

SANYO

No.3707

2SA1769/2SC4613

PNP/NPN Epitaxial Planar Silicon Transistors

160V/700mA Switching Applications**Applications**

- Color TV audio output, converter, inverter.

Features

- Adoption of MBIT processes.
- High breakdown voltage and large current capacity.
- Fast switching speed.

(): 2SA1769

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

			unit
Collector-to-Base Voltage	V_{CB0}	(-)180	V
Collector-to-Emitter Voltage	V_{CE0}	(-)160	V
Emitter-to-Base Voltage	V_{EB0}	(-)6	V
Collector Current	I_C	(-)0.7	A
Collector Current (Pulse)	I_{CP}	(-)1.5	A
Collector Dissipation	P_C	1.5	W
		10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

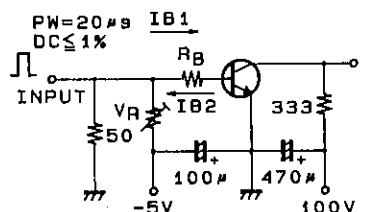
 $T_c = 25^\circ\text{C}$ **Electrical Characteristics at $T_a = 25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)120\text{V}, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{CE} = (-)4\text{V}, I_C = 0$			(-)0.1	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = (-)5\text{V}, I_C = (-)100\text{mA}$	100*		400*	
	$h_{FE}(2)$	$V_{CE} = (-)5\text{V}, I_C = (-)10\text{mA}$	90			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)50\text{mA}$		120		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)250\text{mA}, I_B = (-)25\text{mA}$		0.12	0.4	V
				(- 0.2)	(- 0.5)	
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)250\text{mA}, I_B = (-)25\text{mA}$		(-)0.85	(-)1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-)180			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)160			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu\text{A}, I_C = 0$	(-)6			V

* : The 2SA1769/2SC4613 are classified by 100mA h_{FE} as follows.

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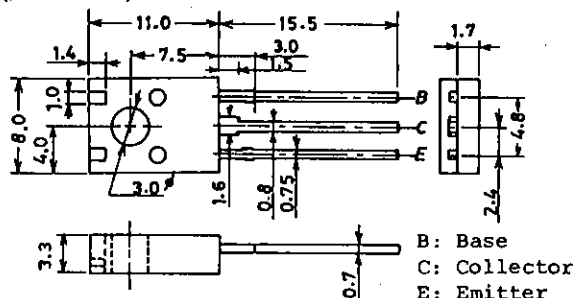
100	R	200	140	S	280	200	T	400
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Switching Time Test Circuit $2Q_{IB1} = -2Q_{IB2} = I_C = 300\text{mA}$

(For PNP, the polarity is reversed).

Unit (Resistance : Ω , Capacitance : F)**Package Dimensions 2042A**

(unit : mm)



