

SANYO	No.2479A	2SA1607/2SC4168
	PNP/NPN Epitaxial Planar Silicon Transistors High-Speed Switching Applications	

Features

- Fast switching speed
- High gain-bandwidth product
- Low saturation voltage

() : 2SA1607

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector to Base Voltage	V _{CB0}	(-)40	V
Collector to Emitter Voltage	V _{CE0}	(-)20	V
Emitter to Base Voltage	V _{EB0}	(-)5	V
Collector Current	I _C	(-)150	mA
Collector Current(Pulse)	I _{CP}	(-)300	mA
Base Current	I _B	(-)30	mA
Collector Dissipation	P _C	200	mW
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} = (-)30V, 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}	V _{CE} = (-)1V, I _C = (-)10mA	60*		270*	
					(180)	
Gain-Bandwidth Product	f _T	V _{CE} = (-)10V, I _C = (-)10mA		700		MHz
				(400)		
Output Capacitance	c _{ob}	V _{CB} = (-)10V, f = 1MHz		(2.9)2.6		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = (-)10mA, I _B = (-)1mA		0.08	(-)0.2	V
				(-0.07)		
B-E Saturation Voltage	V _{BE(sat)}	I _C = (-)10mA, I _B = (-)1mA		0.72	(-)1.0	V
				(-0.75)		
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = (-)10μA, I _E = 0		(-)40		V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = (-)1mA, R _{BE} = ∞		(-)20		V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E = (-)10μA, I _C = 0		(-)5		V

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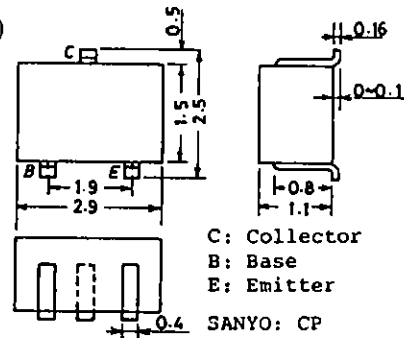
* : The 2SA1607/2SC4168 are classified by 10mA h_{FE} as follows :

2SA1607	60	3	120	90	4	180
2SC4168	60	3	120	90	4	180
					135	5
					270	

Marking 2SA1607 : YL
 2SC4168 : GT
 h_{FE} rank 2SA1607 : 3,4
 2SC4168 : 3,4,5

Package Dimensions 2018A

(unit : mm)

