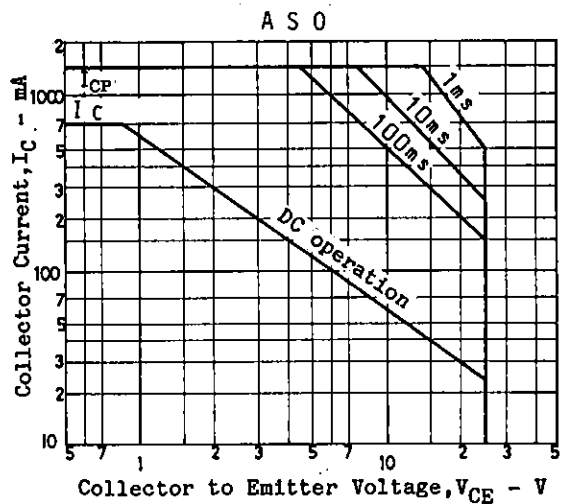
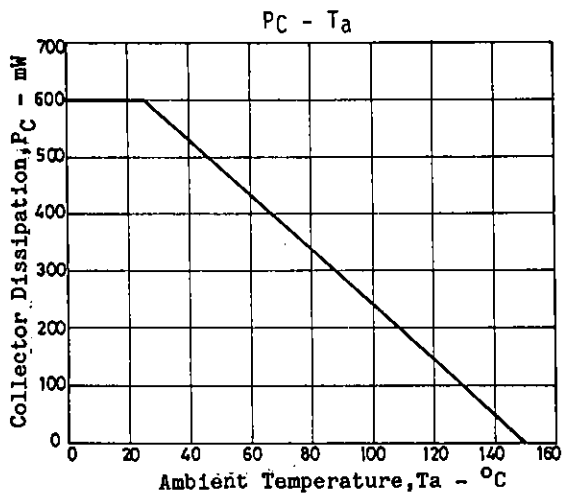
(unit: mm)



JEDEC: TO-92  
EIAJ : SC-43  
SANYO: NP

B. Base  
C. Collector  
E. Emitter





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