



No.3582

2SA1768/2SC4612

PNP/NPN Epitaxial Planar Silicon Transistors

High-Voltage Switching Applications

Applications

- Color TV sound output, converter, inverter

Features

- Adoption of MBIT process
- High breakdown voltage, large current capacity
- Fast switching speed

() : 2SA1768

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector to Base Voltage	V _{CB0}	(-)180	V
Collector to Emitter Voltage	V _{CEO}	(-)160	V
Emitter to Base Voltage	V _{EBO}	(-)6	V
Collector Current	I _C	(-)0.7	A
Collector Current(Pulse)	I _{CP}	(-)1.5	A
Collector Dissipation	P _C	1	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	- 55 to + 150	°C

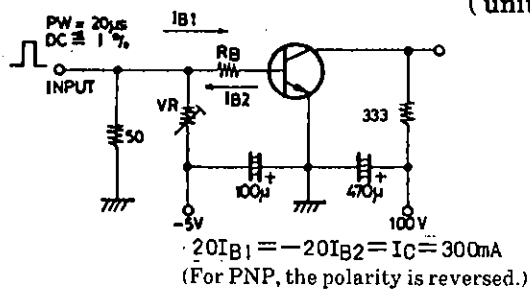
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	V _{CB} = (-)120V, I _E = 0			(-)0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = (-)4V, I _C = 0			(-)0.1	μA
DC Current Gain	h _{FE} (1)	V _{CE} = (-)5V, I _C = (-)100mA	100*		400*	
	h _{FE} (2)	V _{CE} = (-)5V, I _C = (-)10mA	90			
Gain-Bandwidth Product	f _T	V _{CE} = (-)10V, I _C = (-)50mA		120		MHz
Output Capacitance	c _{ob}	V _{CB} = (-)10V, f = 1MHz		(11)8		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = 250mA, I _B = (-)25mA	(- 0.2)0.12		(- 0.5)0.4	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = 250mA, I _B = (-)25mA	(-)0.85		(-)1.2	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	(-)180			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	(-)160			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	6			V
Turn-ON Time	t _{on}	See specified Test Circuit.		(60)50		ns
Storage Time	t _{stg}	"		(900)1000		ns
Fall Time	t _f	"		(60)60		ns

* : The 2SA1768/2SC4612 are classified by 100mA h_{FE} as follows :

100 R	200	140 S	280	200 T	400
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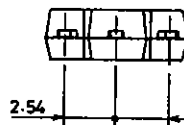
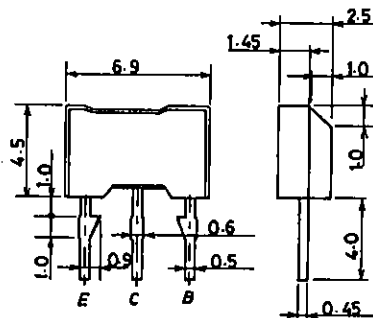
Switching Time Test Circuit



20IB₁ = -20IB₂ = I_C = 300mA
(For PNP, the polarity is reversed.)