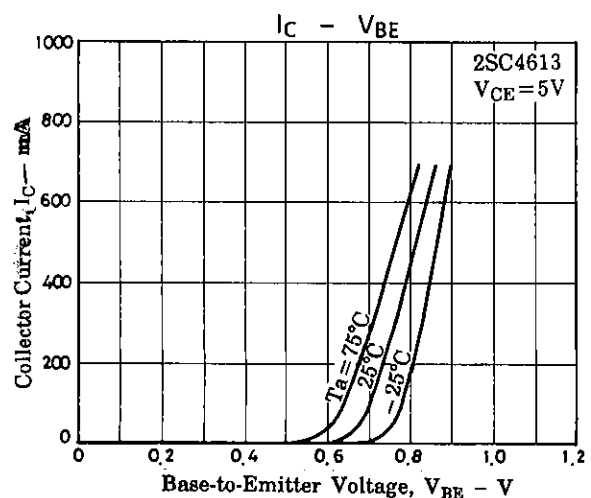
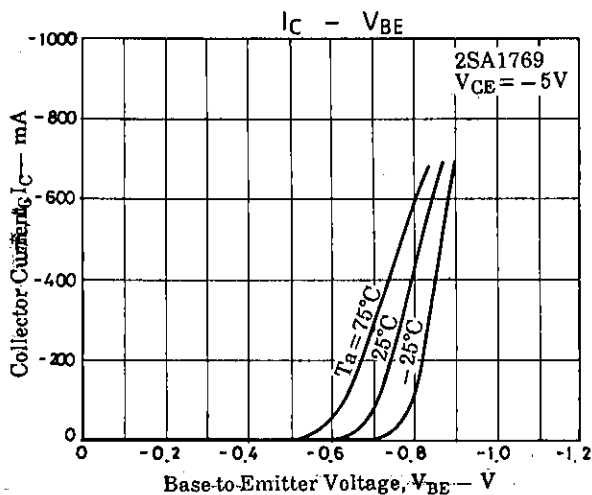
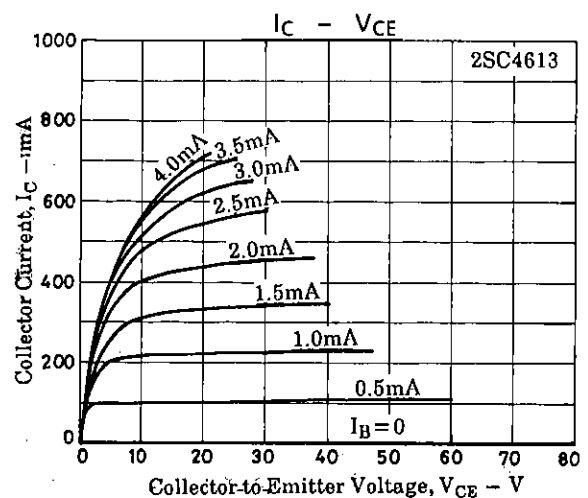
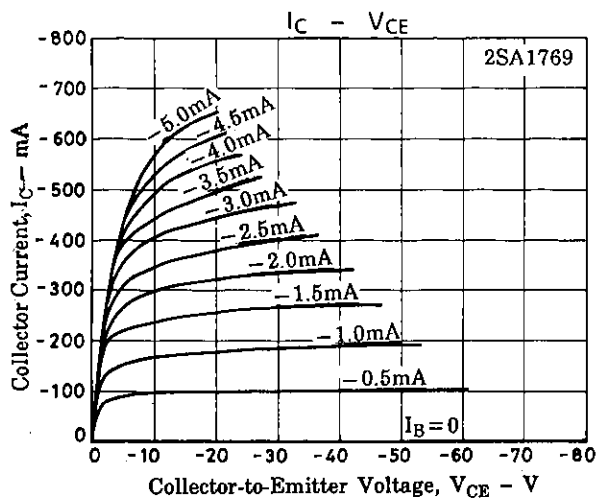
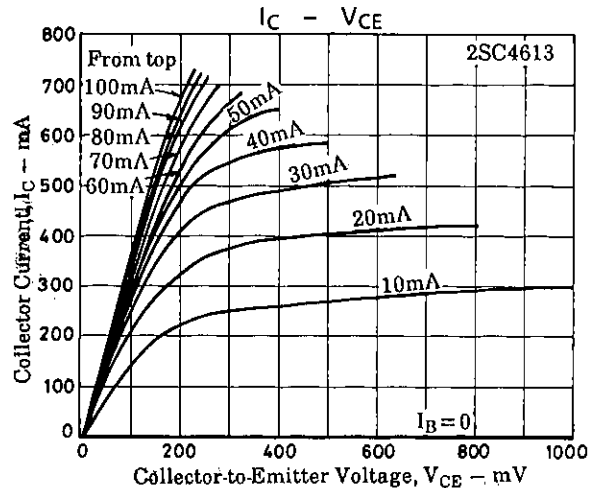
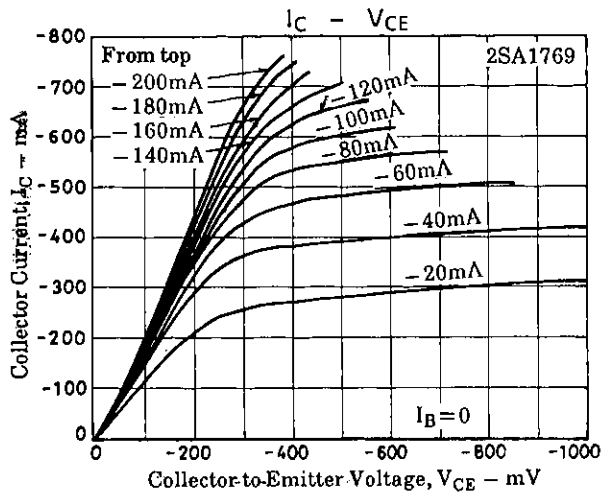
