



2SA1701/2SC4481

Low-Frequency General-Purpose Amplifier Applications

Applications

- AF power amplifier, medium-speed switching, small-sized motor driver applications.

Features

- Large current capacity.
- Low collector-to-emitter saturation voltage.

() : 2SA1701

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)15	V
Collector-to-Emitter Voltage	V_{CE0}		(-)15	V
Emitter-to-Base Voltage	V_{EB0}		(-)5	V
Collector Current	I_C		(-)1.5	A
Collector Current (Pulse)	I_{CP}		(-)3	A
Collector Dissipation	P_C		0.9	W
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB} = (-)12\text{V}, I_E = 0$			(-)100	nA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)100	nA
DC Current Gain	h_{FE1}	$V_{CE} = (-)2\text{V}, I_C = (-)50\text{mA}$	140*		560*	
	h_{FE2}	$V_{CE} = (-)2\text{V}, I_C = (-)1\text{A}$	70			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)2\text{V}, I_C = (-)50\text{mA}$		(300)		MHz
				200		MHz

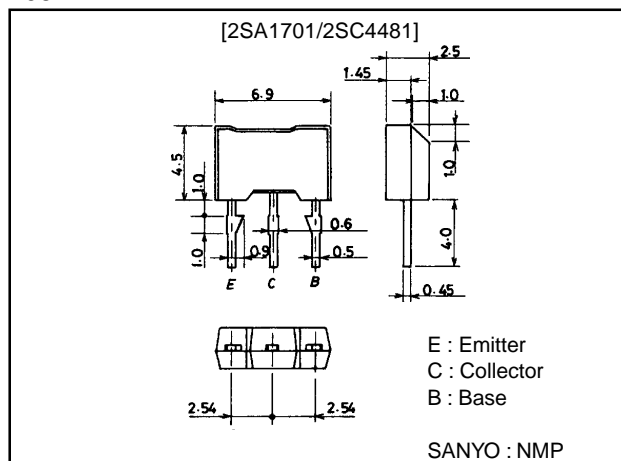
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Package Dimensions

