

SANYO

No.678F

2SB776/2SD8962SB776: PNP Epitaxial Planar Silicon Transistor
2SD896: NPN Triple Diffused Planar Silicon Transistor

100V/7A, AF 40W Output Applications

Features

- Capable of being mounted easily because of one-point fixing type plastic molded package (Interchangeable with TO-3).
- Wide ASO because of on-chip ballast resistance.
- Good dependence of f_T on current and excellent high frequency response.

The descriptions in parentheses are for the 2SB776 only; other descriptions than those in parentheses are common to the 2SB776 and 2SD896.

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

			unit
Collector-to-Base Voltage	V_{CB0}	(-)120	V
Collector-to-Emitter Voltage	V_{CEO}	(-)100	V
Emitter-to-Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)7	A
Collector Current (Pulse)	I_{CP}	(-)11	A
Collector Dissipation	P_C	70	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	- 40 to + 150	$^\circ\text{C}$

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

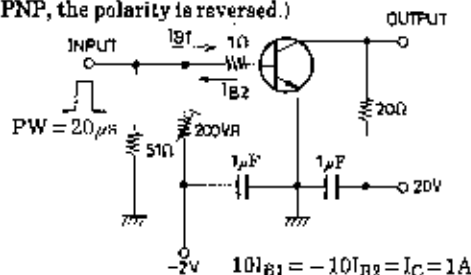
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)80\text{V}, I_E = 0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)0.1	mA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = (-)5\text{V}, I_C = (-)1\text{A}$	60※		200※	
	$h_{FE}(2)$	$V_{CE} = (-)5\text{V}, I_C = (-)4\text{A}$	20			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5\text{V}, I_C = (-)1\text{A}$		15		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$	(200)140			pF
Base-to-Emitter Voltage	V_{BE}	$V_{CE} = (-)5\text{V}, I_C = (-)1\text{A}$			(-)1.5	V
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)4\text{A}, I_E = (-)0.4\text{A}$	(- 0.9)		2.0	V
				0.6		
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)5\text{mA}, I_E = 0$	(-)120			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)5\text{mA}, R_{BE} = \infty$	(-)100			V
		$I_C = (-)50\text{mA}, R_{BE} = \infty$	(-)100			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)5\text{mA}, I_C = 0$	(-)6			V
Turn-ON Time	t_{on}	See specified Test Circuit.	(0.2)0.2			μs
Fall Time	t_f	"	(0.3)0.6			μs
Storage Time	t_{stg}	"	(1.2)6.0			μs

※: The 2SB776/2SD896 are classified by 1A h_{FE} as follows.

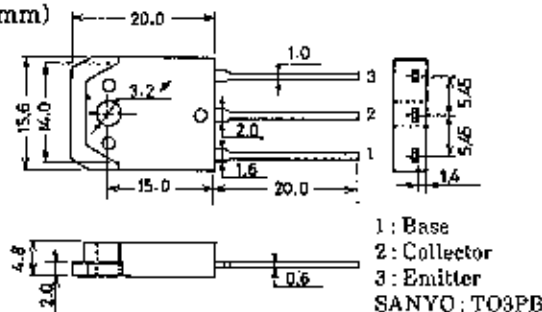
60	D	120	100	E	200
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Switching Time Test Circuit

(For PNP, the polarity is reversed.)

