Ordering number:679F

2SB775 : PNP Epitaxial Planar Silicon Transistor
2SD895 : NPN Triple Diffused Planar Silicon Transistor

2SB775/2SD895

85V/6A, AF 35W Output Applications

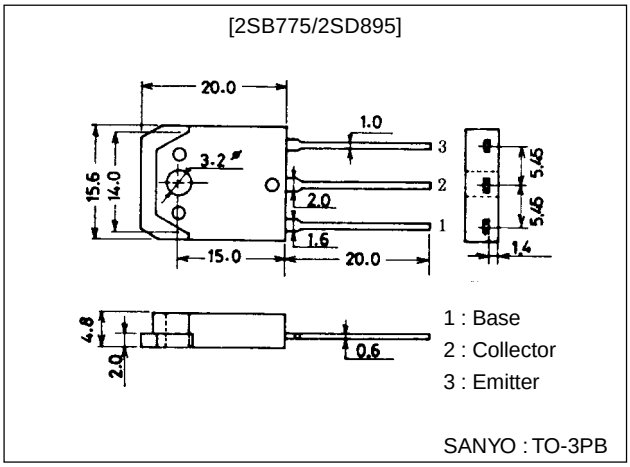
Features

- Wide ASO because of on-chip ballast resistance.
- Capable of being mounted easily becasuse of one-point fixing type plastic molded package (Interchangeable with TO-3).
- Large current capacity : I_C=6A
- Highly resistance breakdown due to wide ASO.

Package Dimensions

unit:mm

2022A



( ) : 2SB775

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)100	V
Collector-to-Emitter Voltage	V_{CEO}		(–)85	V
Emitter-to-Base Voltage	V_{EBO}		(–)6	V
Collector Current	I_C		(–)6	A
Collector Current (Pulse)	I_{CP}		(–)10	A
Collector Dissipation	P_C	Tc=25˚C	60	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–40 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)40V, I_E=0			(–)0.1	mA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0			(–)0.1	mA
DC Current Gain	$h_{FE}1$	V_{CE}=(–)5V, I_C=(–)1A	60*		200*	
	$h_{FE}2$	V_{CE}=(–)5V, I_C=(–)3A	20			
Gain-Bandwidth Product	f_T	V_{CE}=(–)5V, I_C=(–)1A		(18)15		MHz
Output Capacitance	C_{ob}	V_{CB}=(–)10V, f=1MHz		160		pF
Base-to-Emitter Voltage	V_{BE}	V_{CE}=(–)5V, I_C=(–)1A			(–)1.5	V
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)4A, I_B=(–)0.4A		(–1.4)	(–2.0)	V
				0.9	2.0	V

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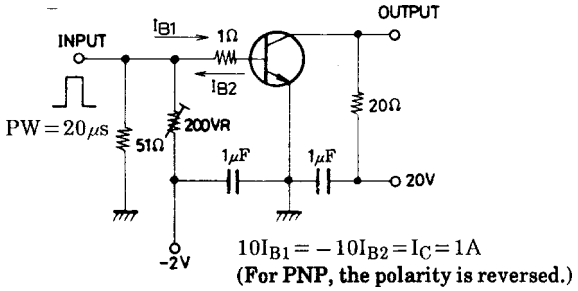
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