unit:mm

2064

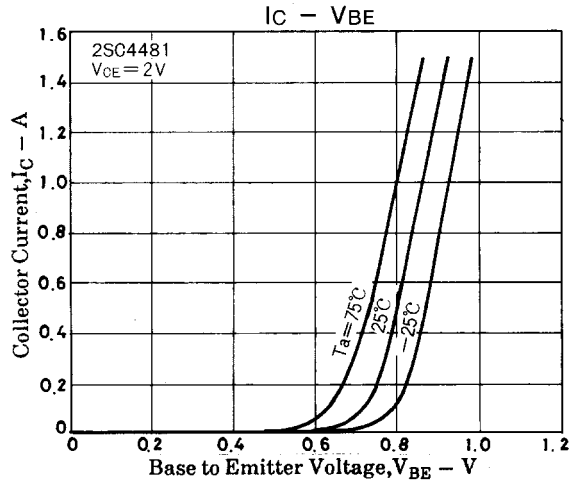
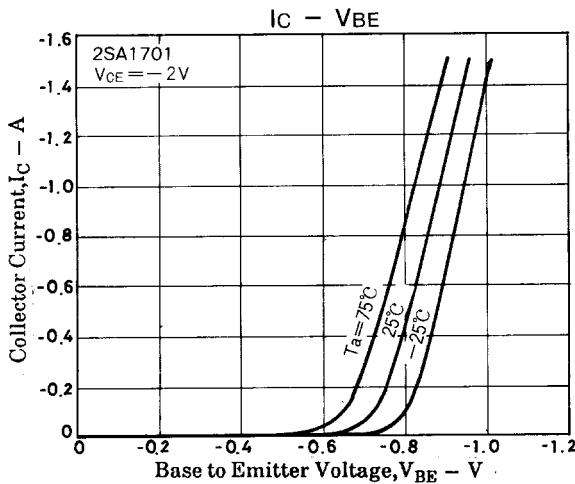
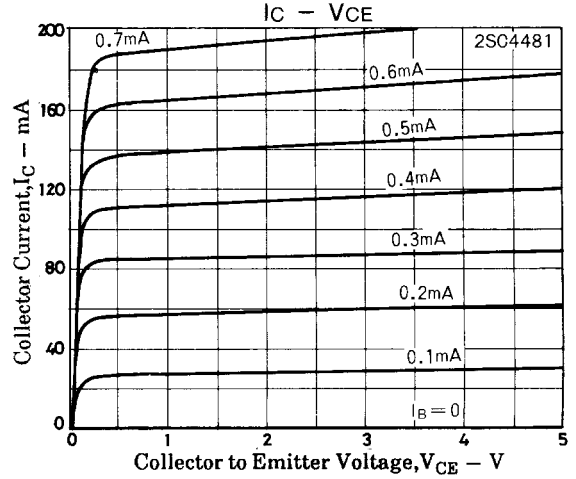
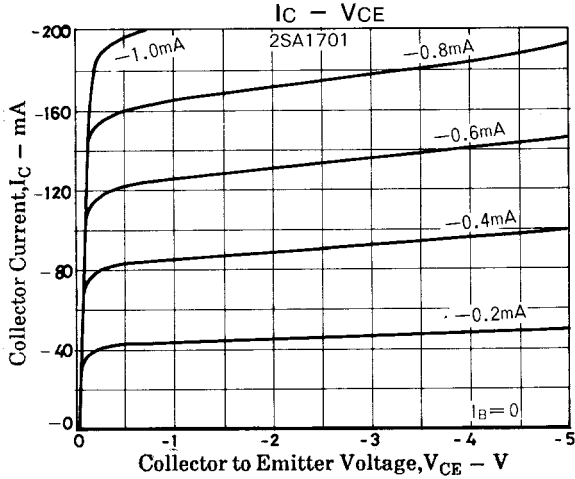
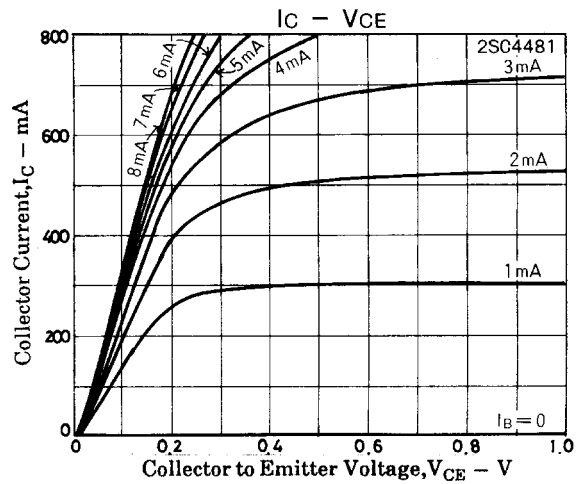
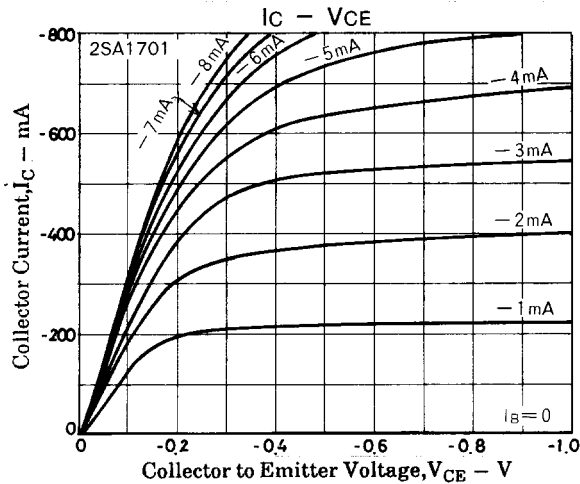


