

SANYO	No.2531A	2SC4204
NPN Epitaxial Planar Silicon Transistor		
High-h_{FE}, AF Amp Applications		

Applications

- . AF amp, various drivers

Features

- . Adoption of MBIT process
- . High DC current gain ($h_{FE} = 800$ to 3200)
- . Large current capacity ($I_C = 0.7A$)
- . Low collector to emitter saturation voltage ($V_{CE(sat)} \leq 0.5V$)
- . High V_{EBO} ($V_{EBO} \geq 15V$)

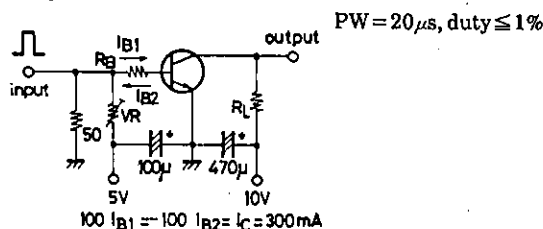
Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	15	V
Collector Current	I_C	0.7	A
Collector Current(Pulse)	I_{CP}	1.5	A
Collector Dissipation	P_C	0.6	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_{CBO}	$V_{CB} = 20V, I_E = 0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 10V, I_C = 0$			0.1	μA
DC Current Gain	h_{FE1}	$V_{CE} = 5V, I_C = 50mA$	800	1500	3200	
	h_{FE2}	$V_{CE} = 5V, I_C = 500mA$	600			
Gain-Bandwidth Product	f_T	$V_{CE} = 10V, I_C = 50mA$		270		MHz
Output Capacitance	c_{ob}	$V_{CB} = 10V, f = 1MHz$		9		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 10mA$	0.15	0.50		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 10mA$	0.9	1.2		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1mA, R_{BE} = \infty$	25			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	15			V
Turn-on Time	t_{on}	See specified Test Circuit.		0.1		μs
Storage Time	t_{stg}	"		0.6		μs
Fall Time	t_f	"		0.06		μs

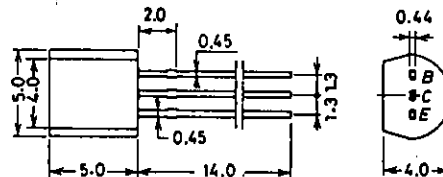
Switching Time Test Circuit



Unit(Resistance : Ω , Capacitance : F)