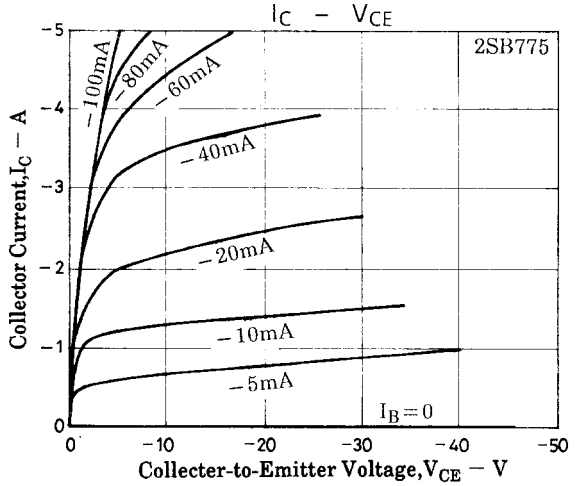
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)5mA, I_E=0	(–)100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)5mA, R_{BE}=∞	(–)85			V
		I_C=(–)50mA, R_{BE}=∞	(–)85			V
Emitter-to-Base Breakdown Votage	$V_{(BR)EBO}$	I_E=(–)5mA, I_C=0	(–)6			V
Turn-ON TIme	t_{on}	See specified Test Circuit		(0.12)		µs
				0.20		µs
Storage Time	t_{stg}	See specified Test Circuit		(0.36)		µs
				0.82		µs
Fall Time	t_f	See specified Test Circuit		(1.29)		µs
				3.88		µs

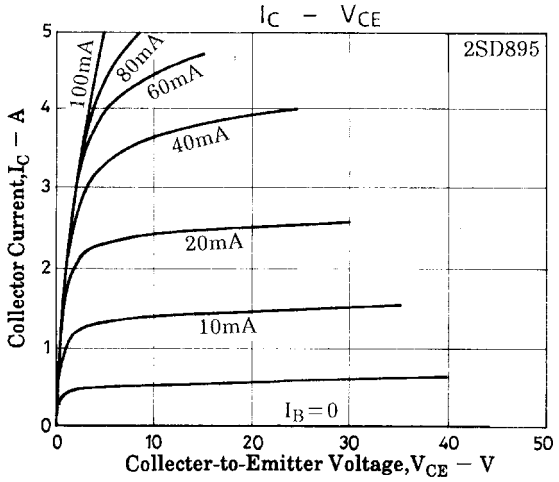
* : The 2SB775/2SD895 are classified by 1A h_{FE} as follows :

