

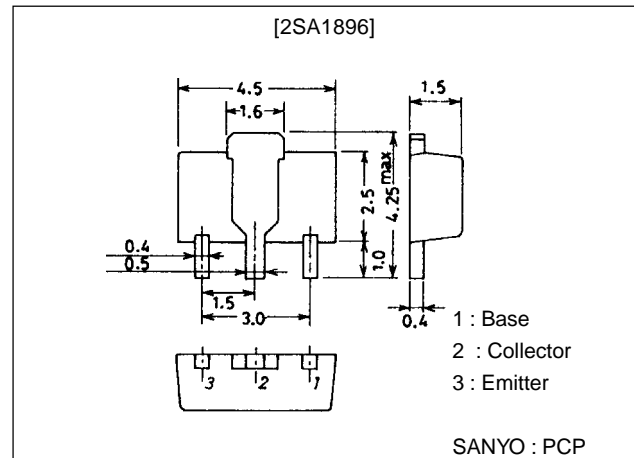
**2SA1896****DC/DC Converter, Motor Driver Applications****Features**

- Adoption of FBET processes.
- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Small size making it easy to provide high-density, small-sized hybrid ICs.

Package Dimensions

unit:mm

2038A

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		-25	V
Collector-to-Emitter Voltage	V_{CE0}		-20	V
Emitter-to-Base Voltage	V_{EB0}		-7	V
Collector Current	I_C		-2.5	A
Collector Current (Pulse)	I_{CP}		-5	A
Collector Dissipation	P_C	Mounted on ceramic board (250mm ² ×0.8mm)	1.3	W
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-20V, I_E=0$			-100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-6V, I_C=0$			-100	nA
DC Current Gain	h_{FE1}	$V_{CE}=-2V, I_C=0.5A$	140*		400*	
	h_{FE2}	$V_{CE}=-2V, I_C=2.5A$	70			
Gain-Bandwidth Product	f_T	$V_{CE}=-2V, I_C=0.3A$		400		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		26		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-1.5A, I_B=-30mA$		-220	-400	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-1.5A, I_B=-30mA$		-0.9	-1.2	V

