



2SB775/2SD895

85V/6A, AF 35W Output Applications

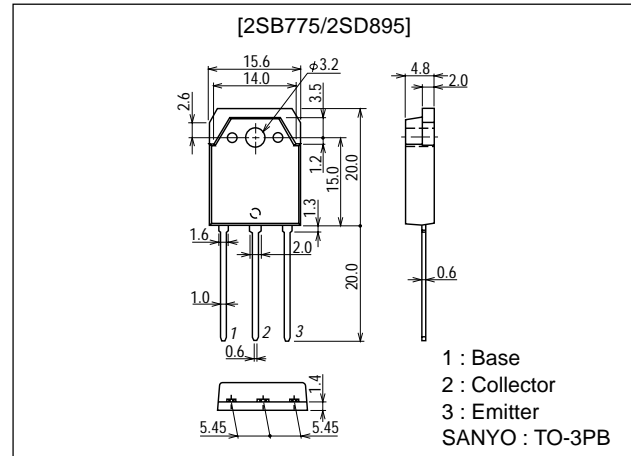
Features

- 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_{CE0}		(-85)	V
Emitter-to-Base Voltage	V_{EB0}		(-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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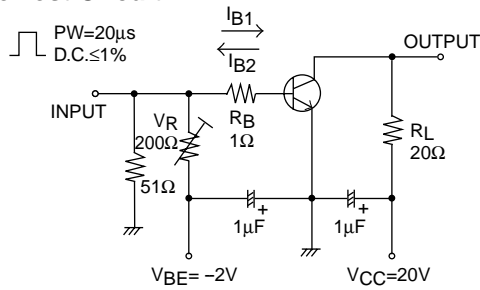
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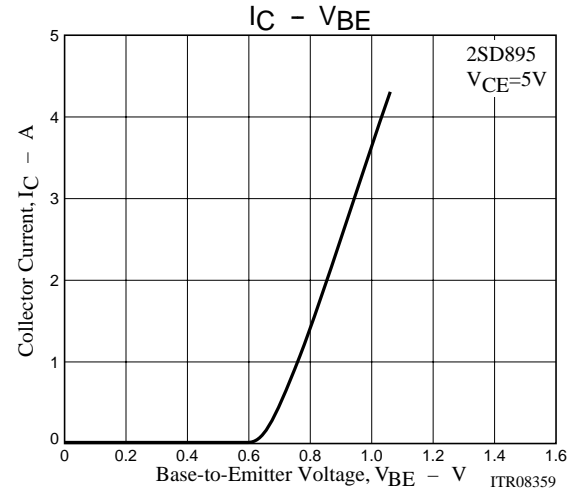
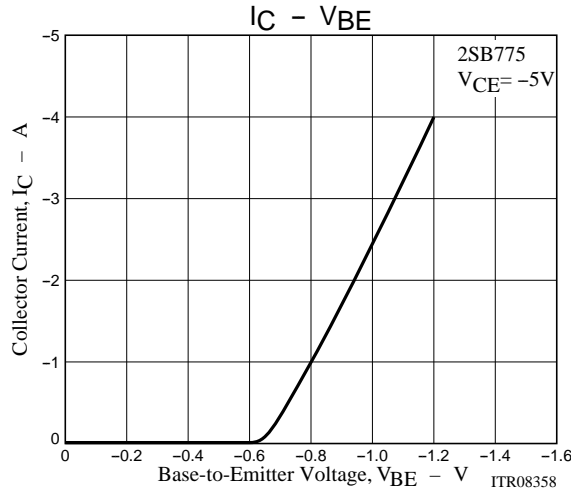
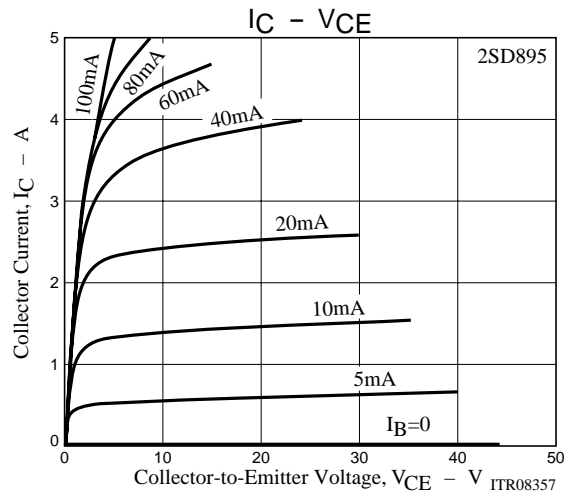
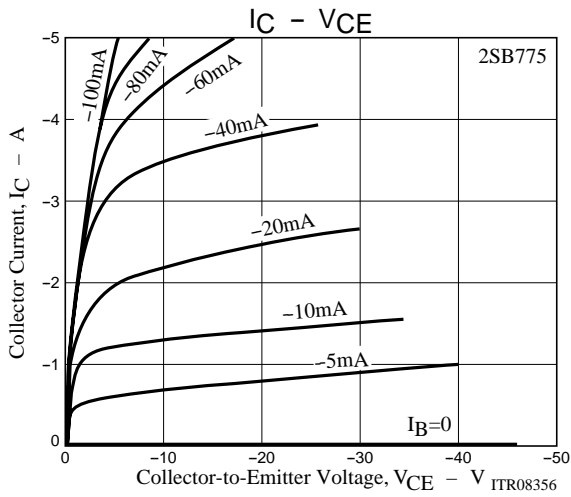
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		160		pF
Base-to-Emitter Voltage	V_{BE}	$V_{CE}=(-)5V, I_C=(-)1A$			(-1.5)	V
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)4A, I_B=(-)0.4A$		(-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
		$I_C=(-)50mA, R_{BE}=\infty$	(-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)		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