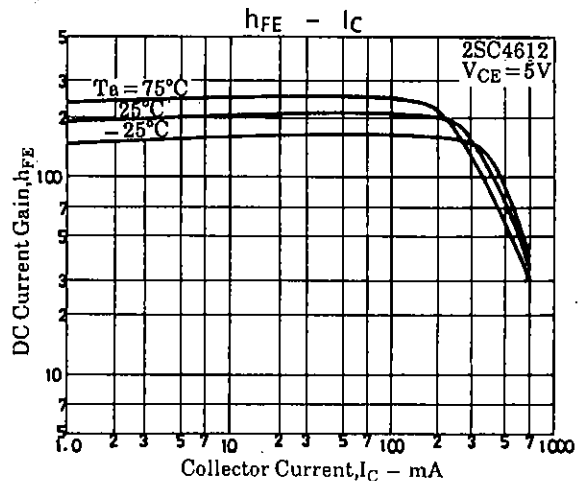
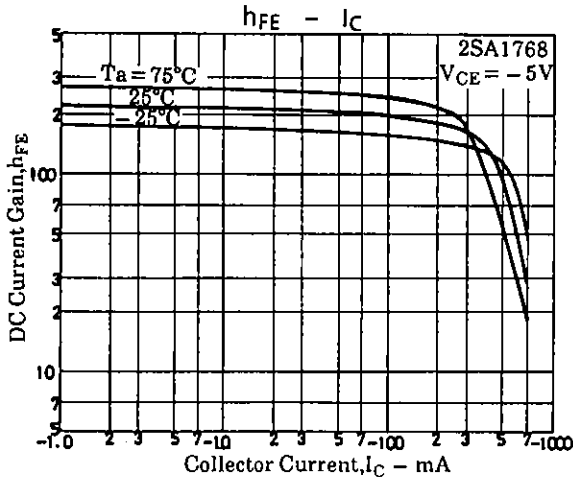
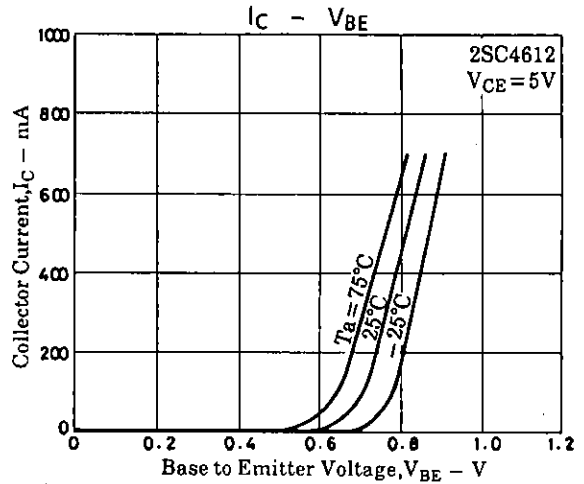
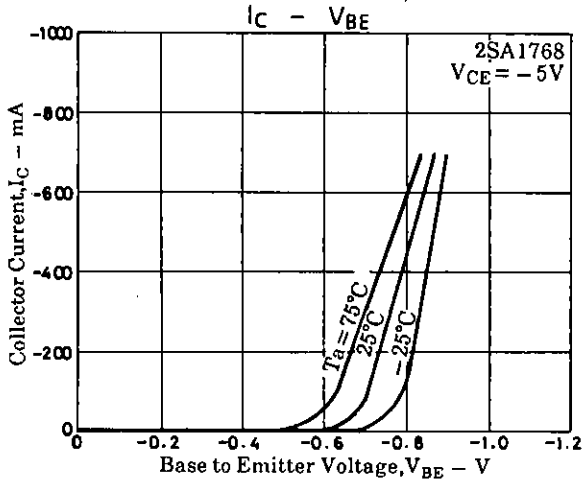