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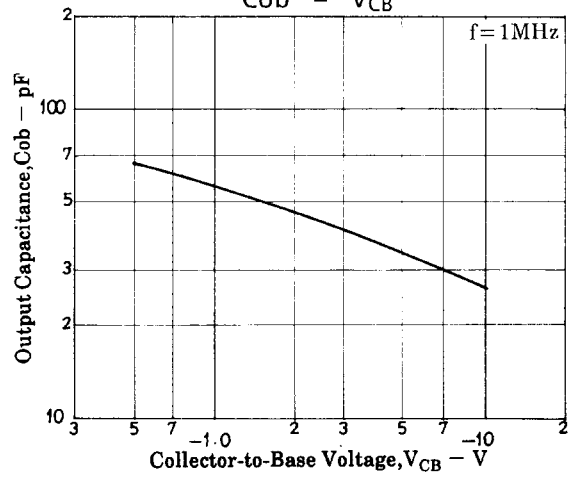
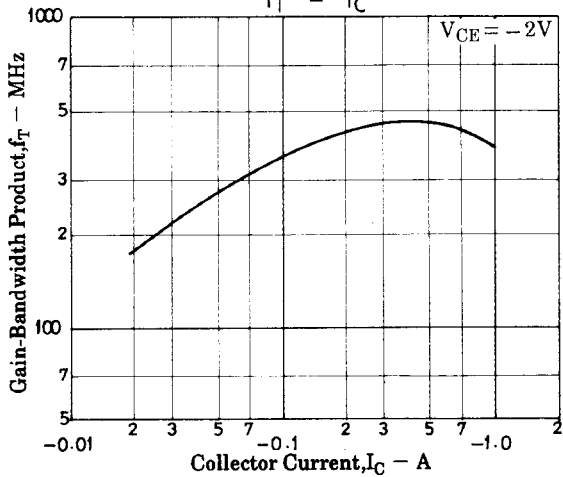
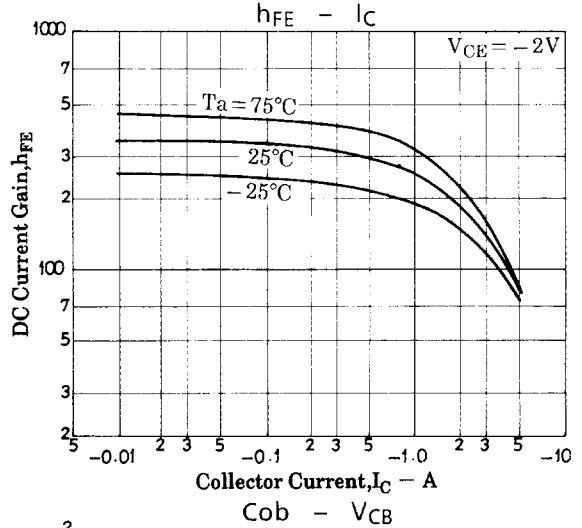
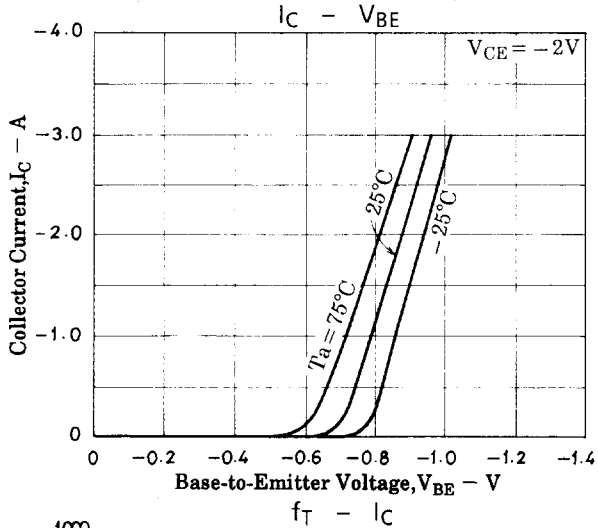
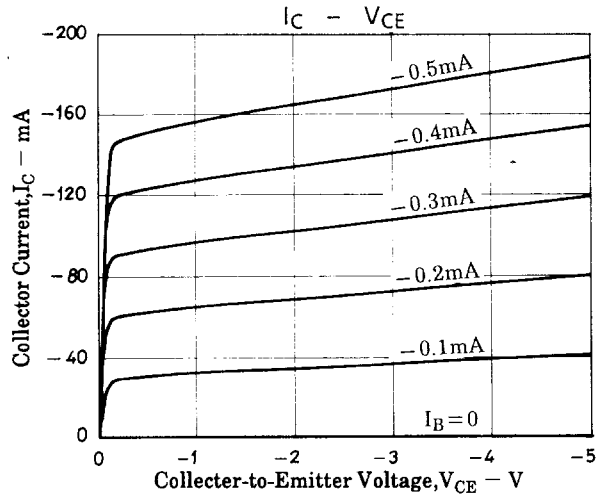
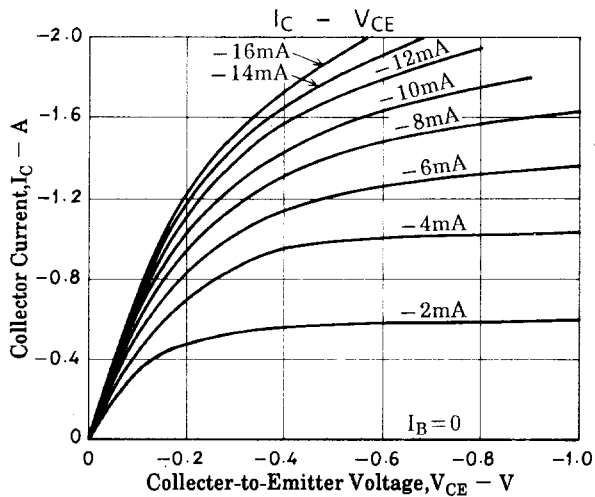
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-25			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-20			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-7			V

* : The 2SA1896 is classified by 0.5A h_{FE} as follows :