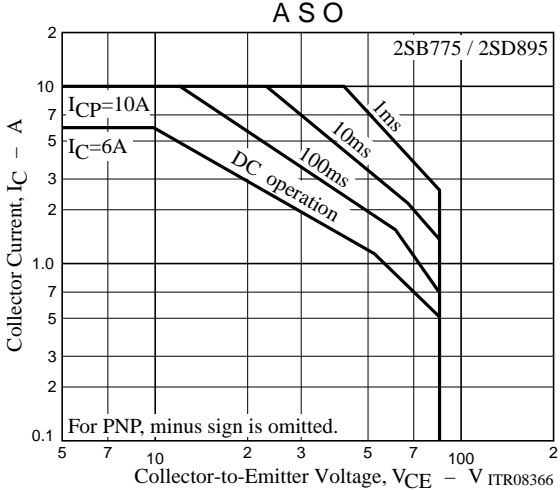
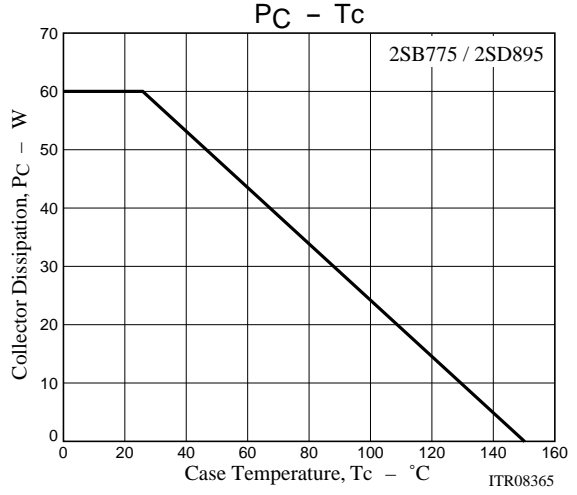
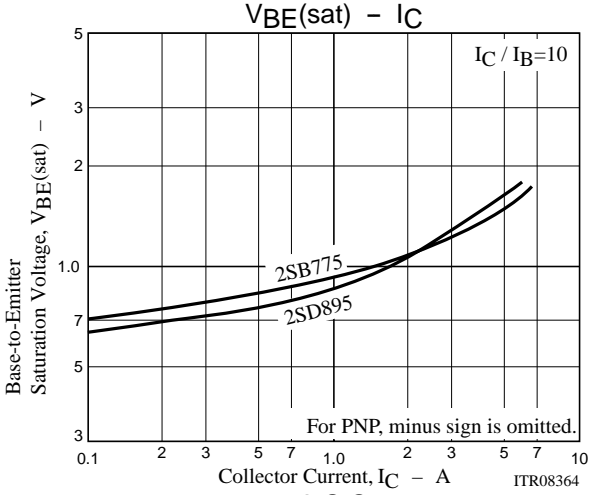
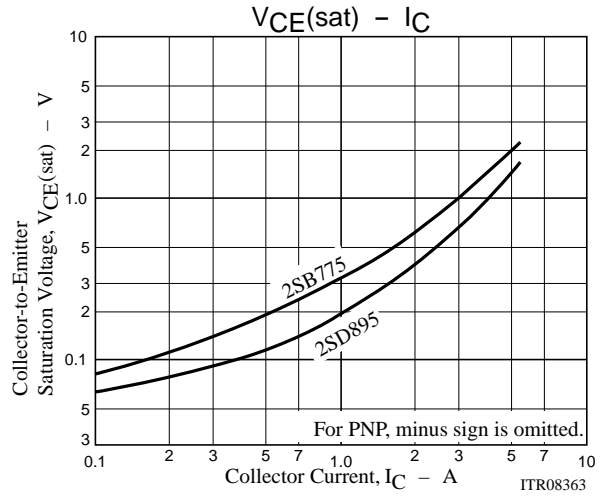
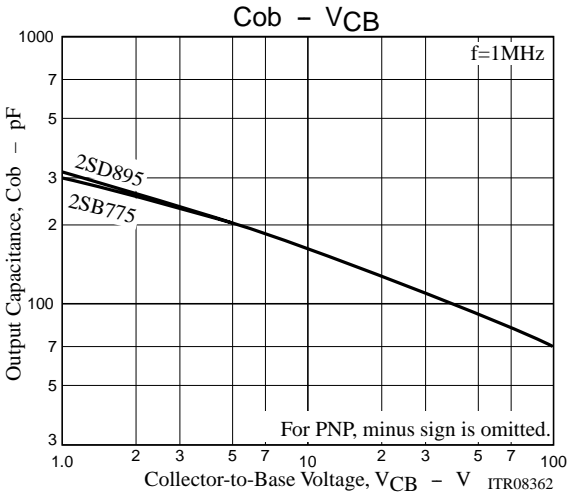
