



No.3024

2SA1704/2SC4484

PNP/NPN Epitaxial Planar Silicon Transistors

High-Current Driver Applications

Applications

- Voltage regulators, relay drivers, lamp drivers.

Features

- Adoption of FBET, MBIT processes.
- Low collector-to-emitter saturation voltage.
- Large current capacity and wide ASO.
- Fast switching speed.

(): 2SA1704

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector to Base Voltage	V _{CB0}	(-)30	V
Collector to Emitter Voltage	V _{CEO}	(-)25	V
Emitter to Base Voltage	V _{EBO}	(-)6	V
Collector Current	I _C	(-)2.5	A
Collector Current(Pulse)	I _{CP}	(-)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} = (-)20V, I _E = 0			(-)100	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} = (-)4V, I _C = 0			(-)100	nA
DC Current Gain	h _{FE} (1)	V _{CE} = (-)2V, I _C = (-)100mA	100*		400*	
			65			
Gain-Bandwidth Product	f _T	V _{CE} = (-)2V, I _C = (-)1.5A		150		MHz
C-E Saturation Voltage	V _{CE(sat)}	I _C = (-)1.5A, I _B = (-)75mA	(-0.35)	0.18	(-0.6)	0.4 V
B-E Saturation Voltage	V _{BE(sat)}	I _C = (-)1.5A, I _B = (-)75mA	(-)0.95		(-)1.2	V
Output Capacitance	c _{ob}	V _{CB} = (-)10V, f = 1MHz		(32)19		pF

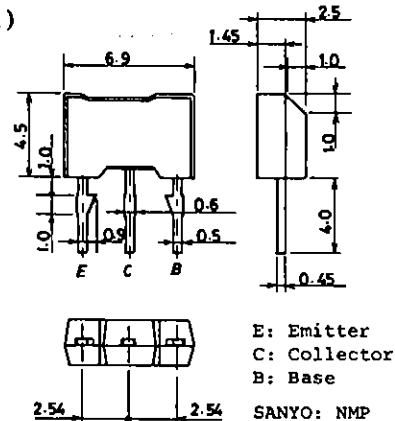
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* : The 2SA1704/2SC4484 are classified by 100mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400
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Package Dimensions 2064