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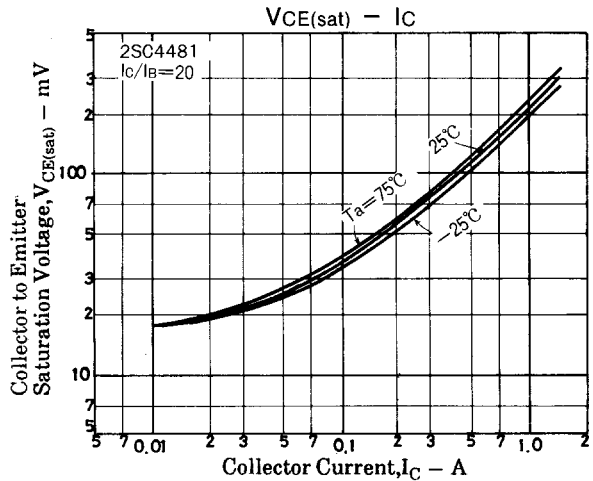
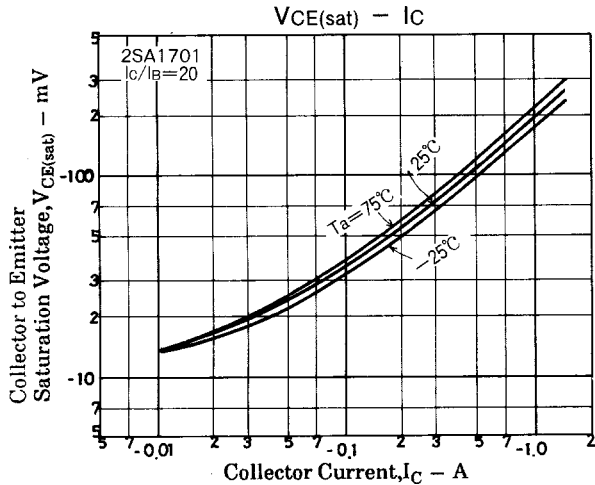
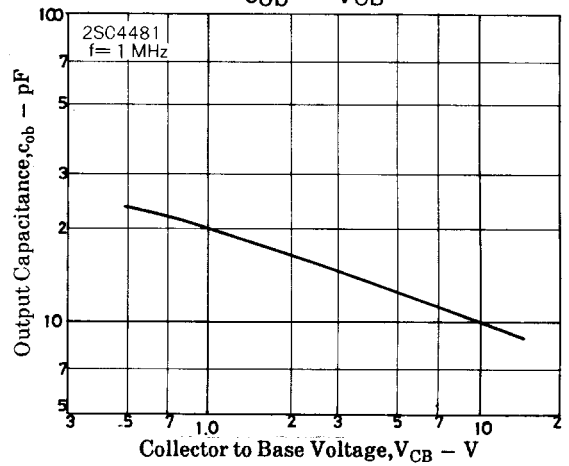
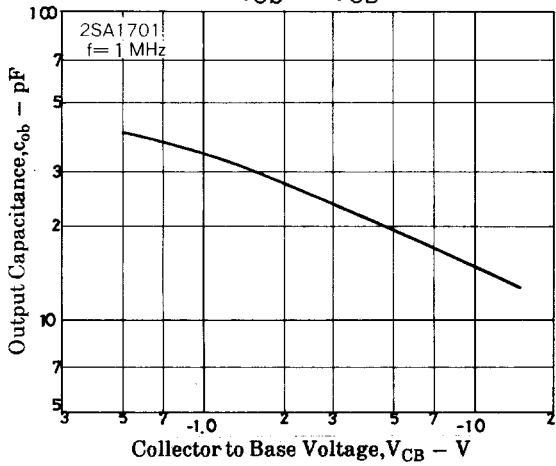
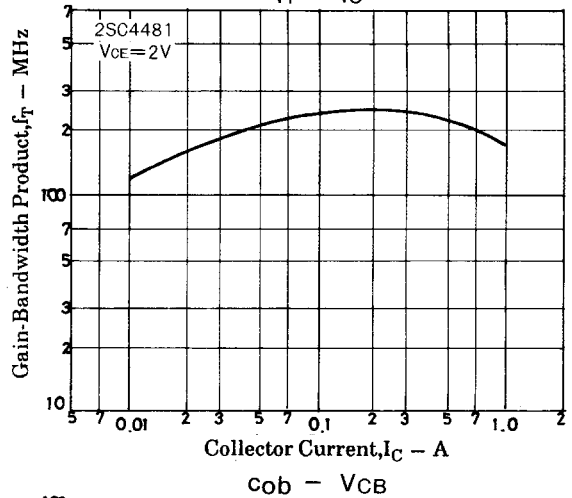
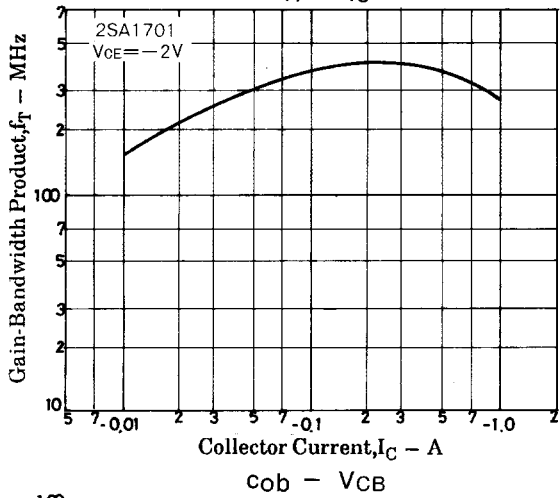
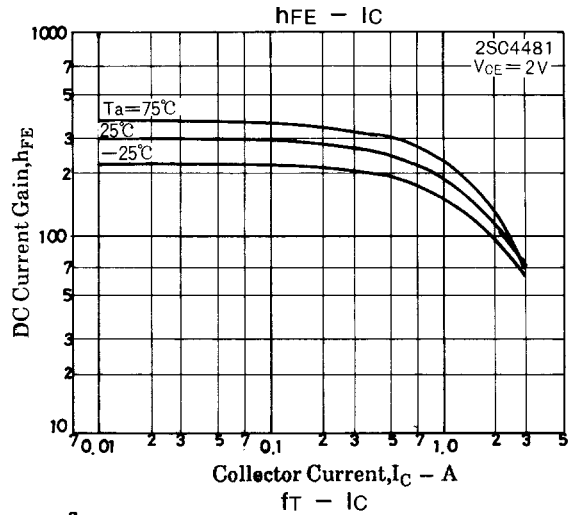
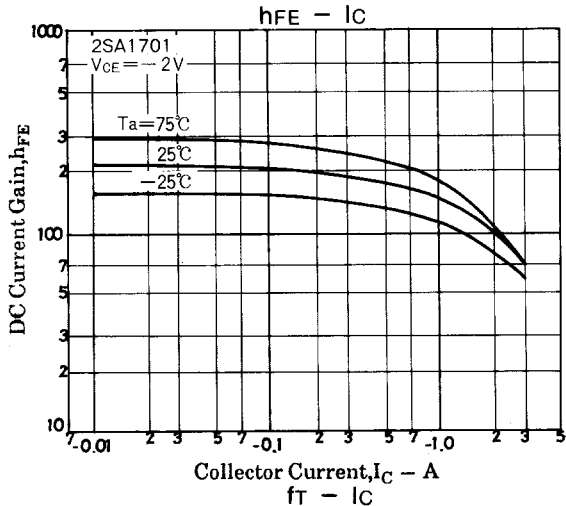
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=(-)5mA, I_B=(-)0.5mA$		(-10)	(-25)	mV
	$V_{CE(sat)2}$	$I_C=(-)400mA, I_B=(-)20mA$		(-100)	(-200)	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)400mA, I_B=(-)20mA$		(-0.9)	(-1.2)	V
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(15)10		pF
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-15)			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-15)			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-5)			V