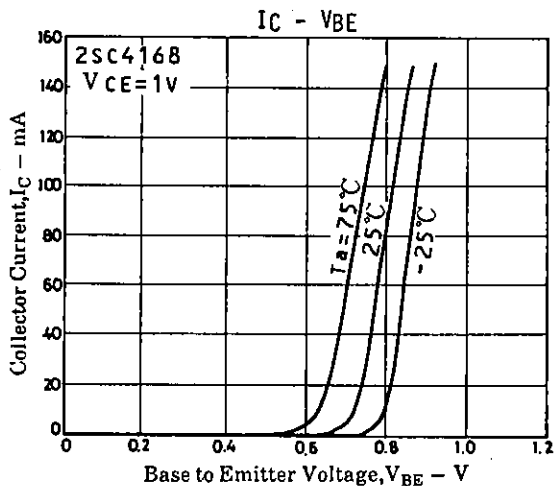
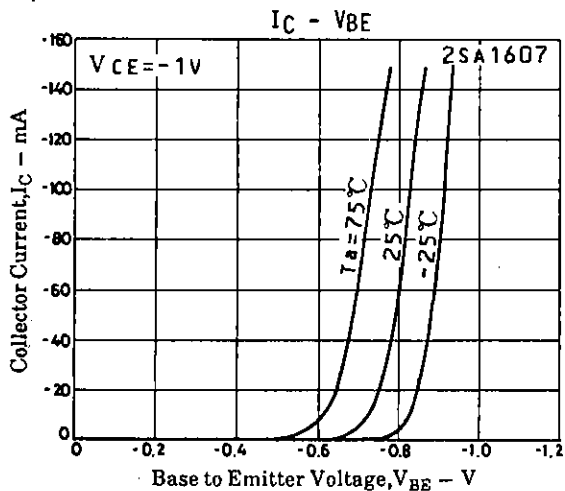
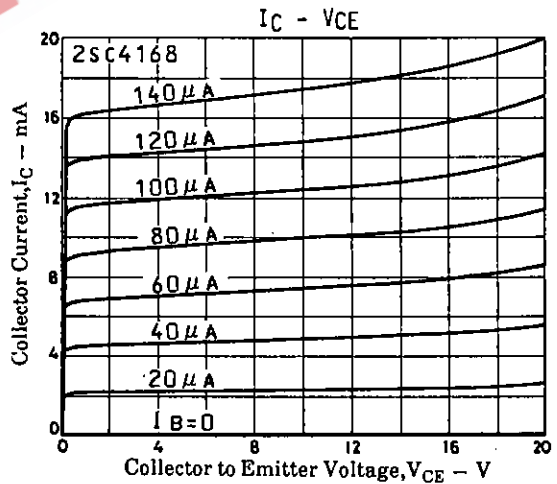
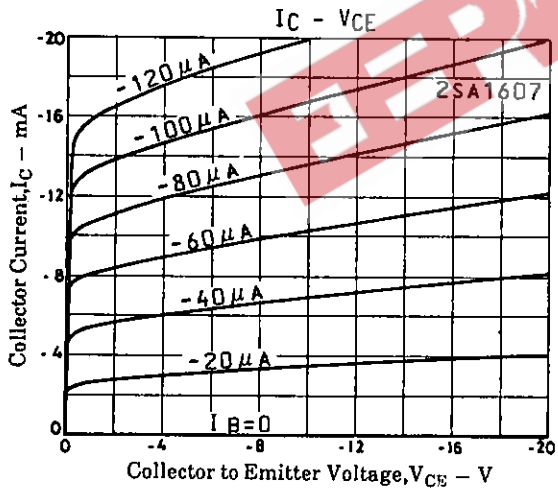
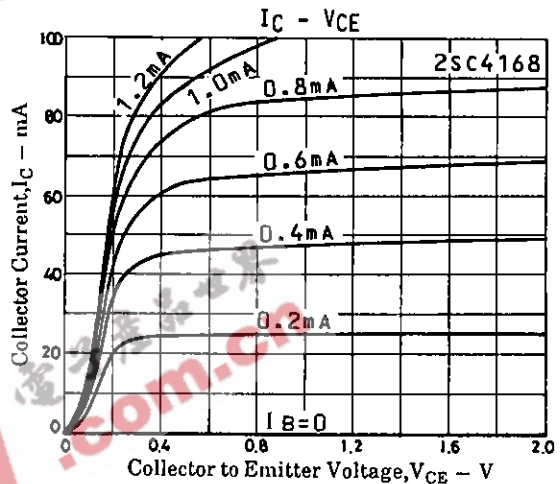
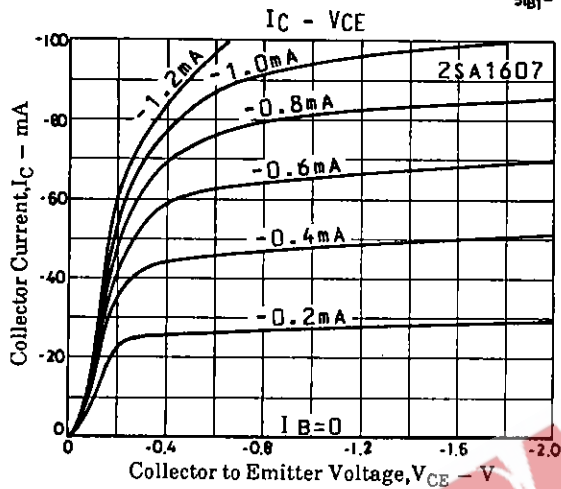
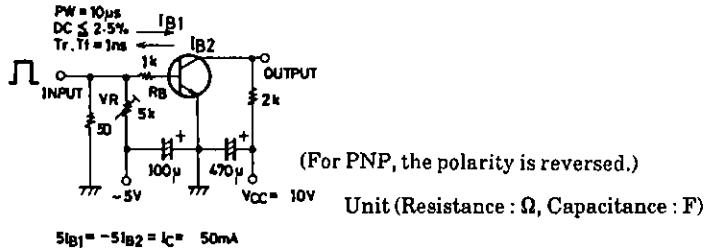