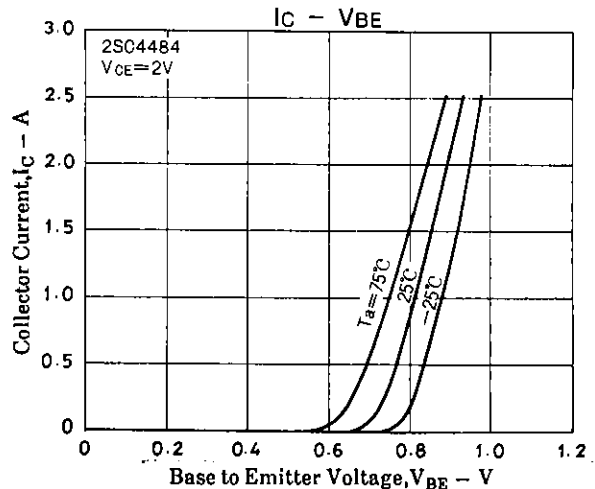
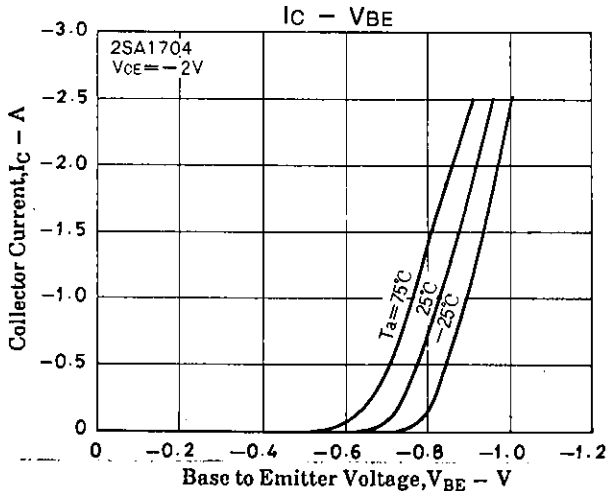
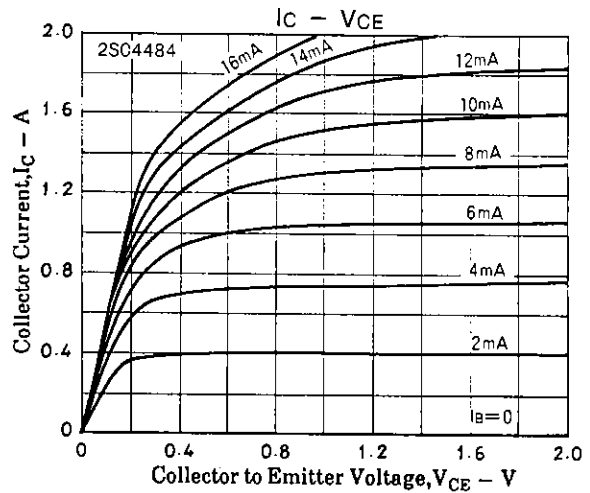
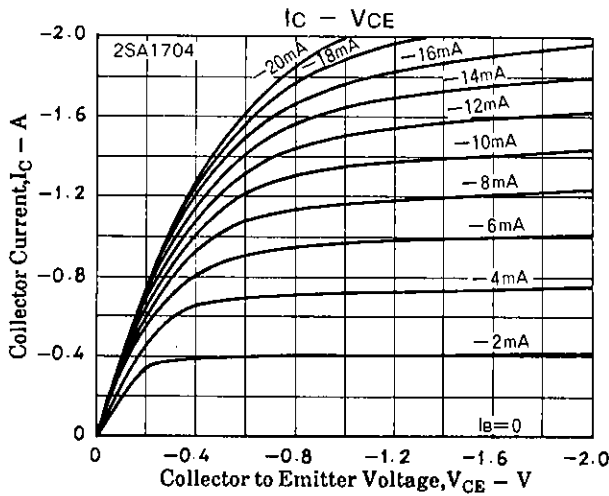
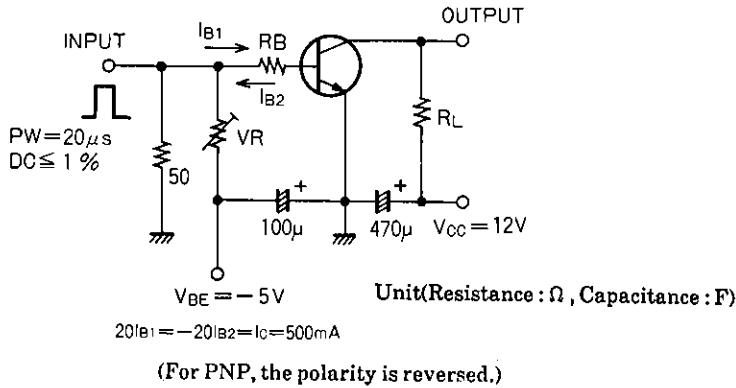
(unit: mm)



