

SANYO	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

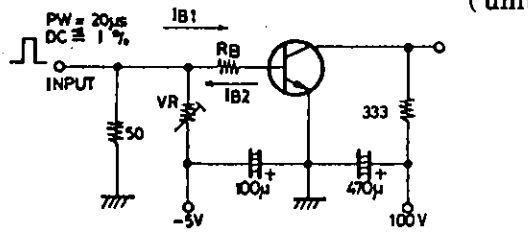
Electrical Characteristics at Ta = 25°C

		min	typ	max	unit
Collector Cutoff Current	I _{CBO} 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		(1)18		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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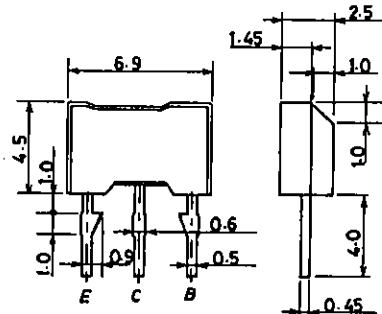
Switching Time Test Circuit



· 20I_{B1} = -20I_{B2} = I_C = 300mA
 (For PNP, the polarity is reversed.)

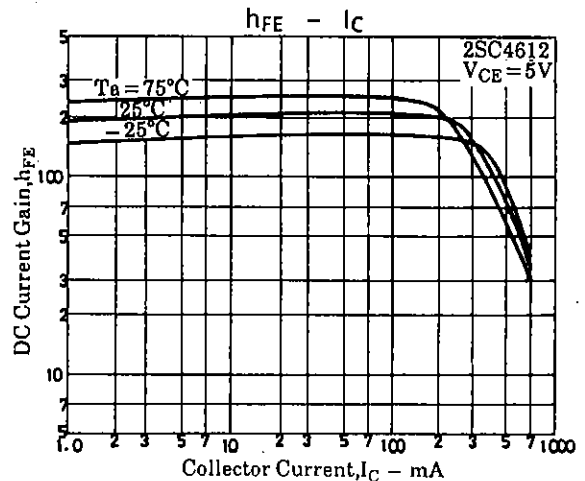
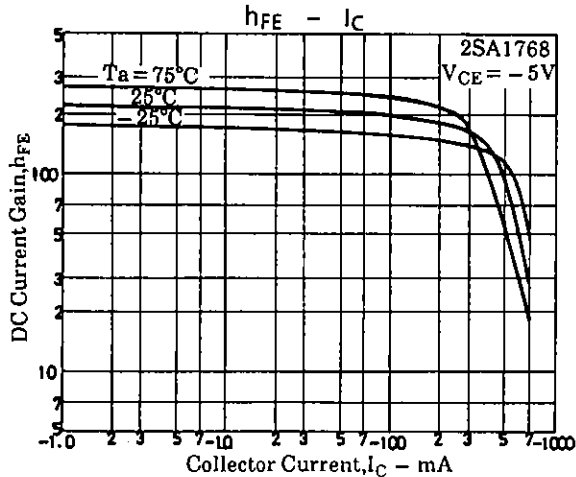
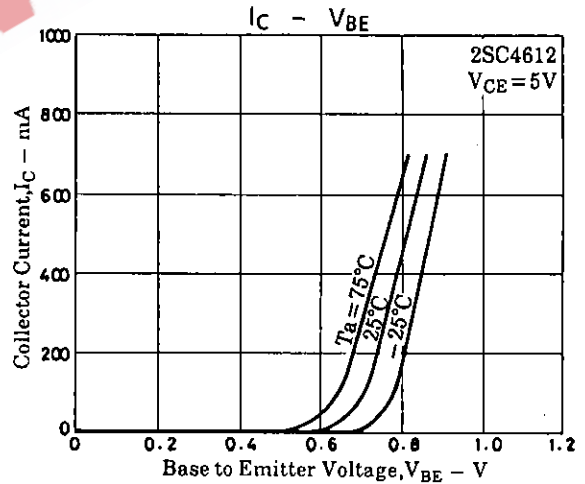
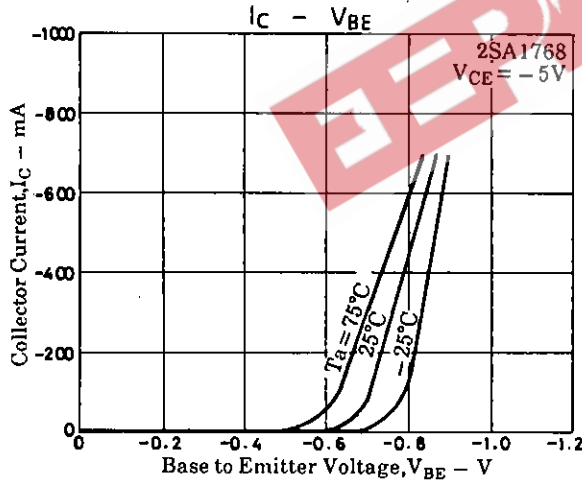
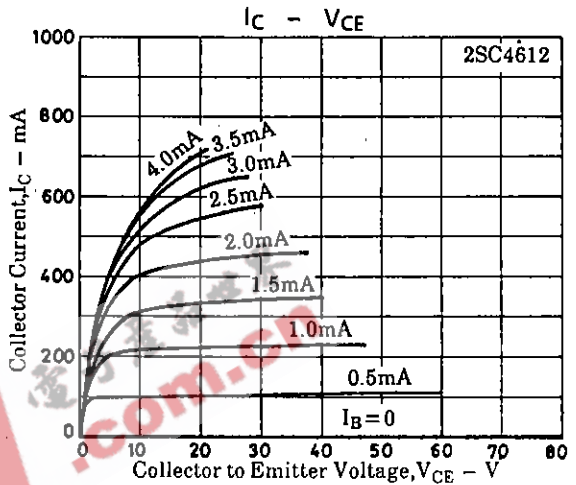
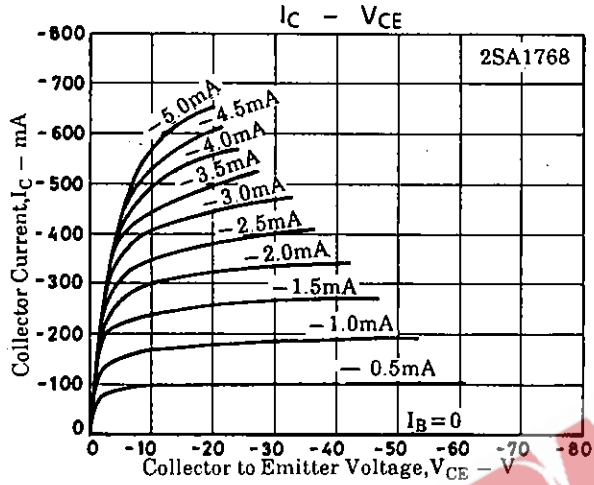
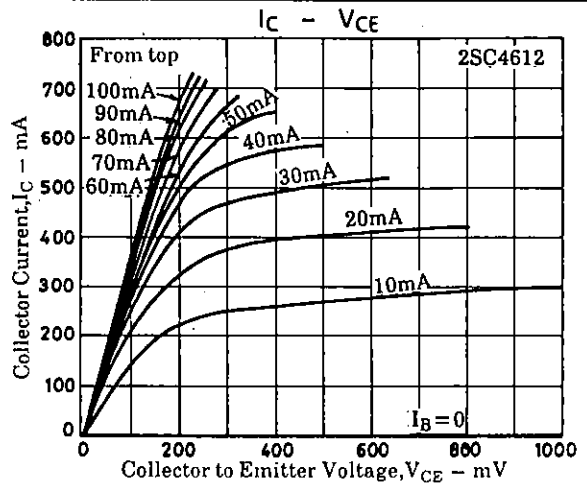
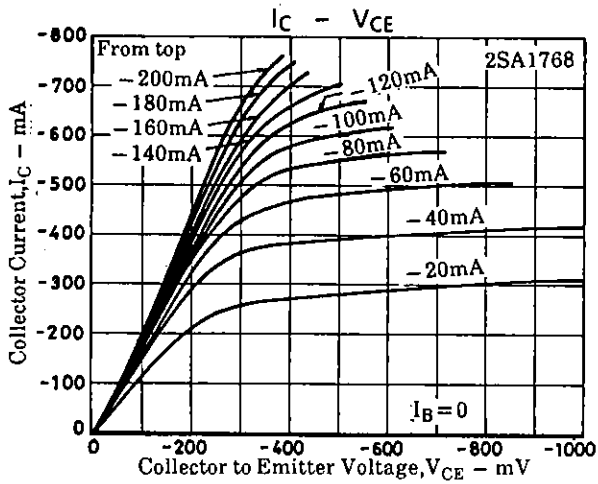
Unit(Resistance : Ω , Capacitance : F)