* : 2SA1701/2SC4481 are classified by 50mA h_{FE} as follows :

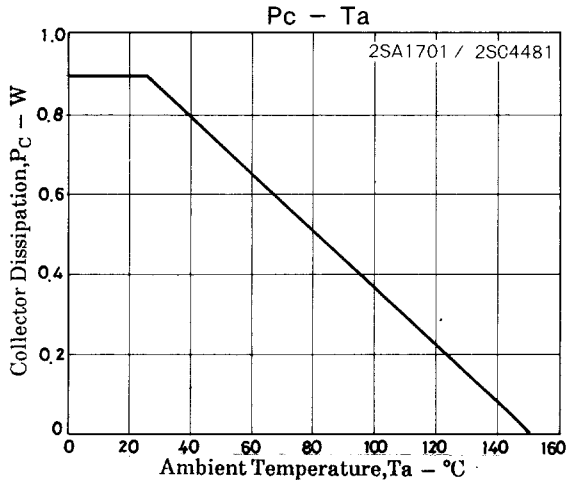
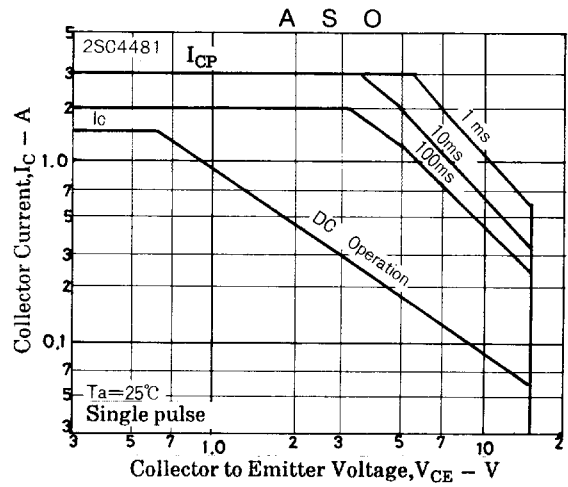
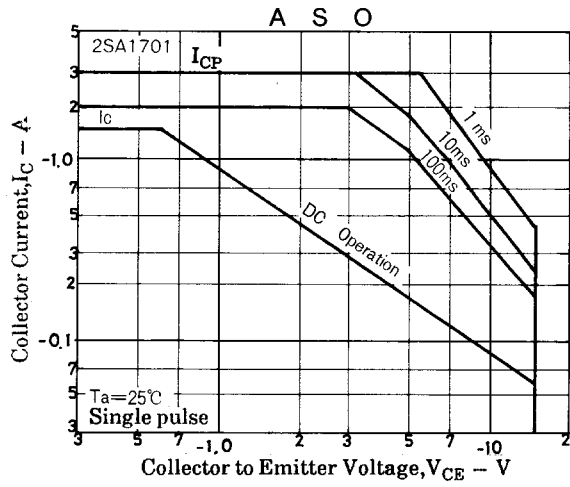
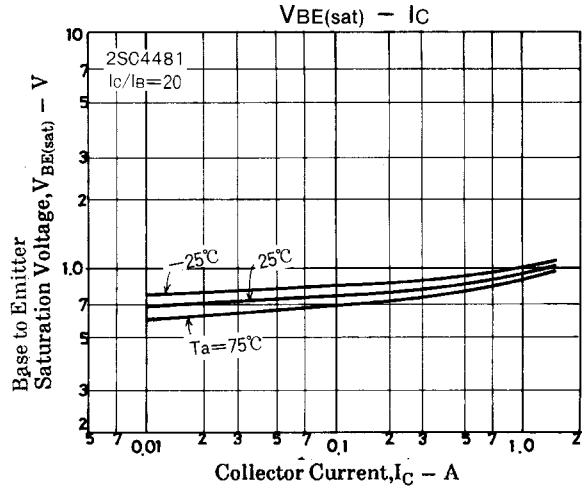
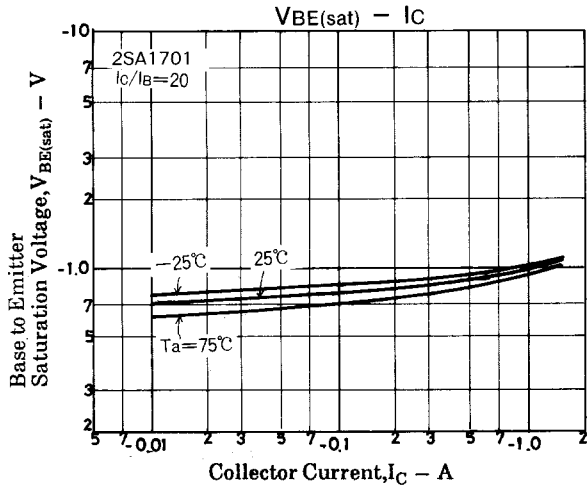
140	S	280	200	T	400	280	U	560
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