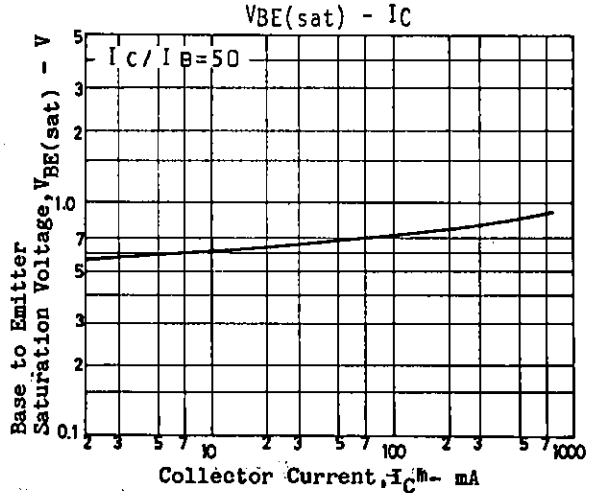
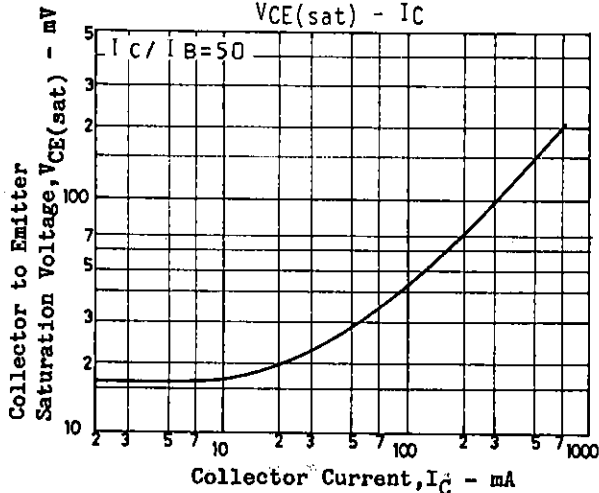
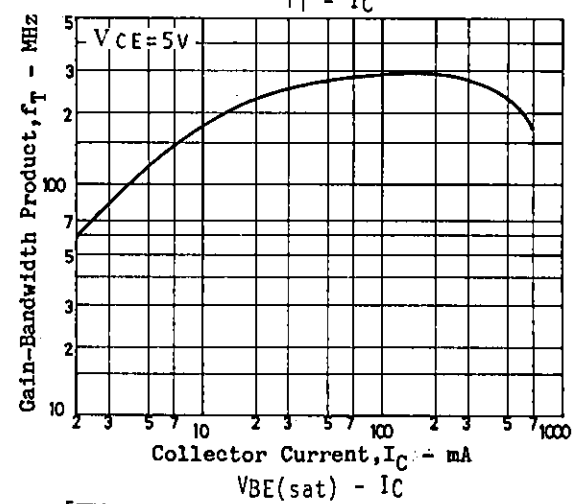
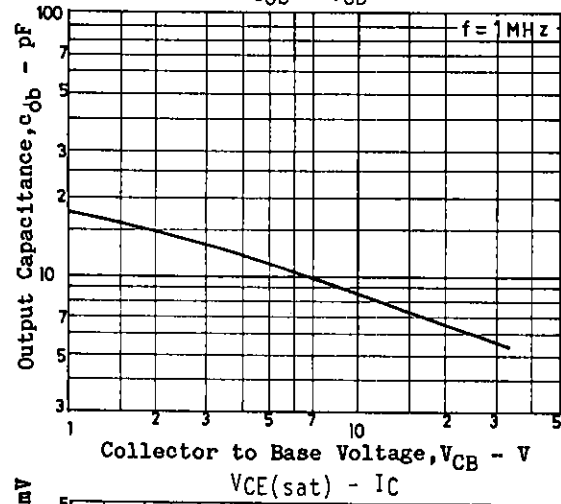
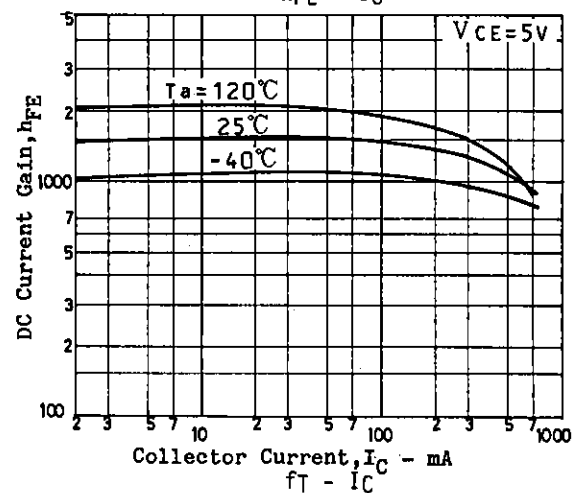
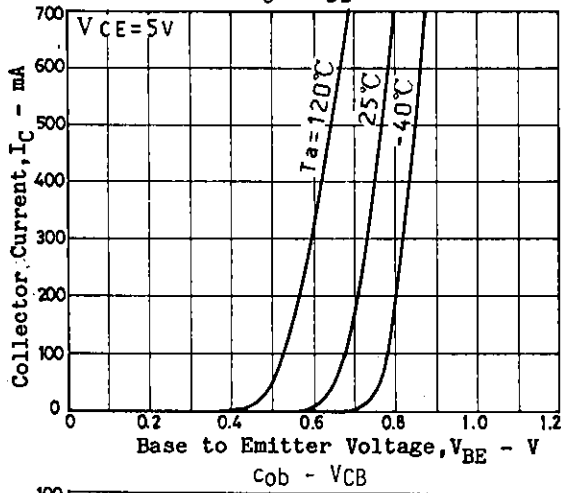
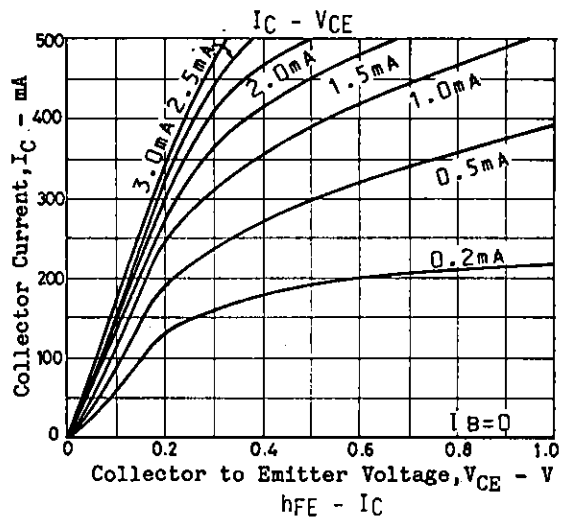
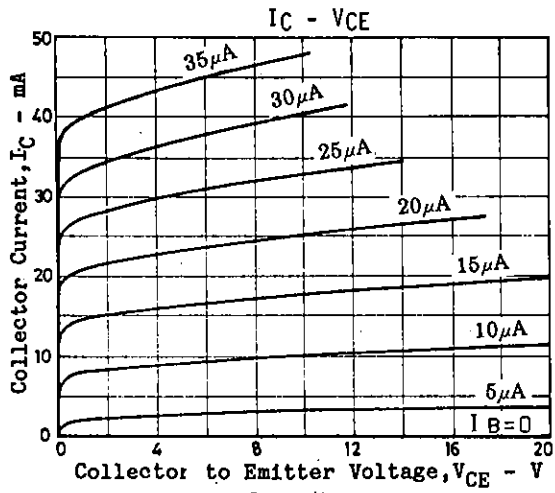
Package Dimensions 2003A