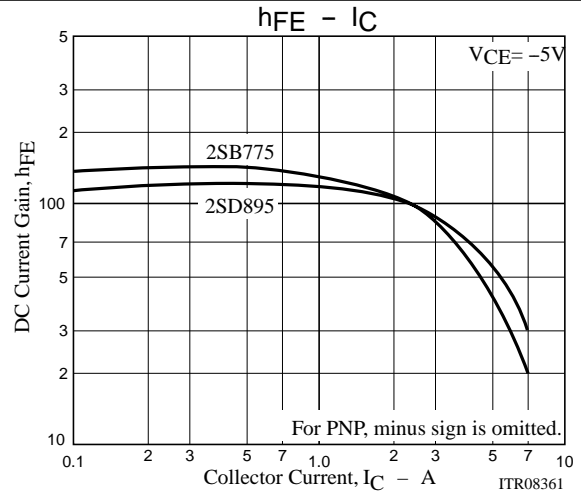
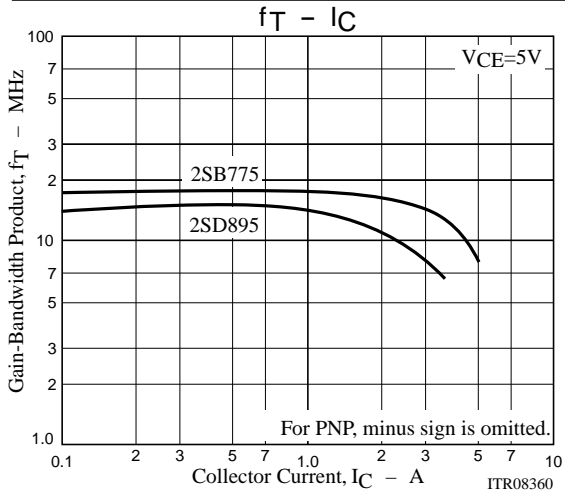
Switching Time Test Circuit



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



2SB775/2SD895



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