



## 2SB775/2SD895

### 85V/6A, AF 35W Output Applications

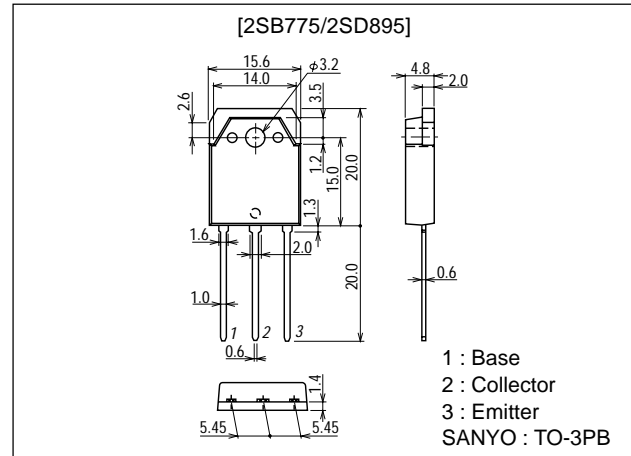
#### Features

- Wide ASO because of on-chip ballast resistance.
- Capable of being mounted easily because 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 $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		(-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	$P_C$	$T_c=25^\circ C$	60	W
Junction Temperature	$T_J$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-40 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)	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=-4V, I_C=0$			(-0.1)	mA
DC Current Gain	$h_{FE1}$	$V_{CE}=-5V, I_C=-1A$	60*		200*	
	$h_{FE2}$	$V_{CE}=-5V, I_C=-3A$	20			
Gain-Bandwidth Product	$f_T$	$V_{CE}=-5V, I_C=-1A$		(18)15		MHz

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

Continued on next page.

Rank	D	E
$h_{FE}$	60 to 120	100 to 200

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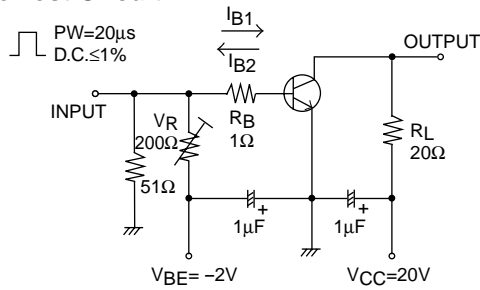
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# 2SB775/2SD895