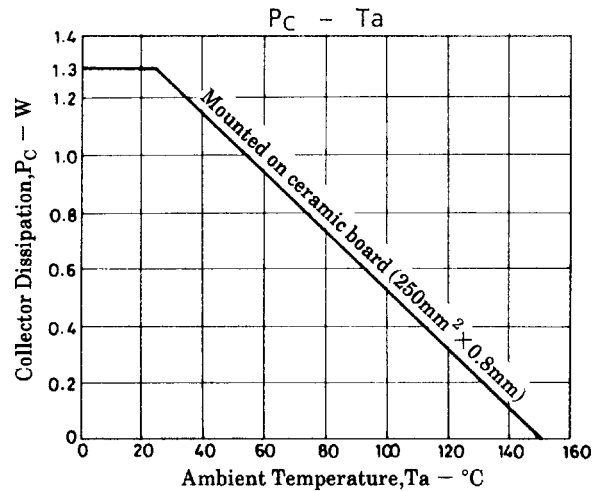
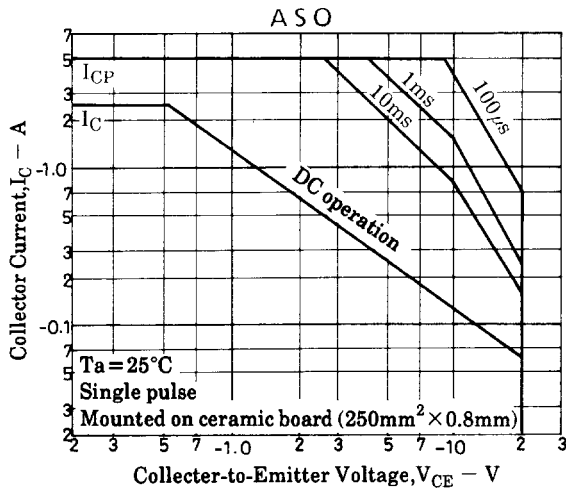
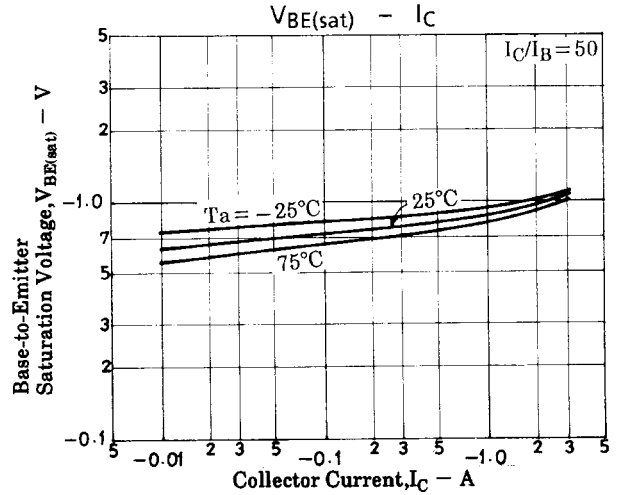
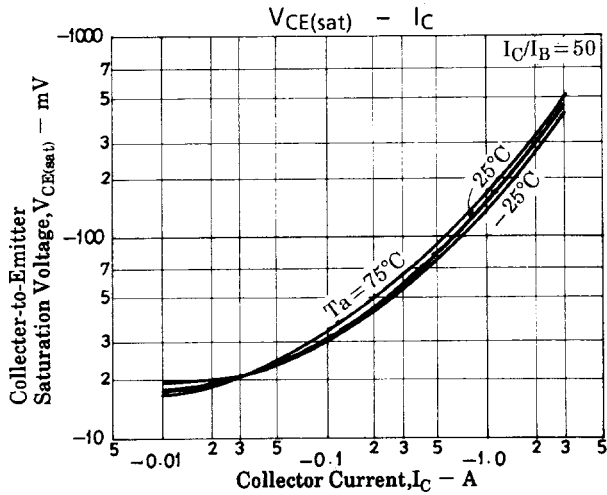
140	S	280	200	T	400
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Marking : AM

h_{FE} rank : S, T



2SA1896



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