**Package Dimensions 2022A**

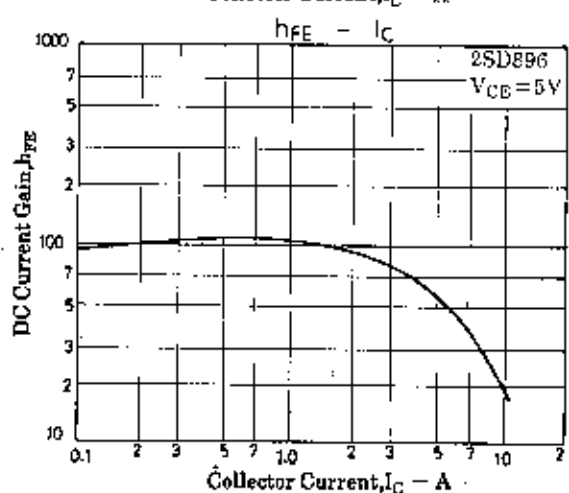
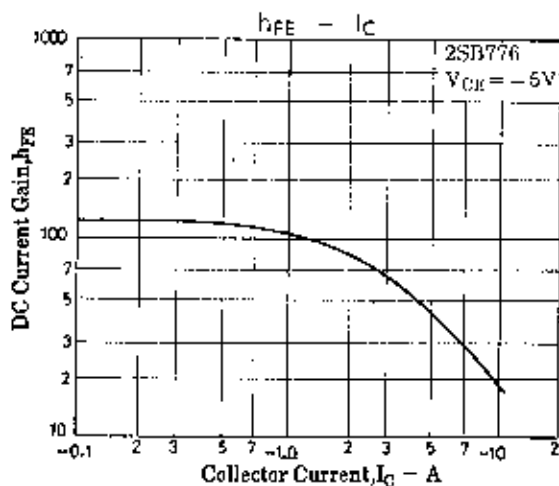
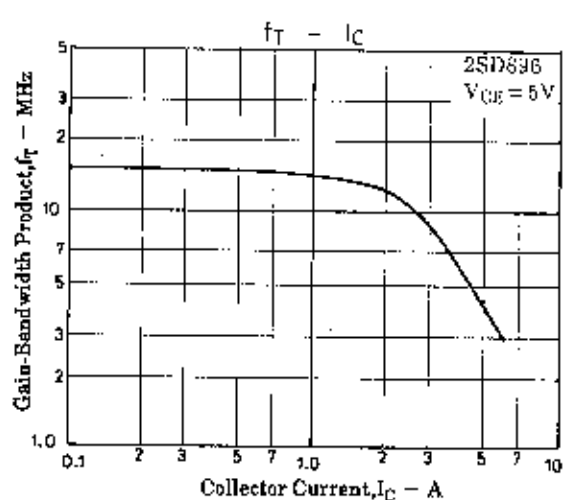
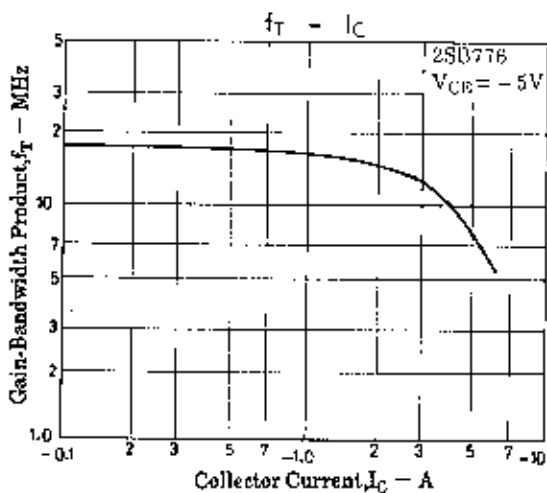
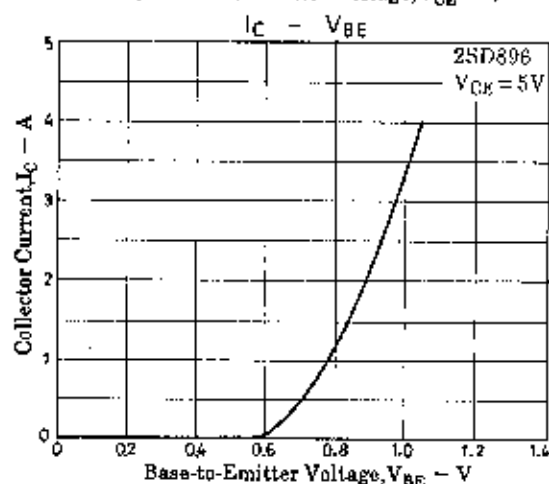
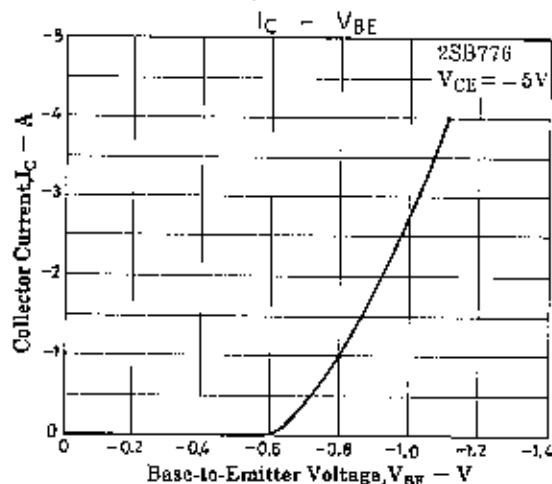
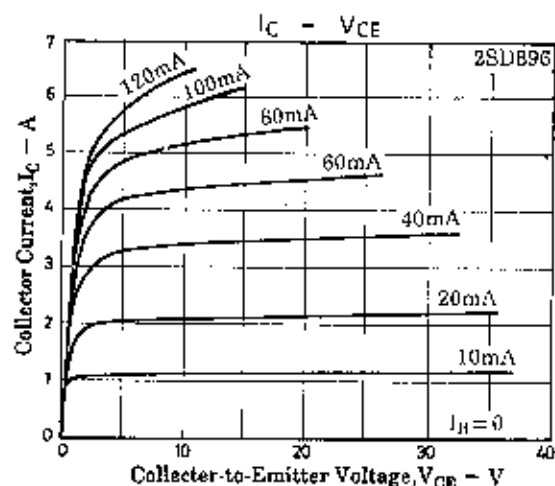
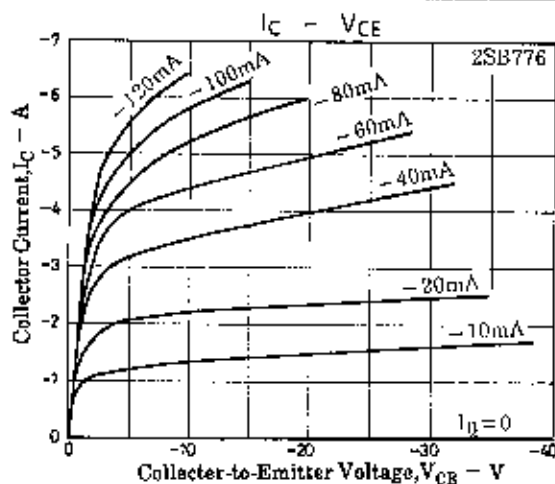
(unit: mm)