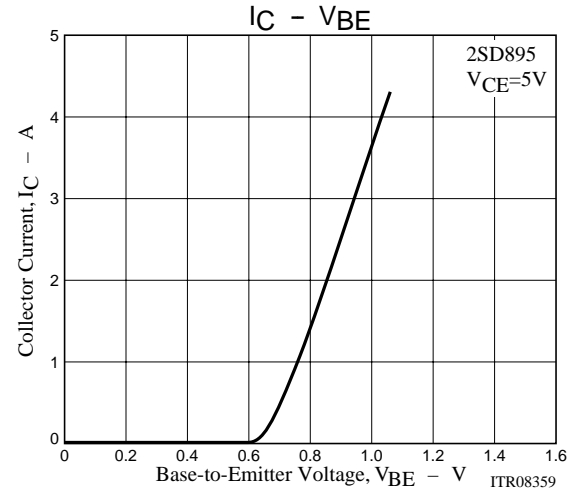
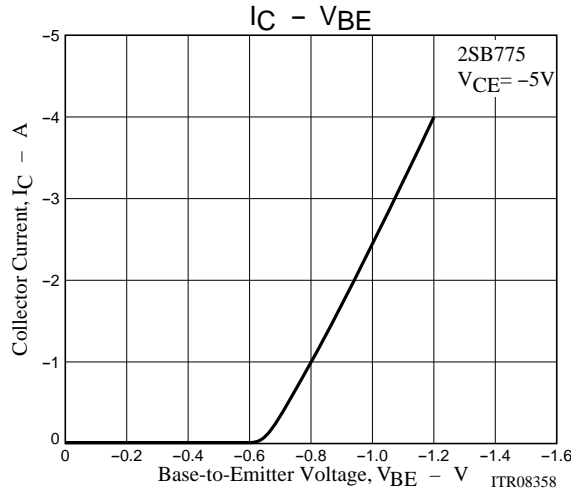
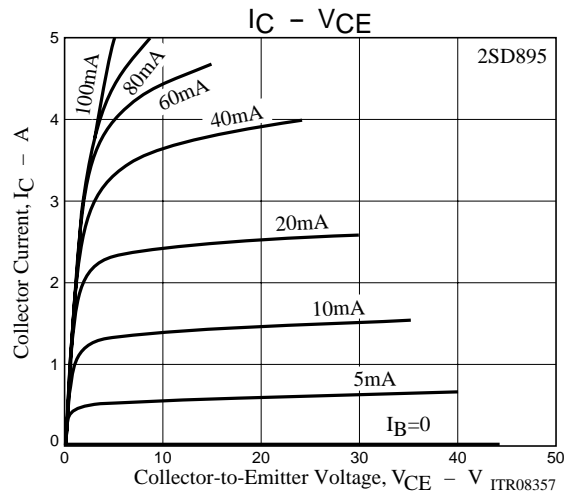
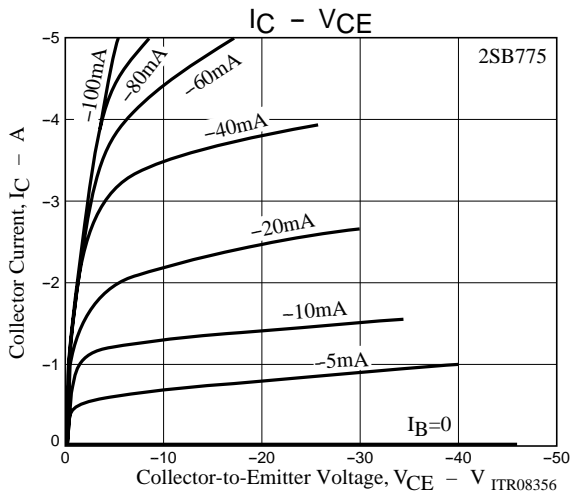
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Capacitance	$C_{ob}$	$V_{CB}=(-)10V, f=1MHz$		160		pF
Base-to-Emitter Voltage	$V_{BE}$	$V_{CE}=(-)5V, I_C=(-)1A$			(-1.5)	V
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)4A, I_B=(-)0.4A$		(-1.4)	(-2.0)	V
				0.9	2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)5mA, I_E=0$	(-100)			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)5mA, R_{BE}=\infty$			(-85)	V
					(-85)	V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)5mA, I_C=0$	(-6)			V
Turn-ON Time	$t_{on}$	See specified Test Circuit		(0.12)		$\mu s$
				0.20		$\mu s$
Storage Time	$t_{stg}$	See specified Test Circuit		(0.36)		$\mu s$
				0.82		$\mu s$
Fall Time	$t_f$	See specified Test Circuit		(1.29)		$\mu s$
				3.88		$\mu s$