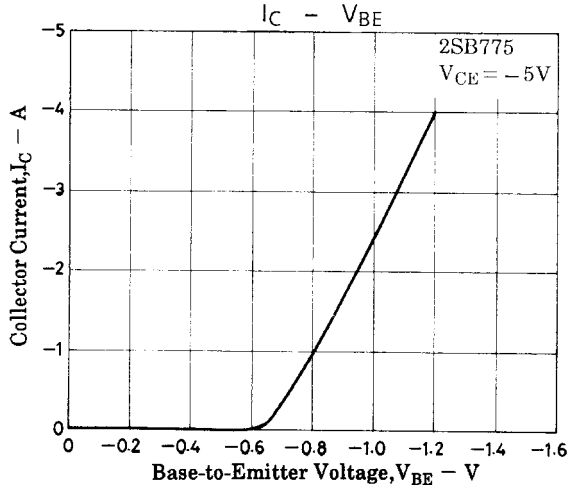
60	D	120	100	E	200

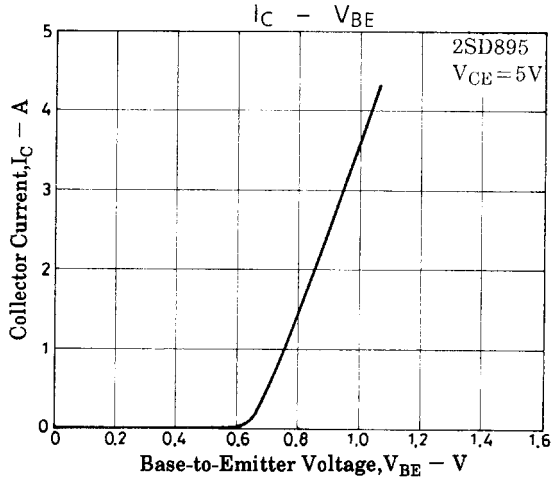
Switching Time Test Circuit

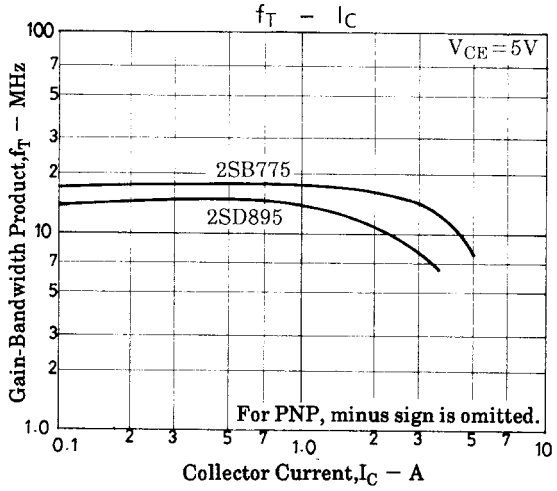


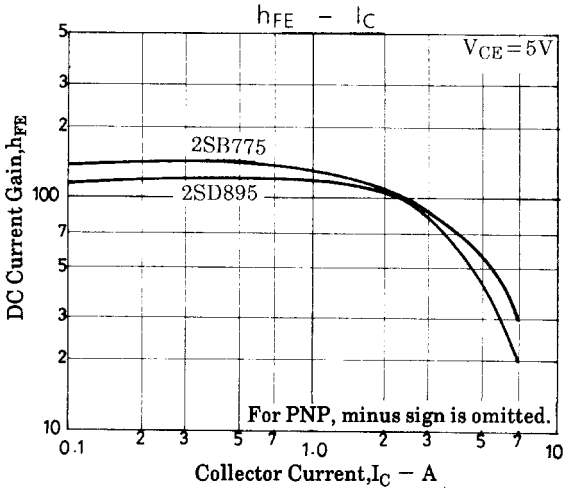


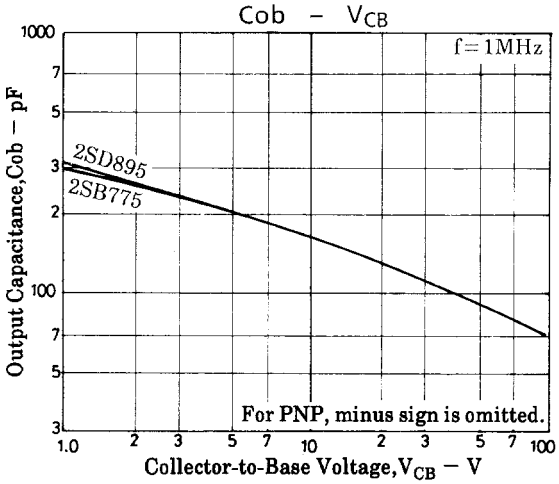


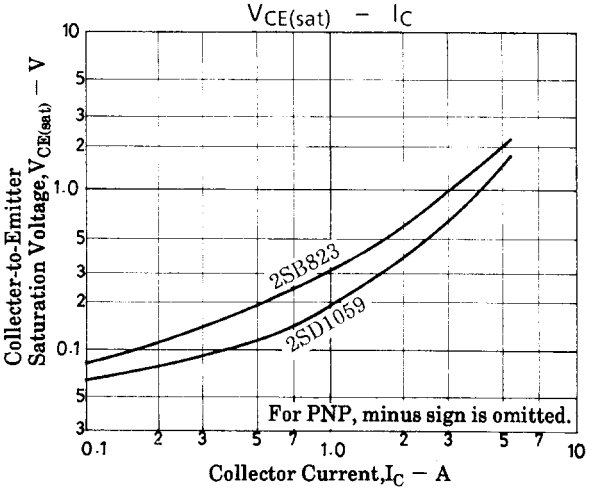


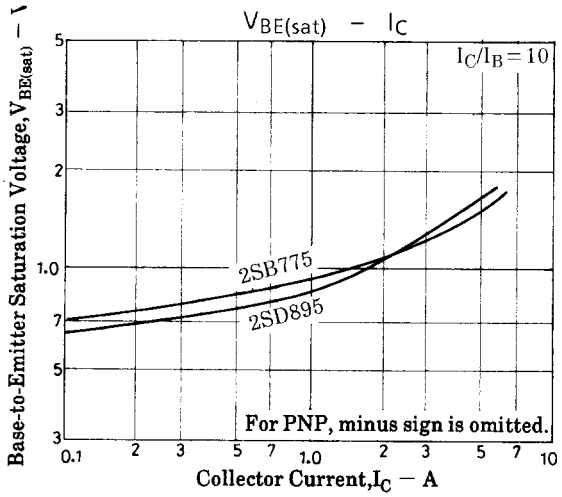


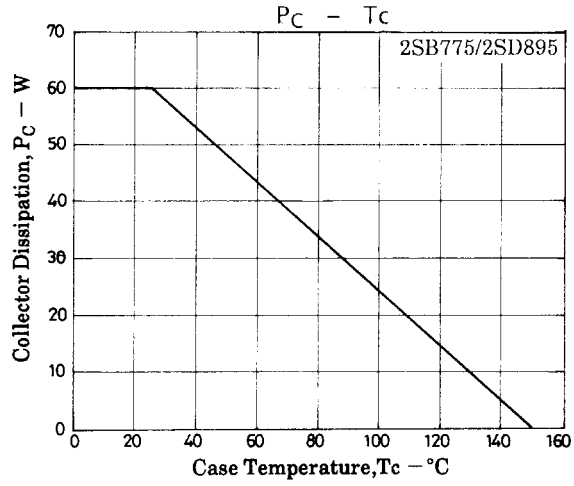

fT – IC
VCE=5V
2SB775
2SD895
For PNP, minus sign is omitted.
Gain-Bandwidth Product,fT – MHz
Collector Current,IC – A

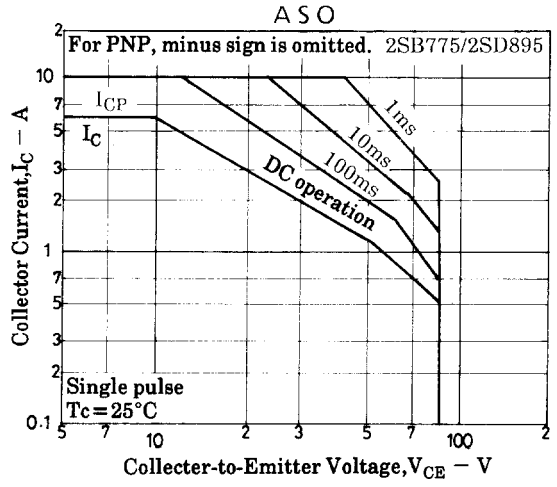

hFE – IC
VCE=5V
2SB775
2SD895
For PNP, minus sign is omitted.
DC Current Gain,hFE
Collector Current,IC – A


Cob – VCB
f=1MHz
2SD895
2SB775
For PNP, minus sign is omitted.
Output Capacitance,Cob – pF
Collector-to-Base Voltage,VCB – V


VCE(sat) – IC
2SB823
2SD1059
For PNP, minus sign is omitted.
Collecter-to-Emitter Saturation Voltage,VCE(sat) – V
Collector Current,IC – A


VBE(sat) – IC
IC/IB=10
2SB775
2SD895
For PNP, minus sign is omitted.
Base-to-Emitter Saturation Voltage,VBE(sat) – V
Collector Current,IC – A


PC – Tc
2SB775/2SD895
Collector Dissipation, PC – W
Case Temperature,Tc – °C


ASO
For PNP, minus sign is omitted. 2SB775/2SD895
ICP
IC
1ms
10ms
100ms
DC operation
Single pulse
Tc=25°C
Collector Current,IC – A
Collecter-to-Emitter Voltage,VCE – V