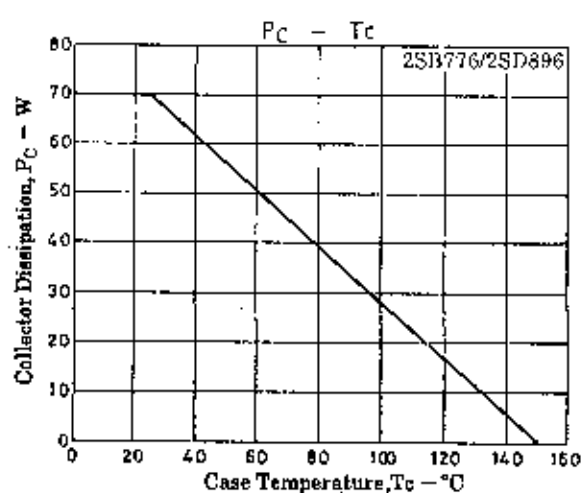
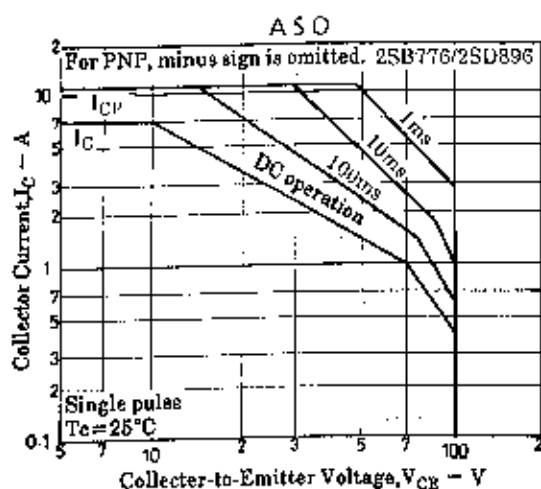
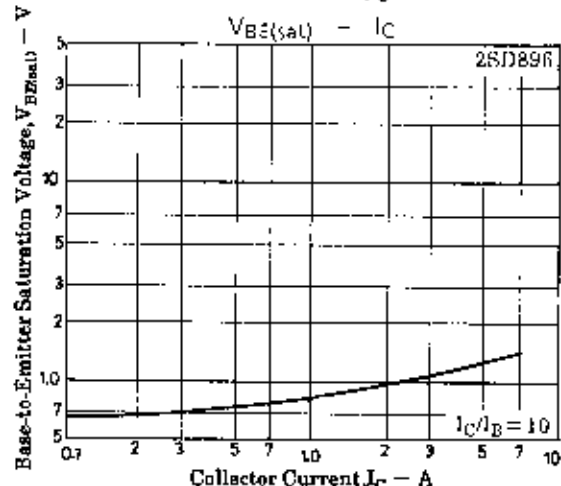
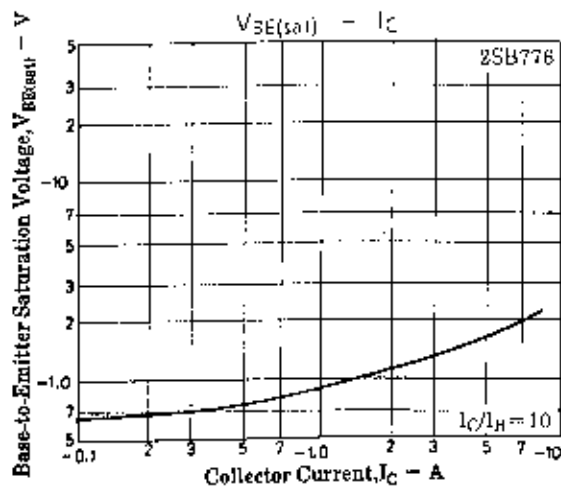
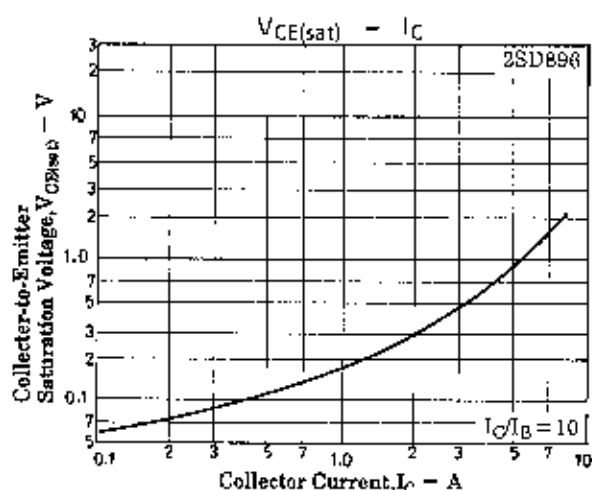
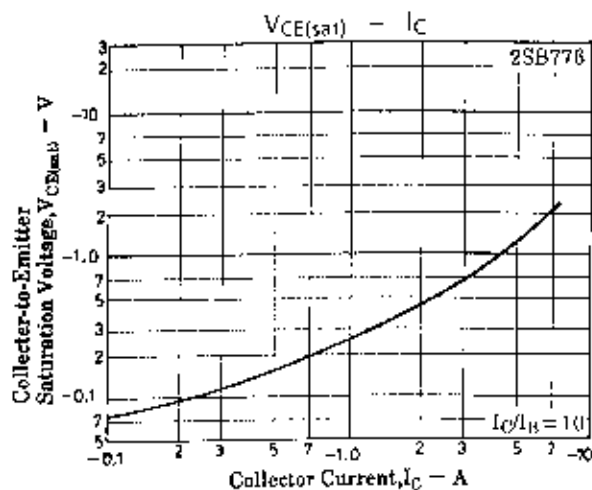