Package Dimensions 2064
 (unit: mm)

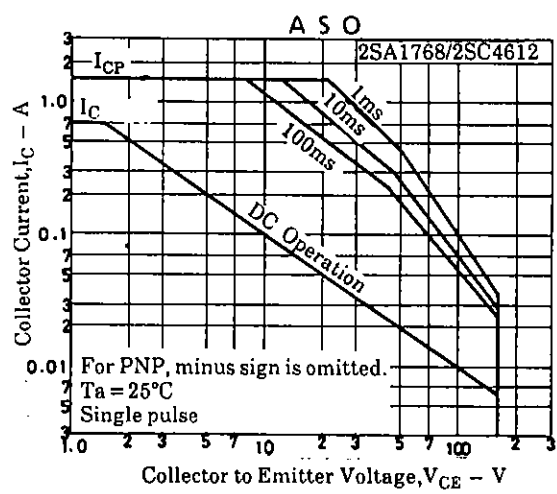
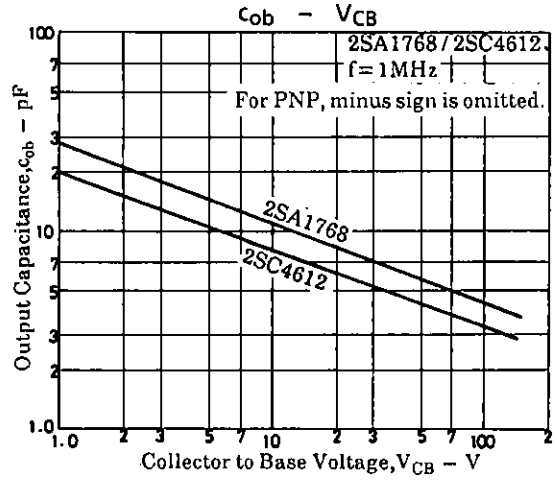
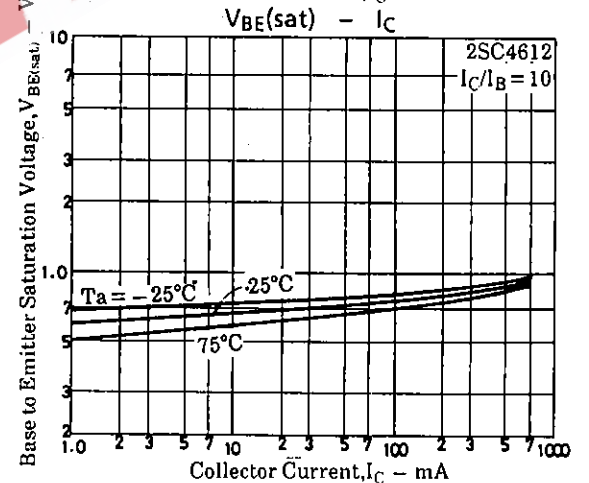
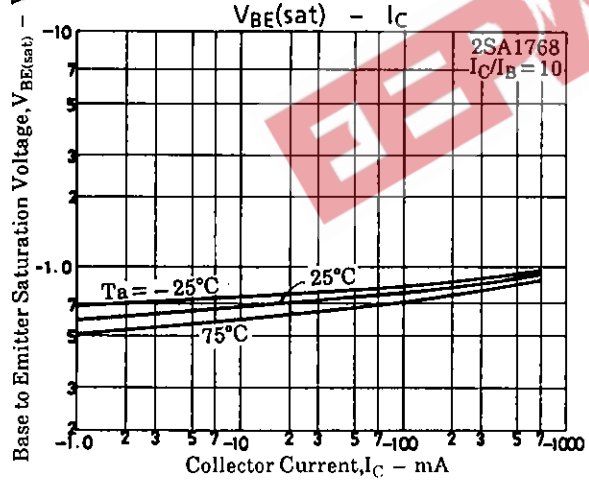
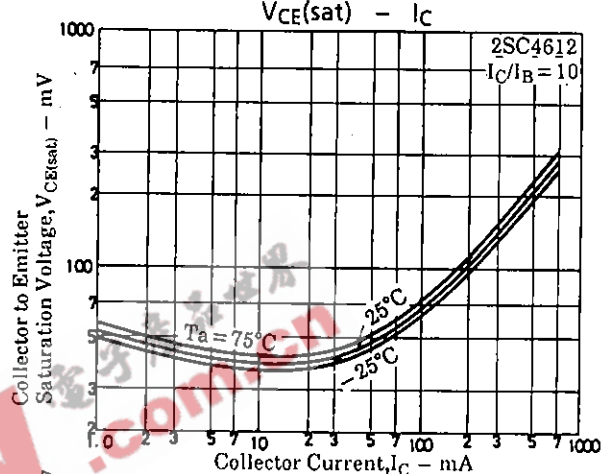