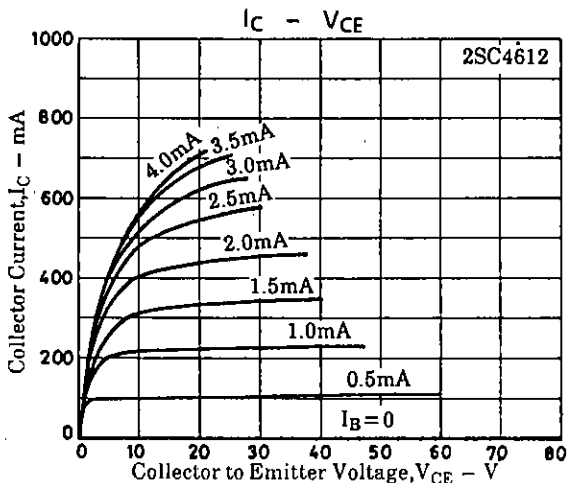
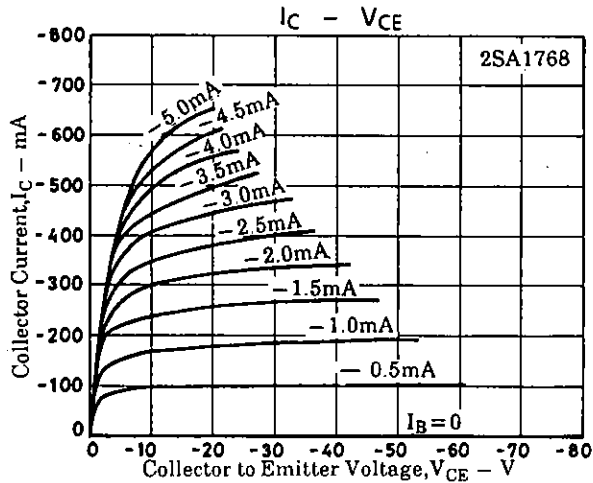
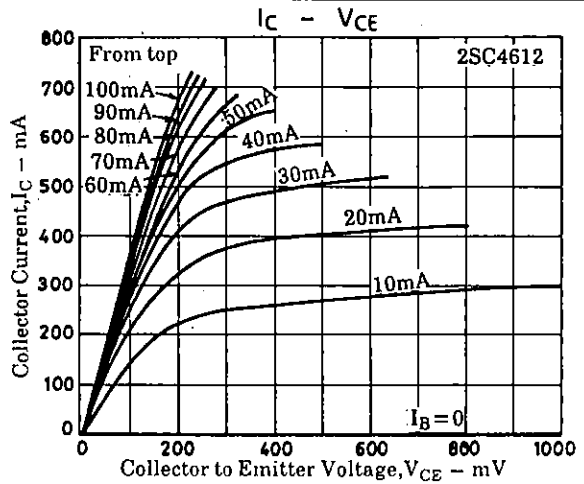
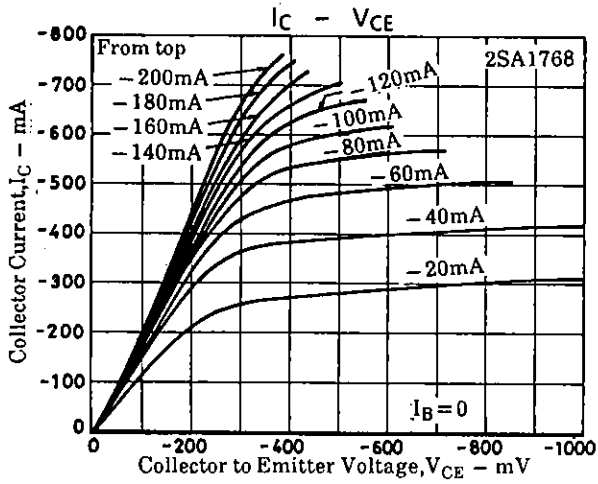
Unit(Resistance : Ω , Capacitance : F)

