

**2SB893**

Large-Current Driving Applications

Applications

- Power supplies, relay drivers, lamp drivers, strobes.

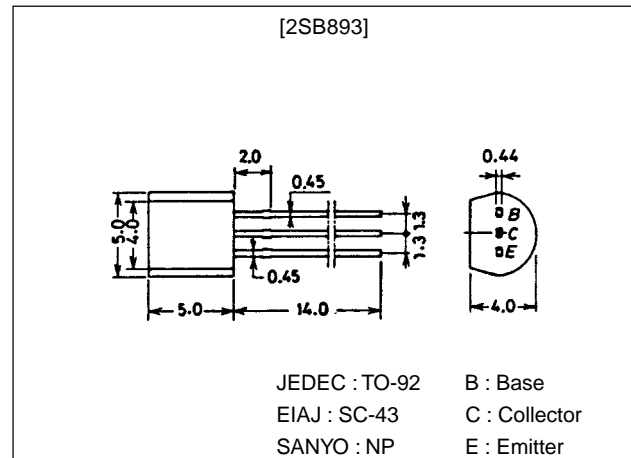
Features

- Low saturation voltage :
 $V_{CE(sat)} \leq -0.45V$ ($I_C = -1.5A, I_B = -0.15A$).
- Large current capacity and wide ASO :
 $I_C \text{ max} = -2.5A$.

Package Dimensions

unit:mm

2003A



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		-20	V
Collector-to-Emitter Voltage	V_{CEO}		-10	V
Emitter-to-Base Voltage	V_{EBO}		-7	V
Collector Current	I_C		-2.5	A
Collector Current (Pulse)	I_{CP}		-5	A
Allowable Collector Dissipation	P_C		0.75	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_{CBO}	$V_{CB} = -20V, I_E = 0$			-1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -4V, I_C = 0$			-1.0	μA
DC Current Gain	h_{FE1}	$V_{CE} = -2V, I_C = -500\text{mA}$	100*		560*	
	h_{FE2}	$V_{CE} = -2V, I_C = -3A, \text{pulse}$	70			
Gain-Bandwidth Product	f_T	$V_{CE} = -10V, I_C = -50\text{mA}$		250		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10V, f = 1\text{MHz}$		70		pF

* : The SB893 is classified by 500mA h_{FE} as follows :