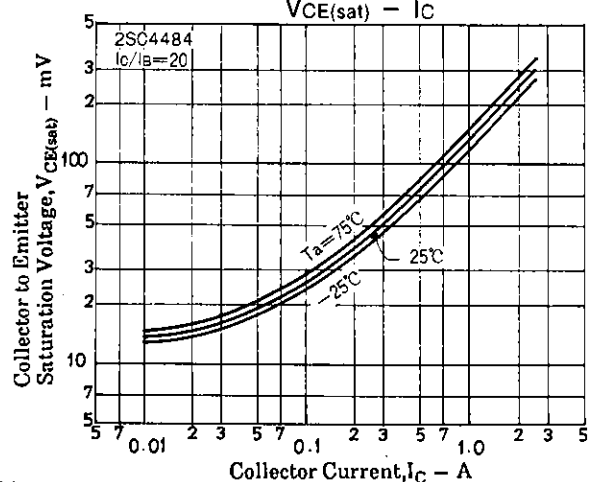
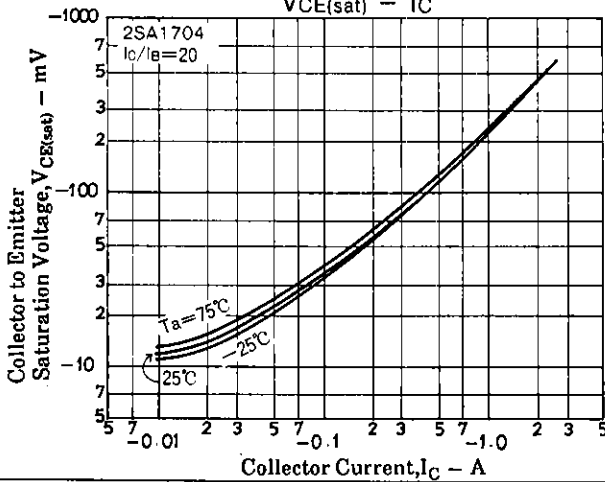
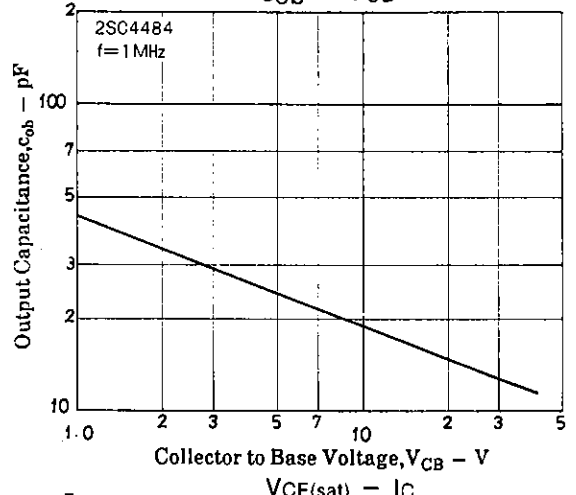
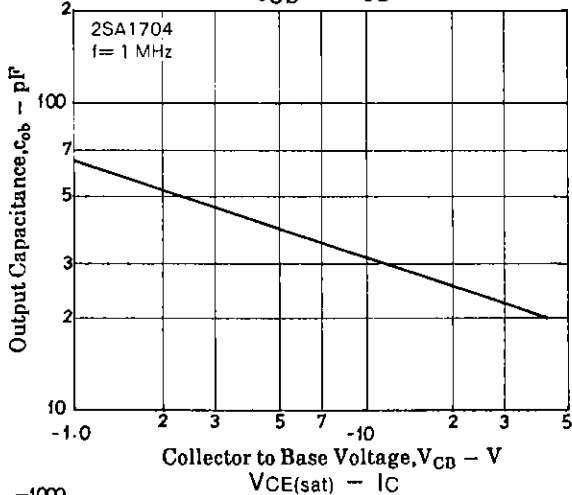
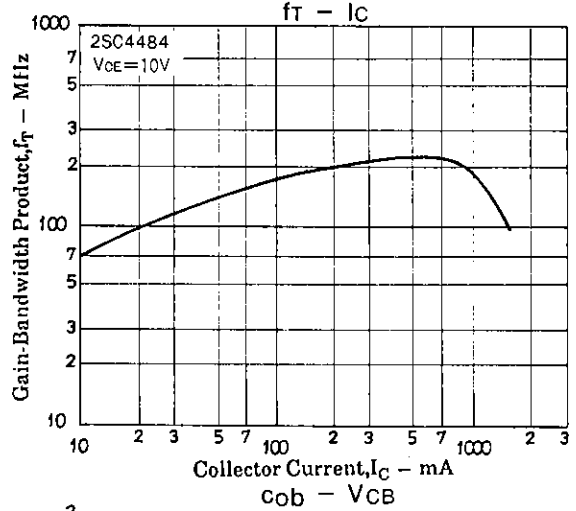
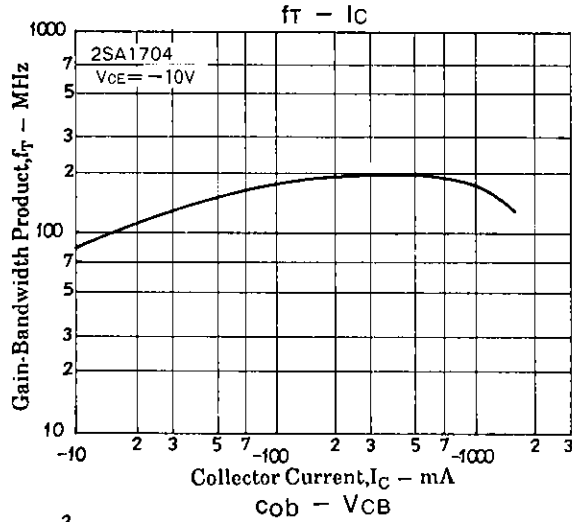
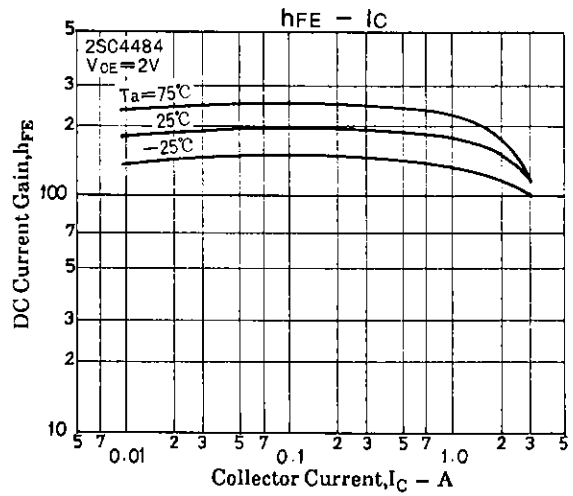
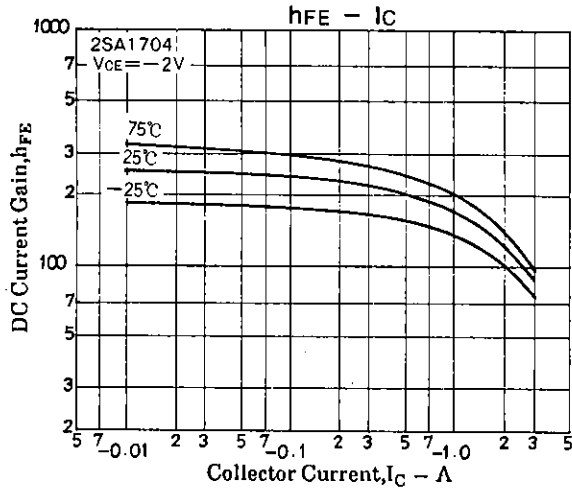