Package Dimensions 2064 (unit: mm)

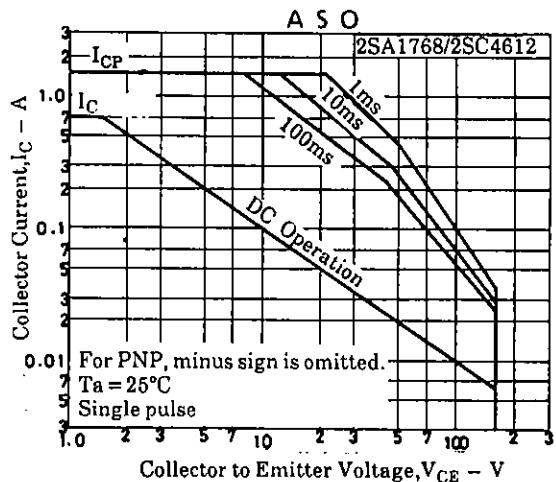
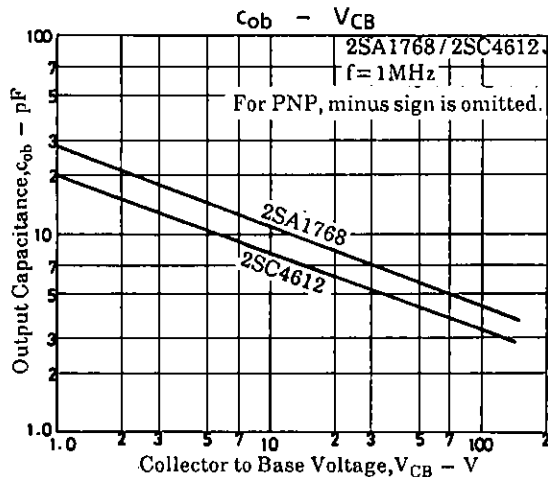
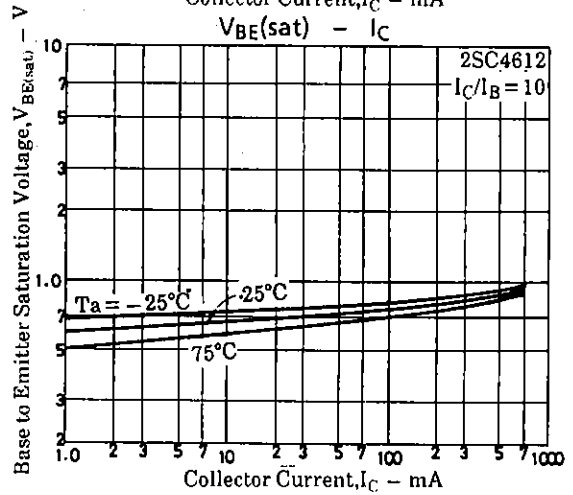
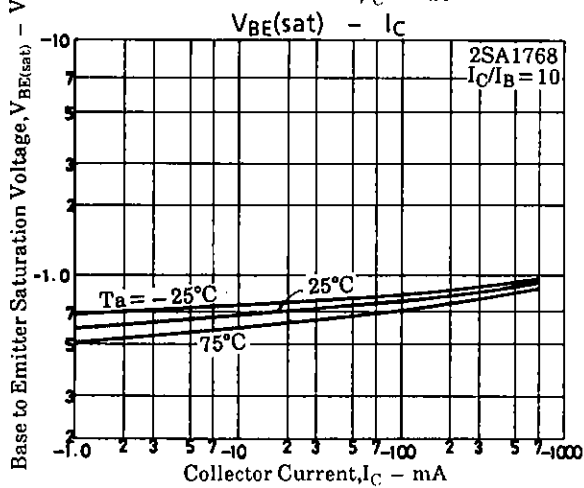
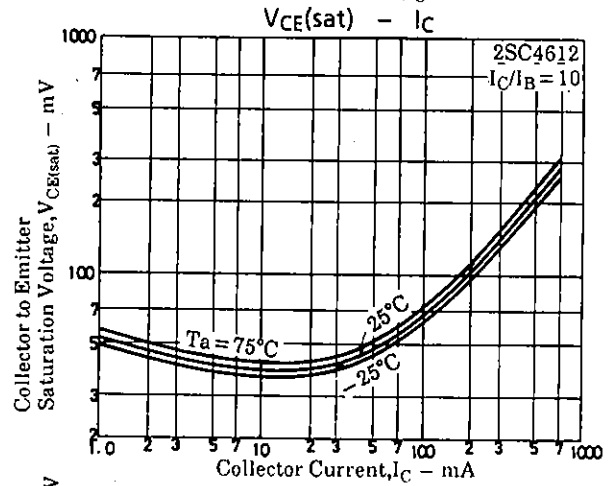