C : Collector
 B : Base
 E : Emitter
 SANYO: CP

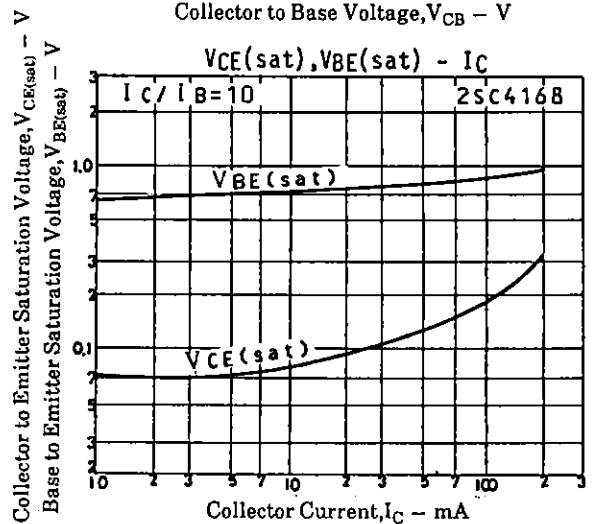
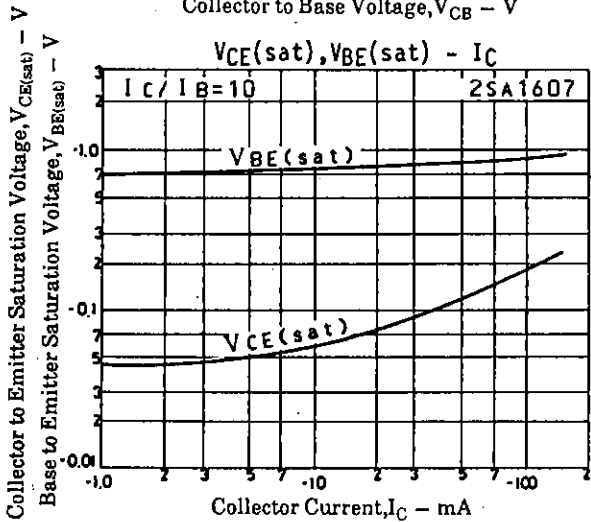
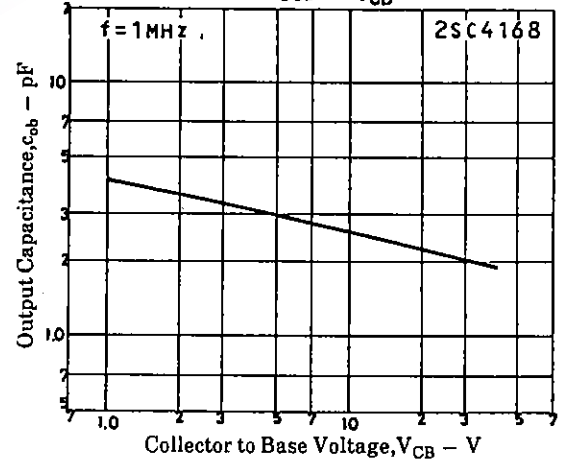
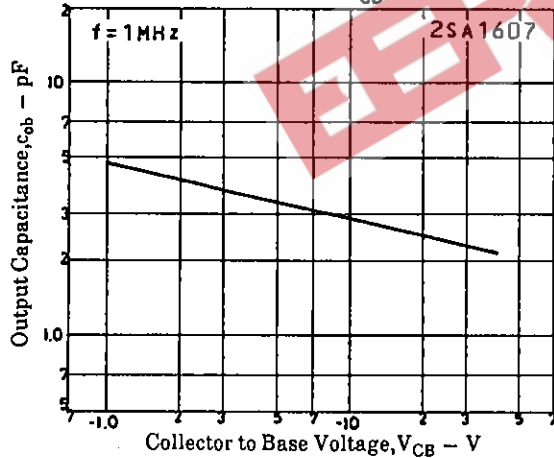
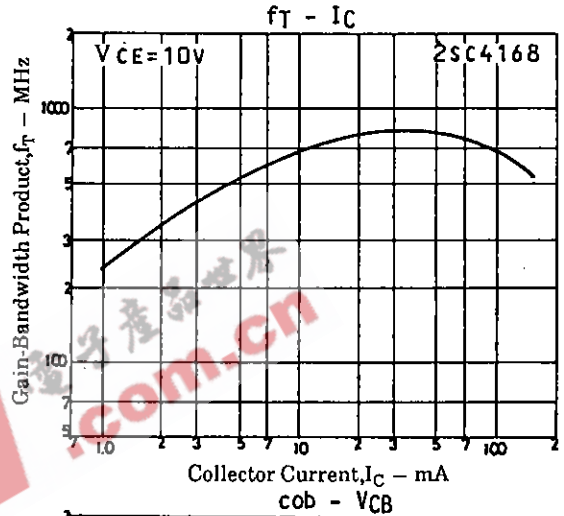
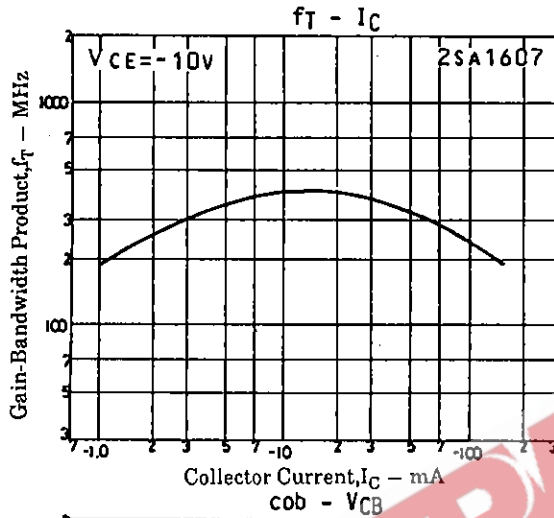