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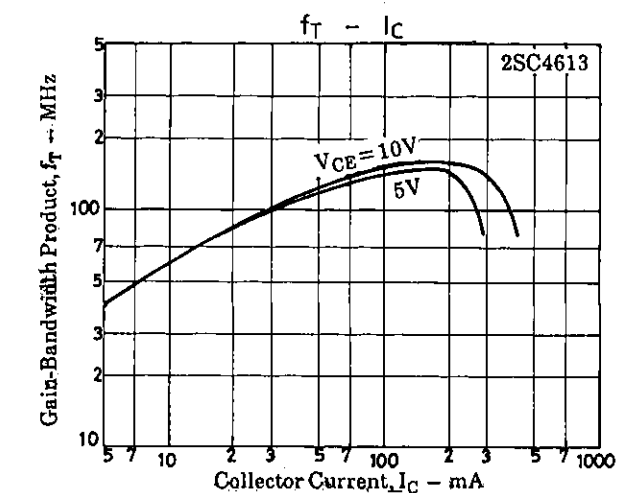
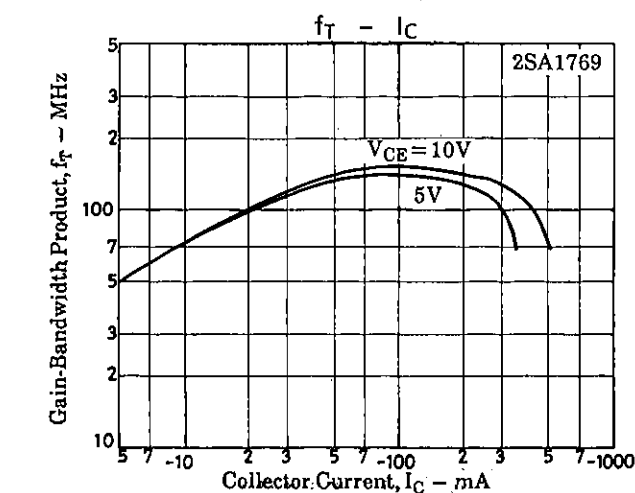
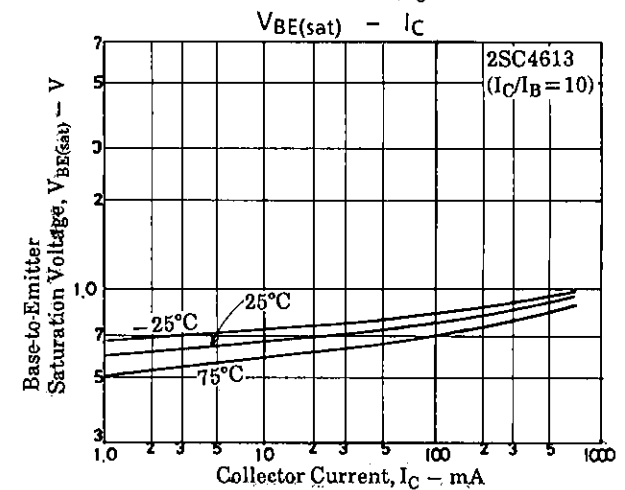
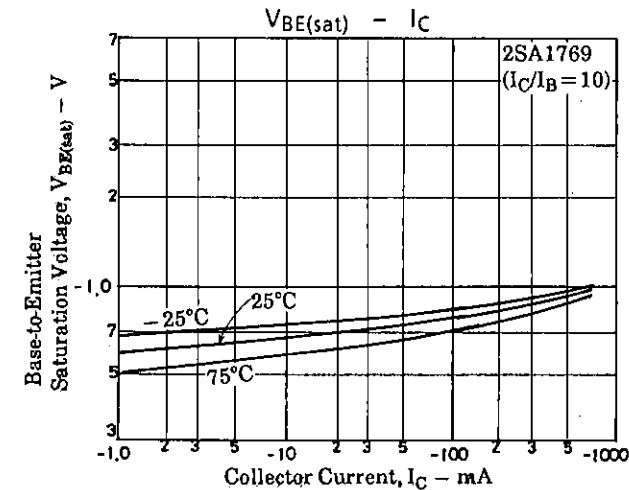
