



## 2SC4705

### Low-Frequency General-Purpose Amplifier, Applications (High $h_{FE}$ )

#### Applications

- Low-frequency general-purpose amplifier, drivers, muting circuits.

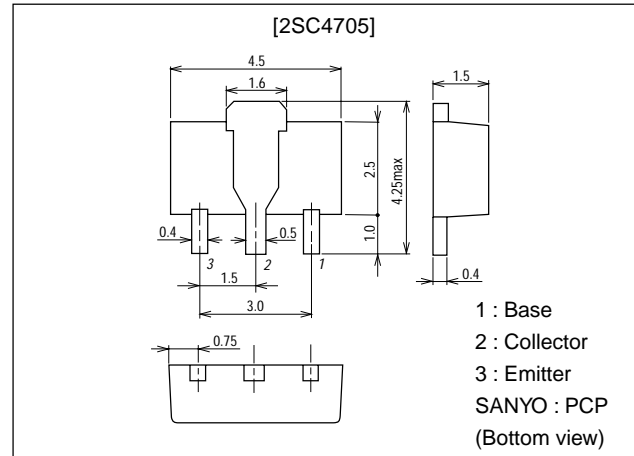
#### Features

- High DC current gain ( $h_{FE}=800$  to  $3200$ ).
- Low collector-to-emitter saturation voltage :  $V_{CE(sat)} \leq 0.5V$  max.
- High  $V_{EBO}$  :  $V_{EBO} \geq 15V$ .
- Small size making it easy to provide high-density, hybrid ICs.

#### Package Dimensions

unit:mm

2038A



#### Specifications

##### Absolute Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		60	V
Collector-to-Emitter Voltage	$V_{CEO}$		50	V
Emitter-to-Base Voltage	$V_{EBO}$		15	V
Collector Current	$I_C$		200	mA
Collector Current (Pulse)	$I_{CP}$		300	mA
Base Current	$I_B$		40	mA
Collector Dissipation	$P_C$	Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm)	1.3	W
Junction Temperature	$T_j$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

##### Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=40V, I_E=0$			0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=10V, I_C=0$			0.1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=100mA$	800	1500	3200	
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=10mA$		250		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$		4.0		pF