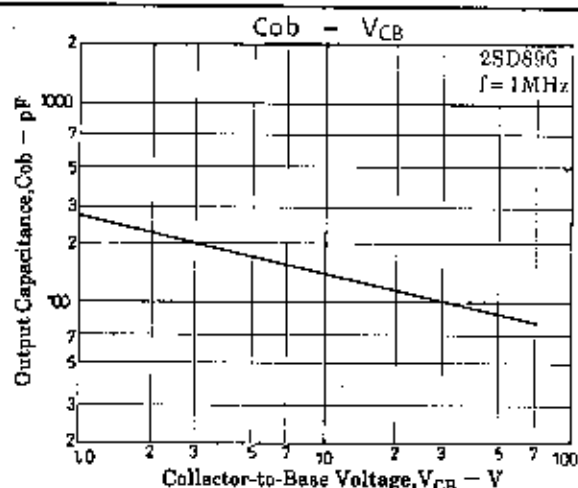
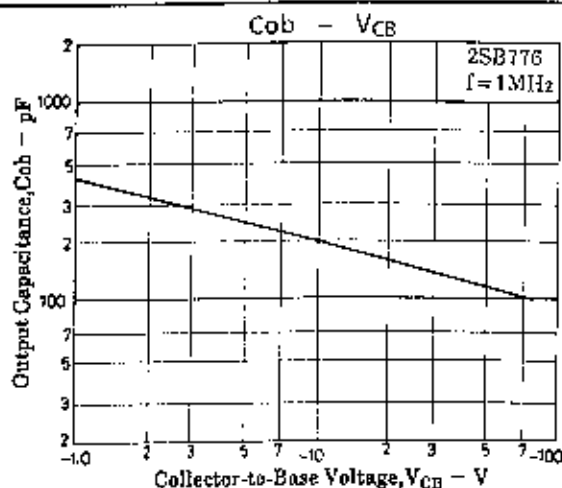
1: Base
2: Collector
3: Emitter
SANYO: TO3PB

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2SB776/2SD896



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