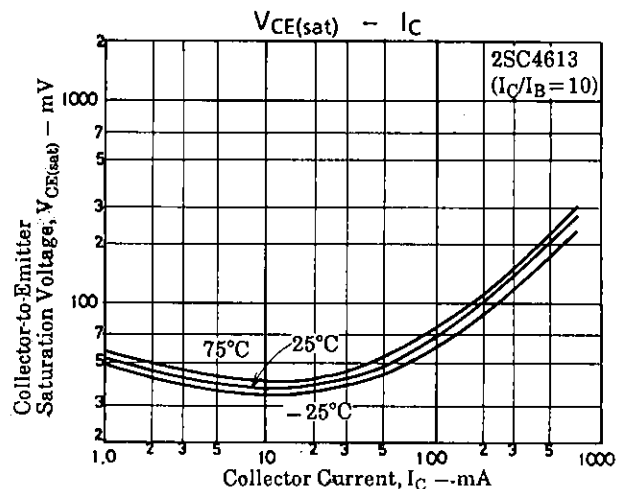
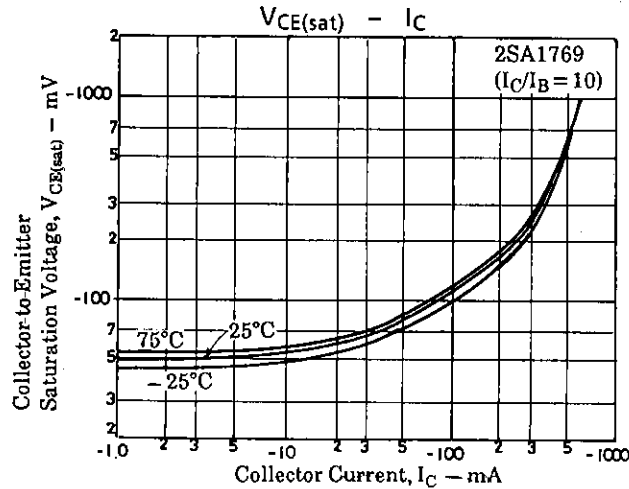
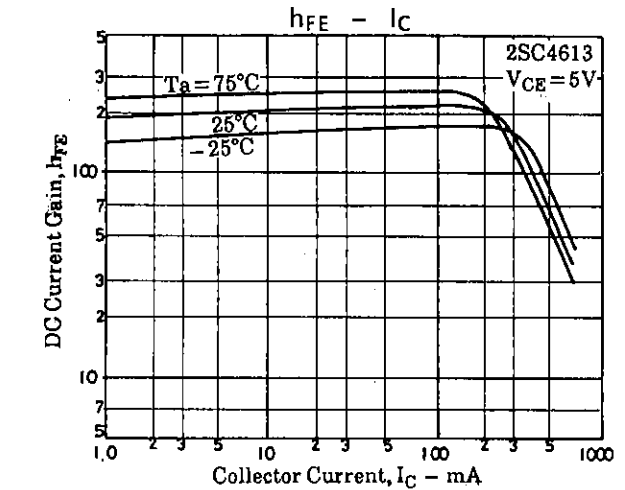
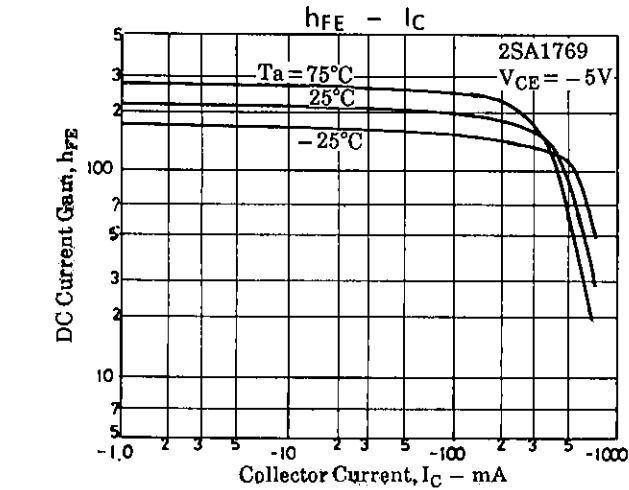
SANYO Electric Co., Ltd. Semiconductor Business Headquarters