Marking :CP

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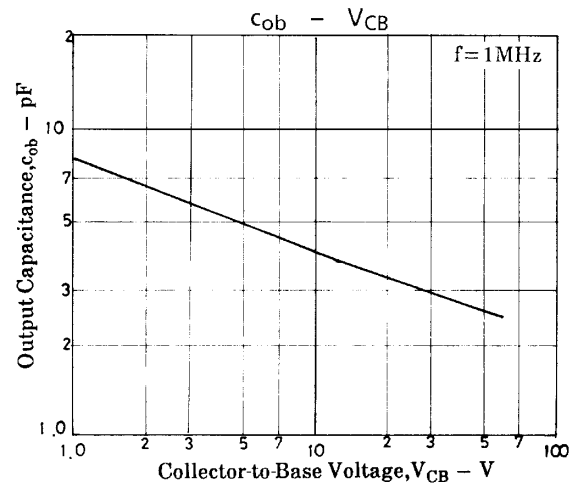
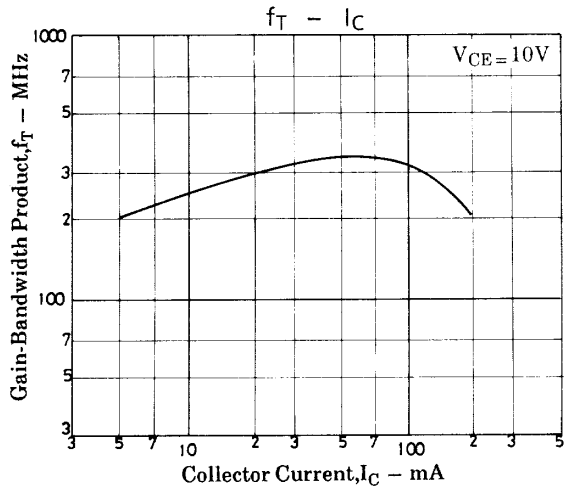
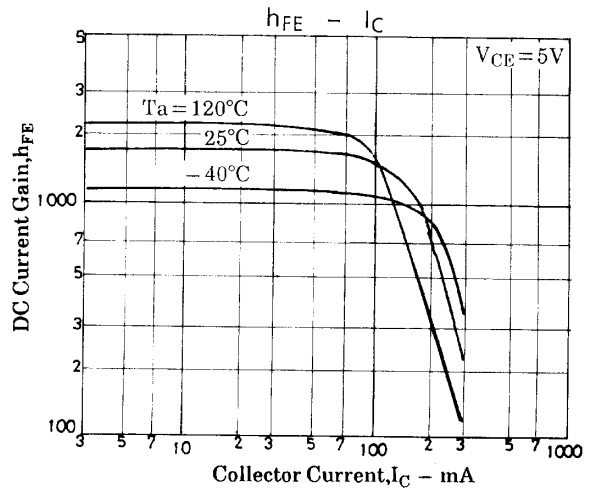
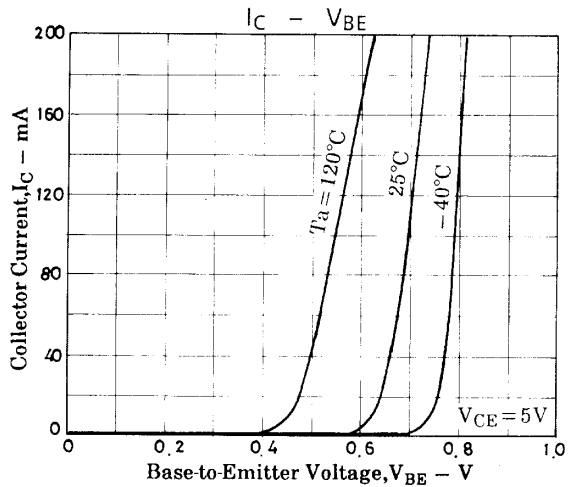
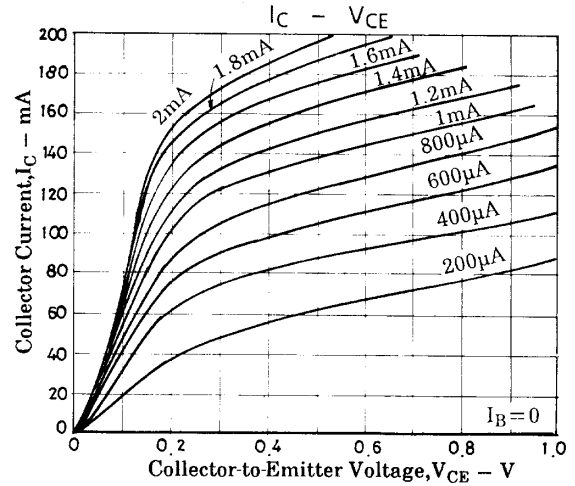
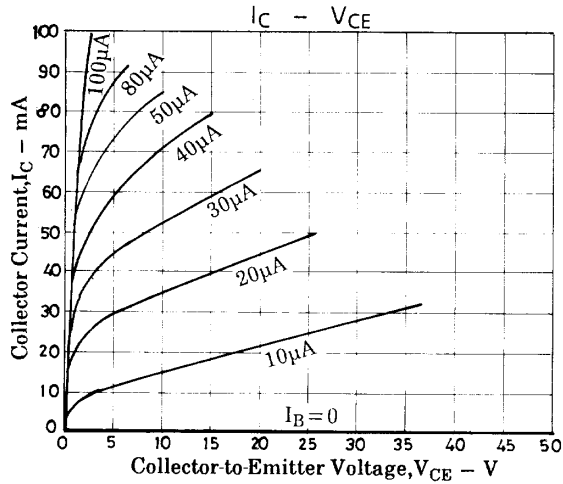
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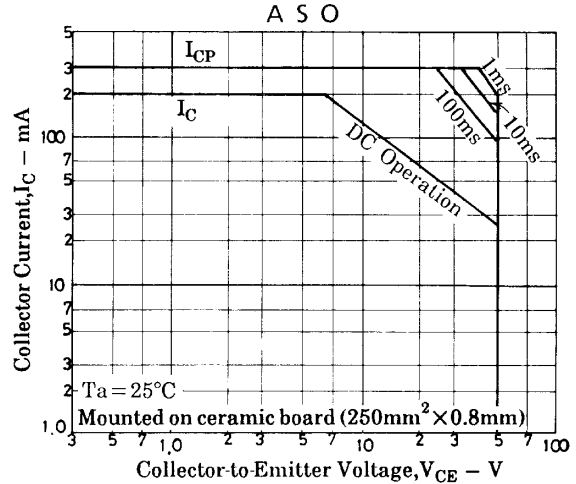