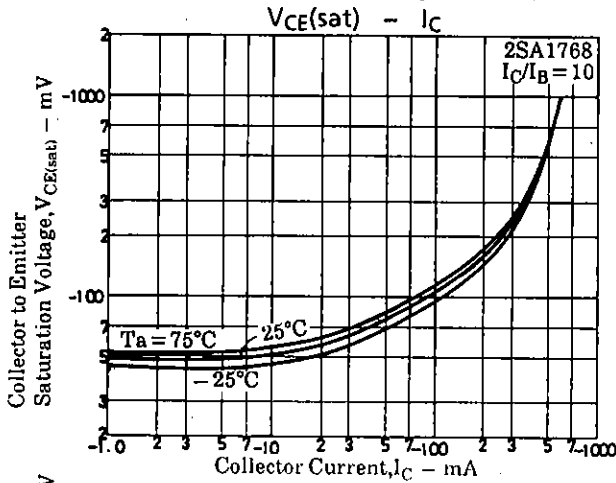
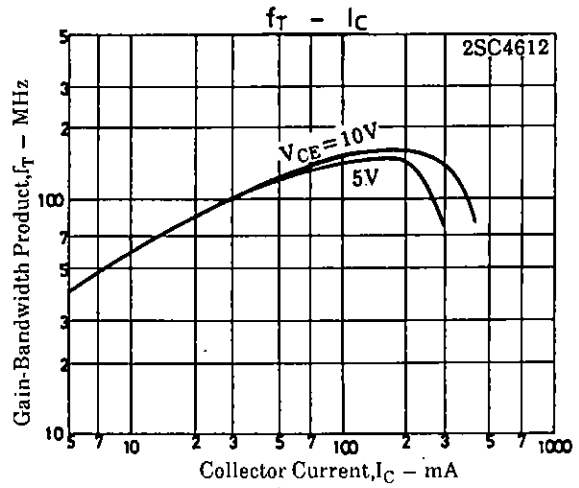
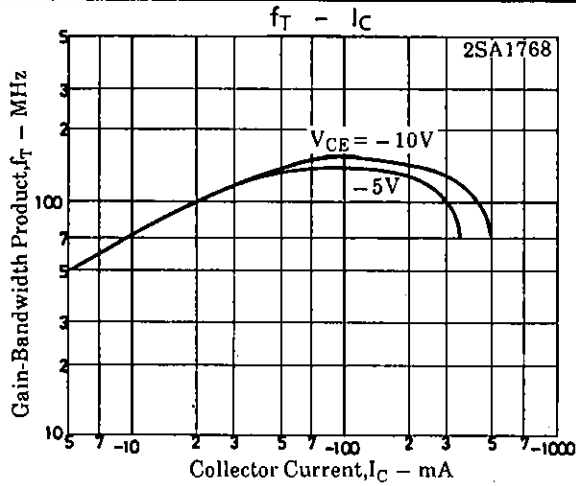


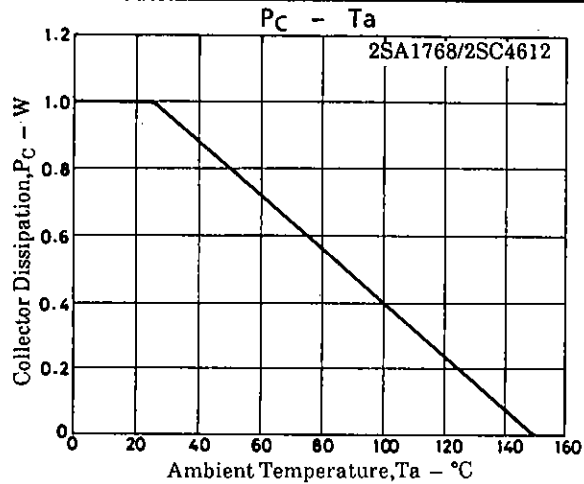
E: Emitter
C: Collector
B: Base
SANYO: NMP

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