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

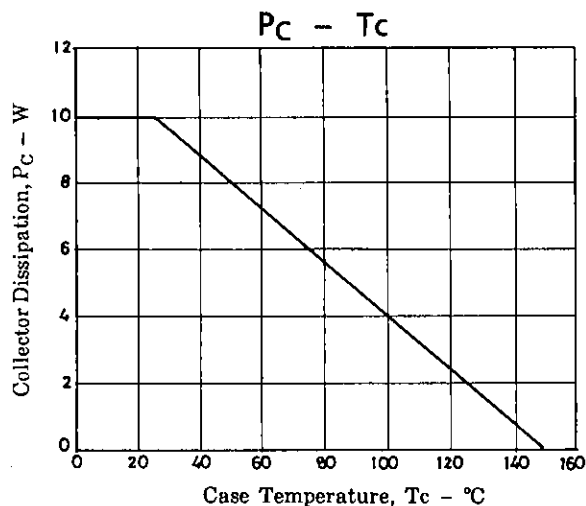
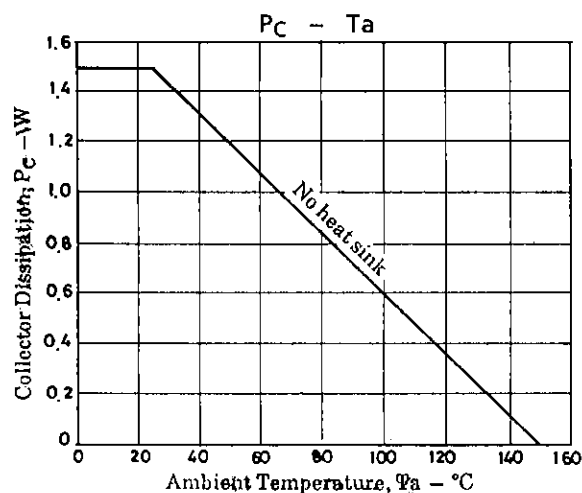
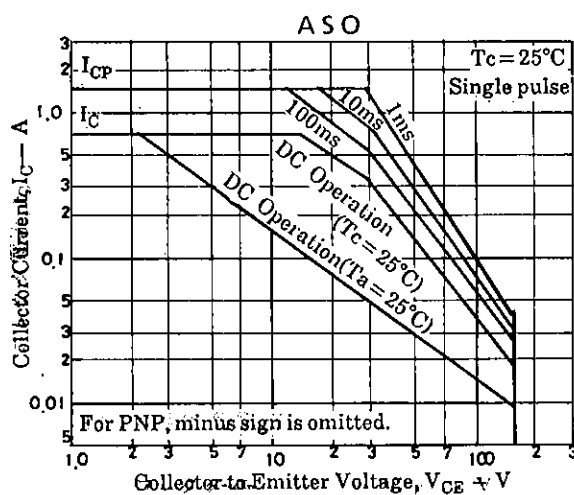
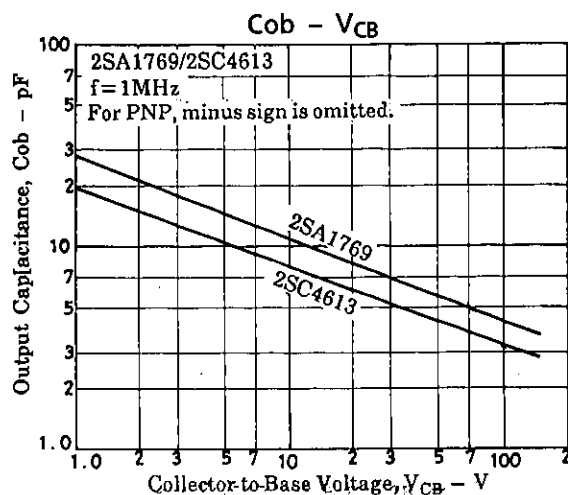
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Output Capacitance	C_{ob}	$V_{CB} = (-)10V, f = 1MHz$	min	typ	max	unit
Turn-ON Time	t_{on}	See specified Test Circuit.		8 (11)		pF
Storage Time	t_{stg}	◇		50 (60)		ns
Fall Time	t_f	◇		1000 (900)		ns
				60 (60)		ns





2SA1769/2SC4613



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