100	E	200	160	F	320	280	G	560
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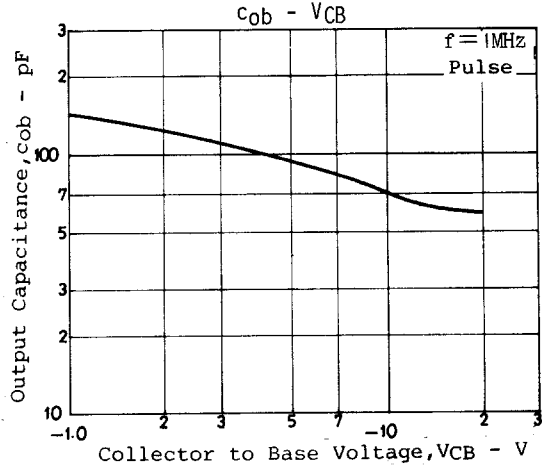
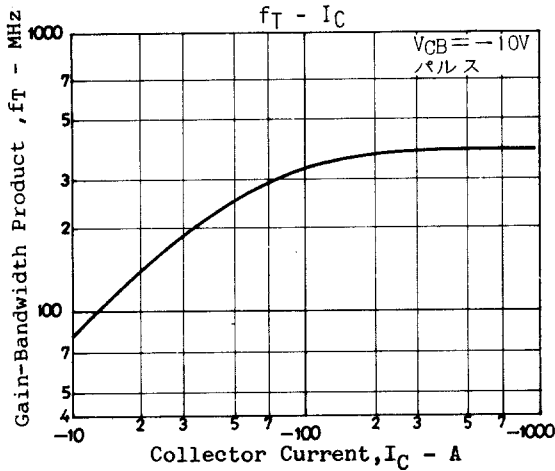
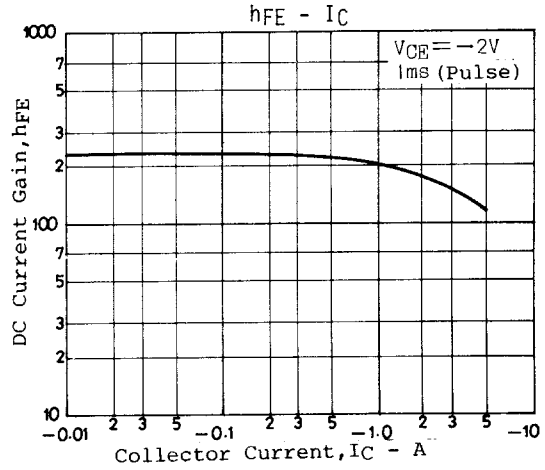
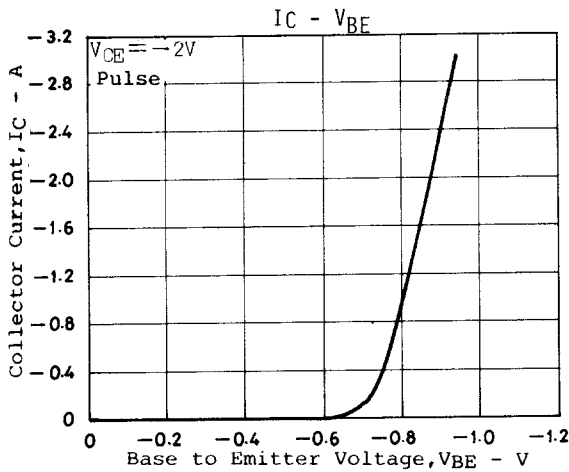
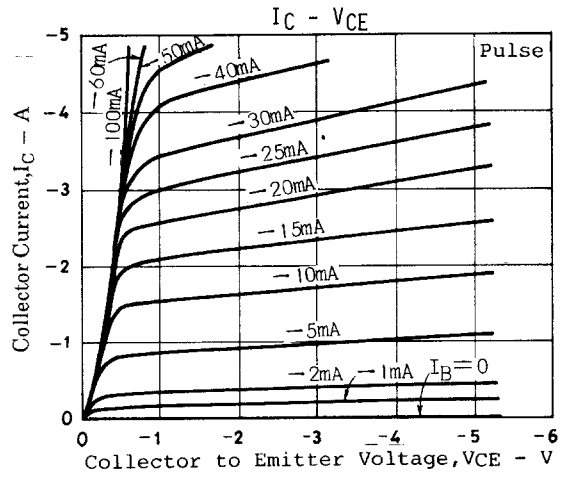
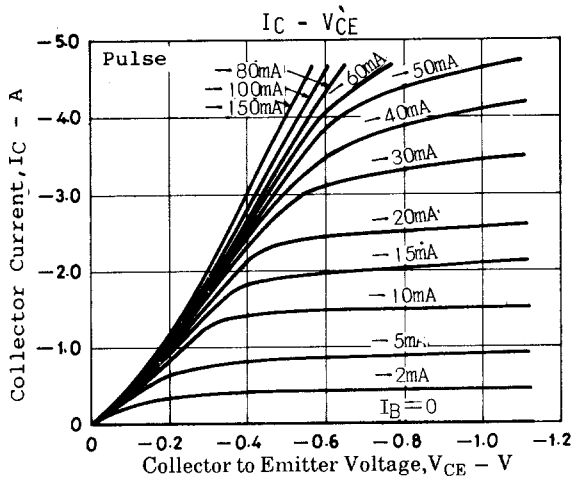
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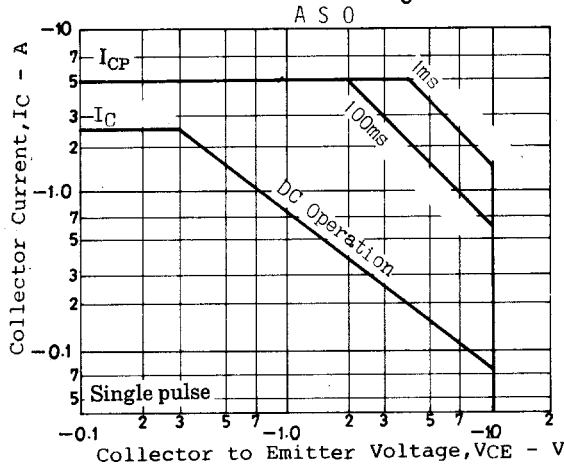
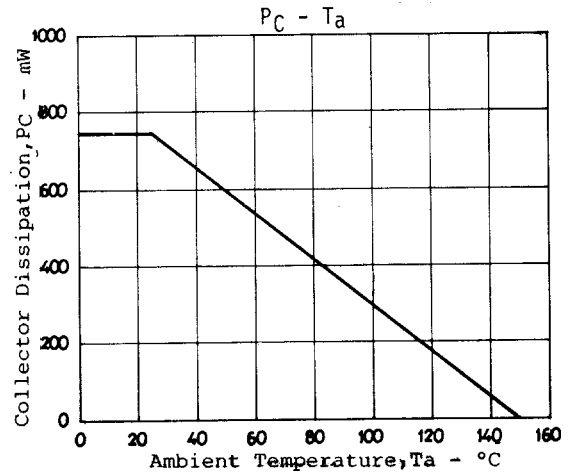
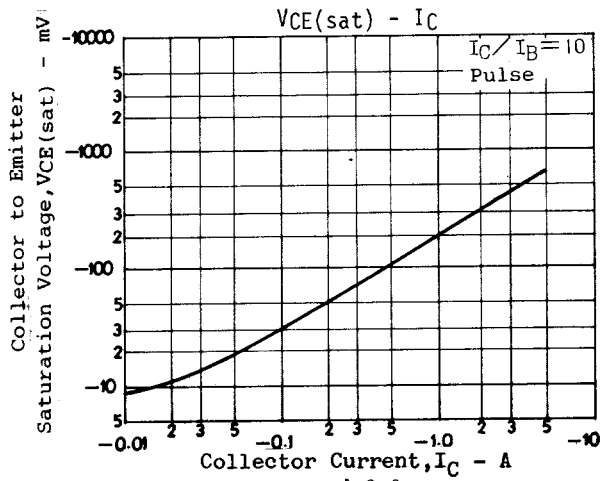
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2SB893

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -1.5A, I_B = -0.15A$		-0.25	-0.45	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-10			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-7			V



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