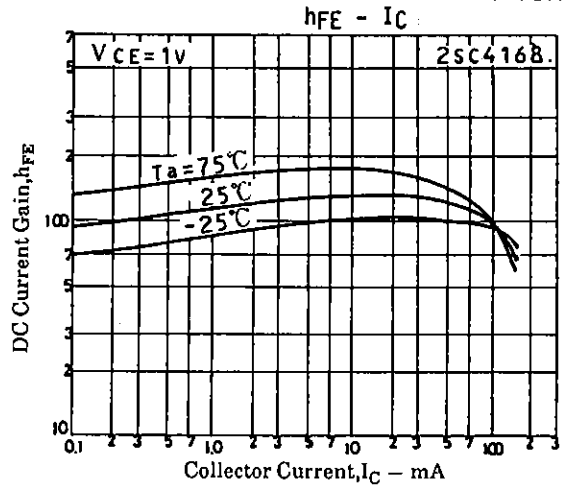
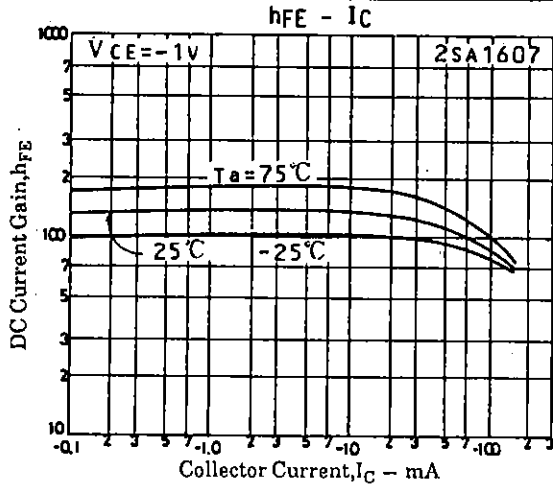
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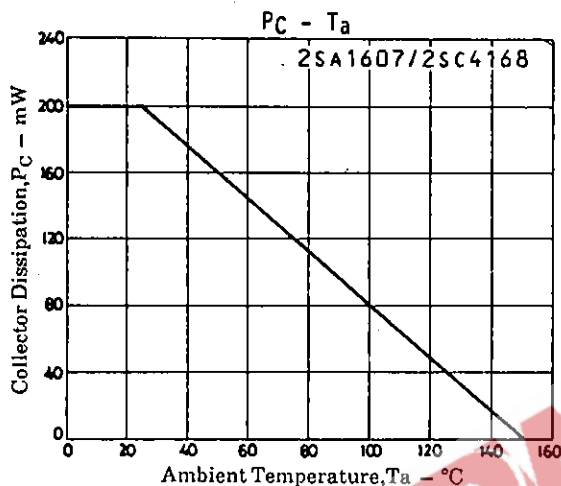
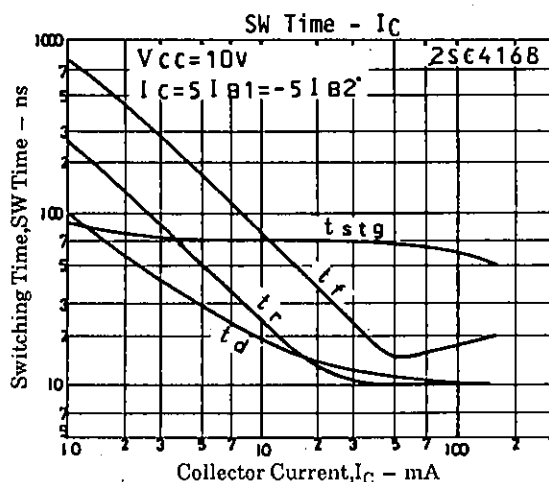
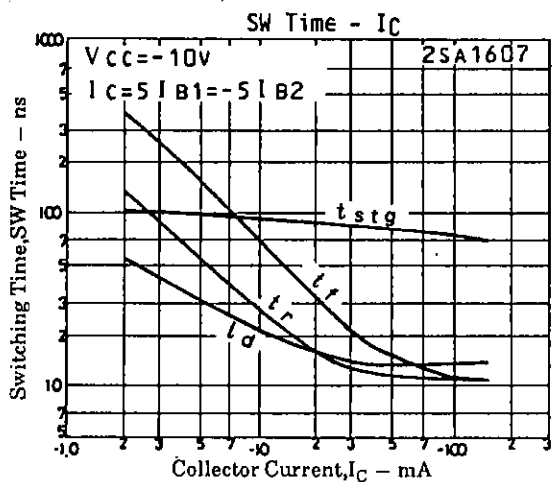
			min	typ	max	unit
Delay Time	t_d	See specified Test Circuit.		(14)11	20	ns
Rise Time	t_r	"		(11)10	20	ns
Storage Time	t_{stg}	"		(80)70	180	ns
Fall Time	t_f	"		(16)15	25	ns

Switching Time Test Circuit



2SA1607/2SC4168





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