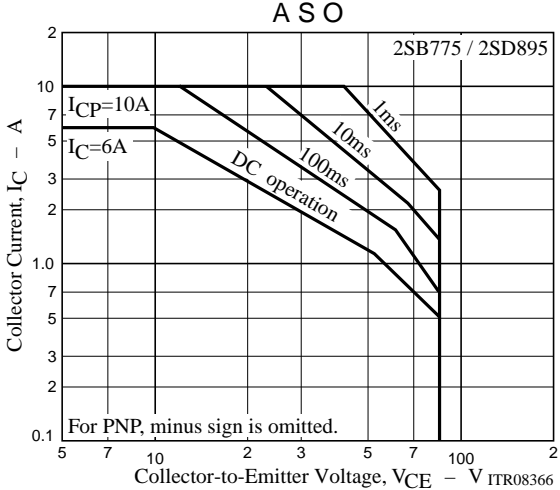
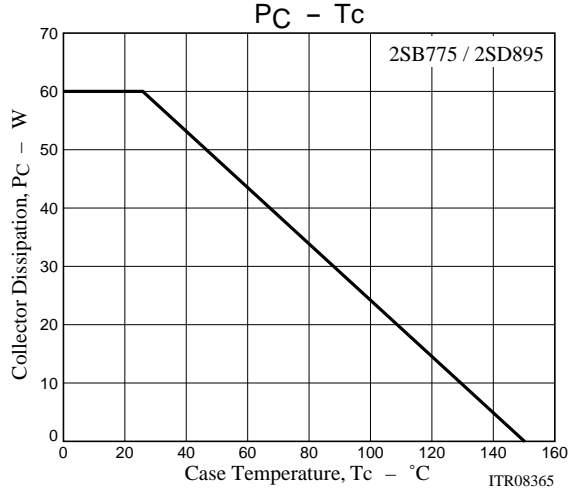
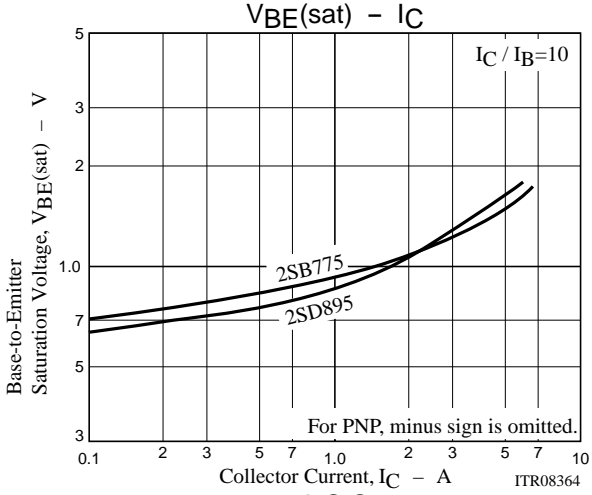
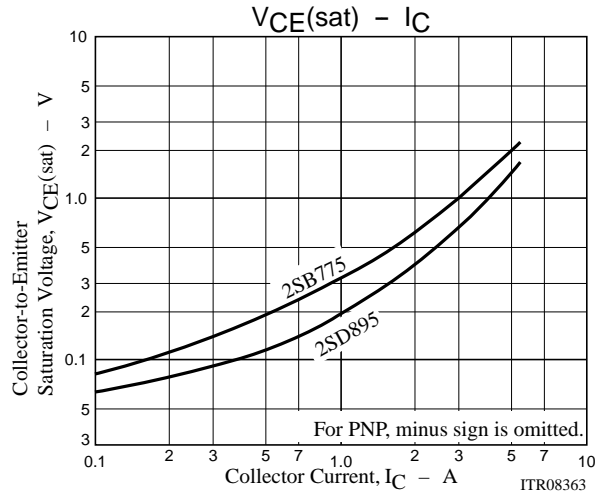
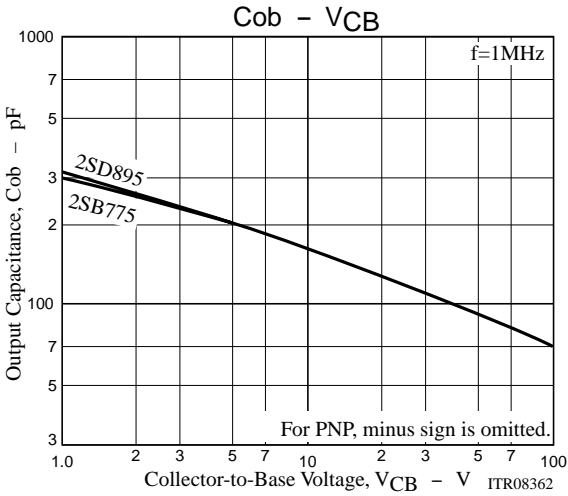
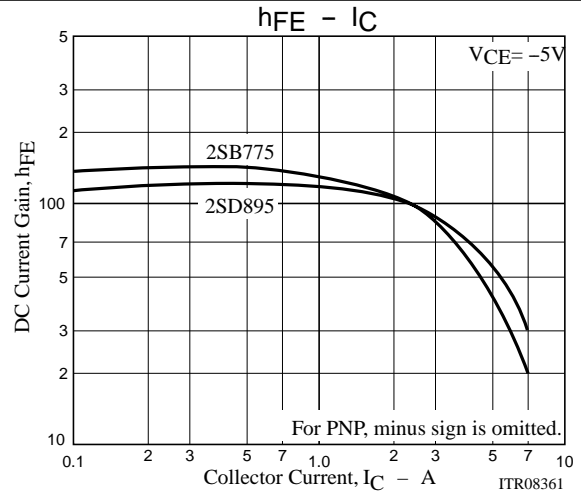
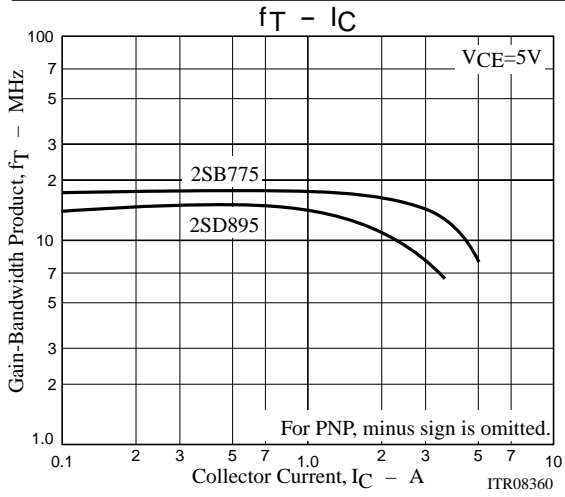
## Switching Time Test Circuit



$I_C=10I_{B1} = -10I_{B2}=1A$   
(For PNP, the polarity is reversed.)



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