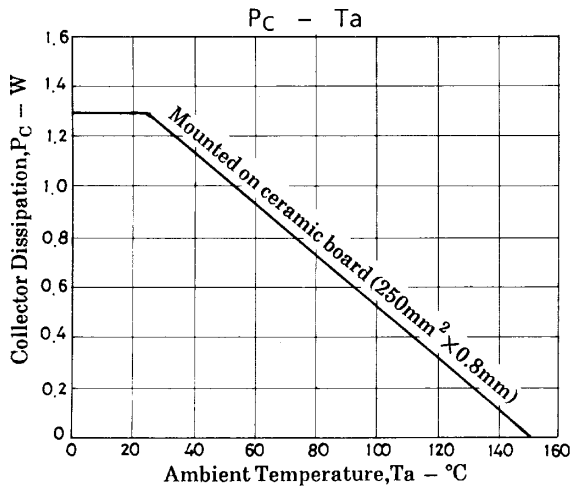
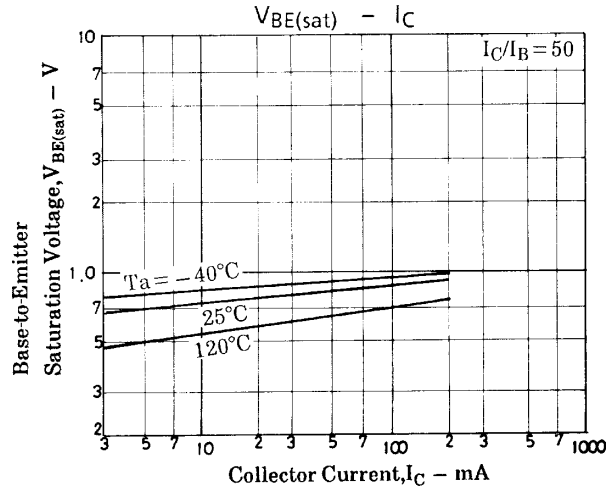
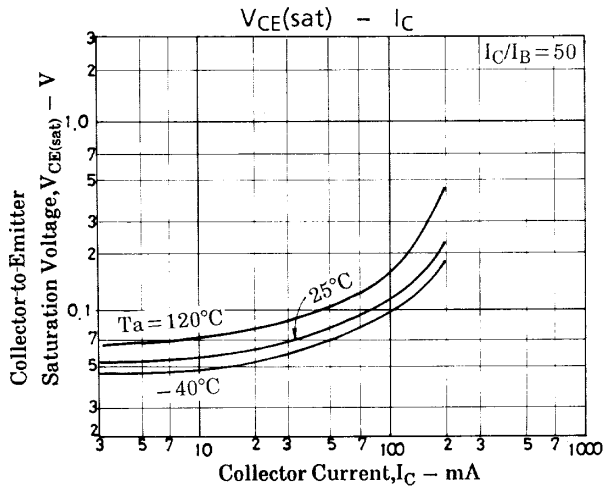
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=2\text{mA}$		0.12	0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=2\text{mA}$		0.85	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	15			V



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