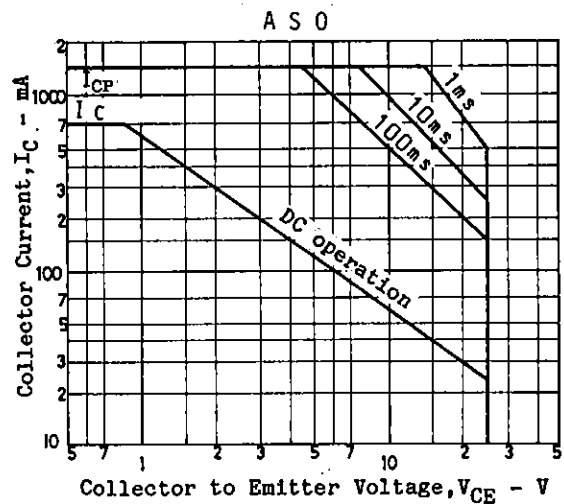
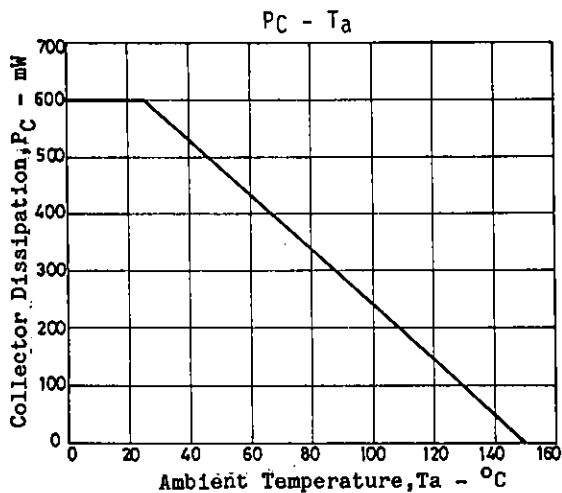
(unit: mm)



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

B. Base
C. Collector
E. Emitter





- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.