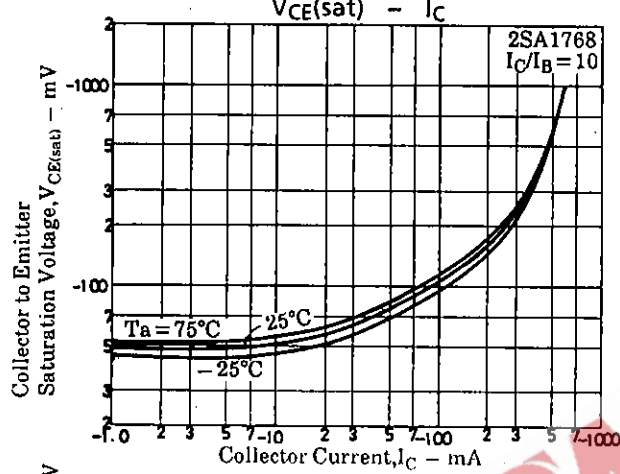
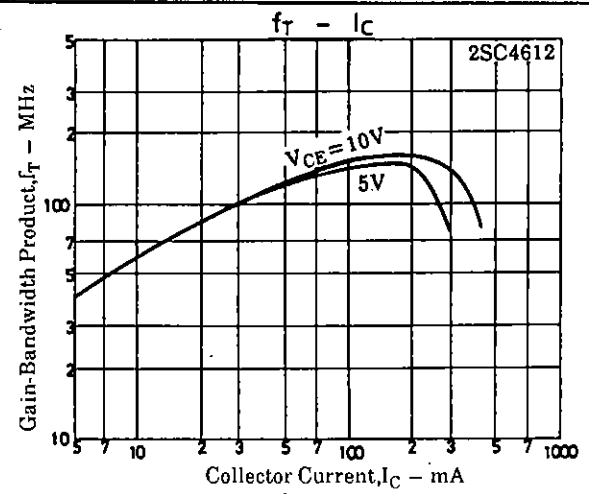
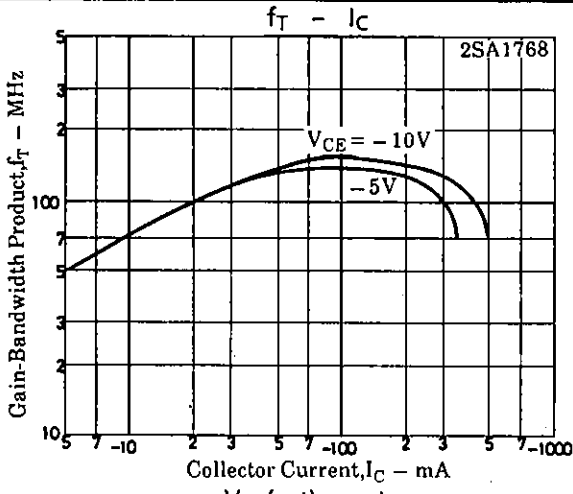


E: Emitter
 C: Collector
 B: Base
 SANYO: NMP

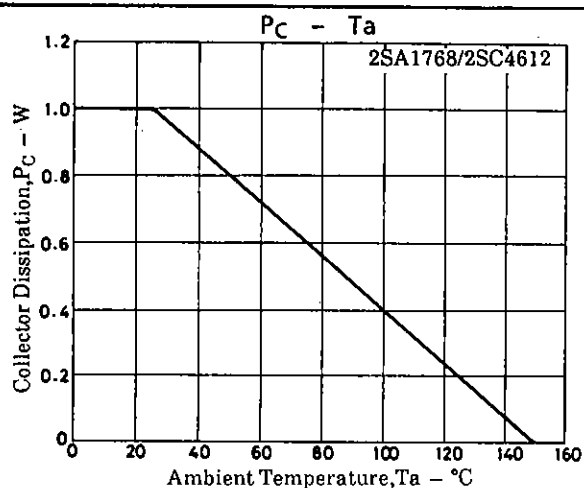
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