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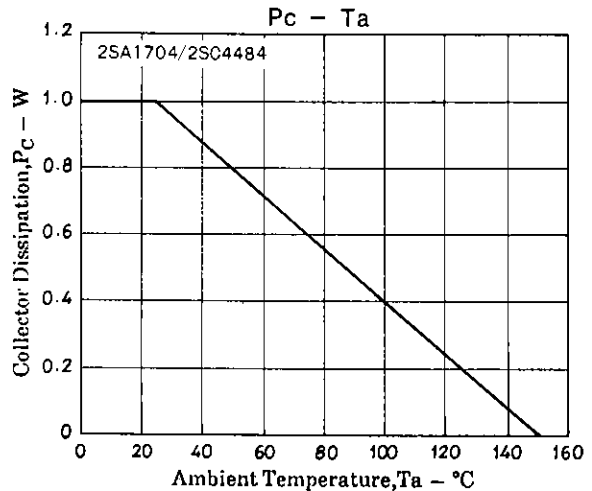
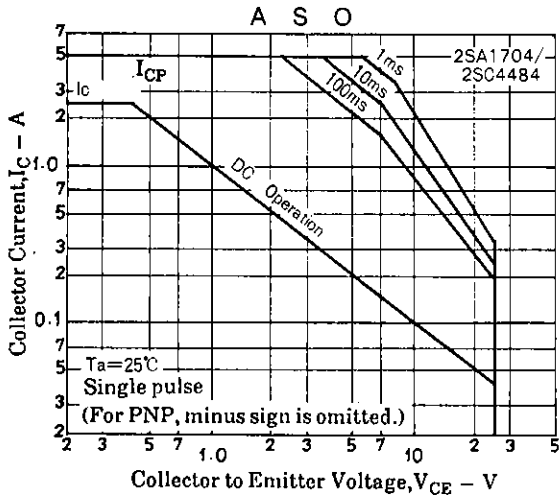
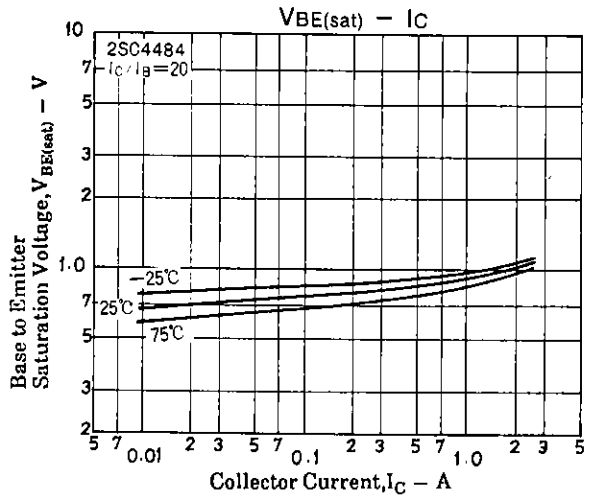
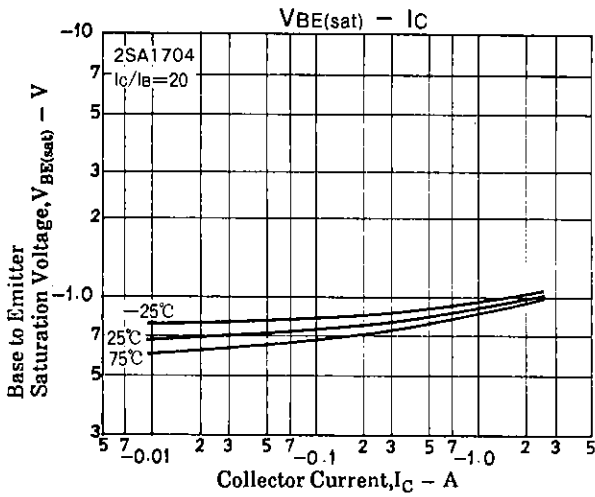
		min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$ $I_C = (-)10\mu A, I_E = 0$	(-)30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$ $I_C = (-)1mA, R_{BE} = \infty$	(-)25			V
E-B Breakdown Voltage	$V_{(BR)EBO}$ $I_E = (-)10\mu A, I_C = 0$	(-)6			V
Turn-ON Time	t_{on} See specified Test Circuit.		60		ns
Storage Time	t_{stg} "		(350)500		ns
Fall Time	t_f "		25		ns

Switching Time Test Circuit



2SA1704/2SC4484





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