



2SA1850/2SC4824

High Definition CRT Display Video Output Applications

Applications

- High Definition CRT Display Video Output Applications, Wide-Band Amplifier.

Features

- Adoption of FBET process.
- High Gain Bandwidth product ($f_T=400\text{MHz}$).
- High breakdown voltage ($V_{CE0}=120\text{V}$).
- Small reverse transfer capacitance and excellent high-frequency characteristic :
 $C_{re}=1.7\text{pF/NPN}$, 2.2pF/PNP .
- Usage of radial taping to meet automatic mounting.

() : 2SA1850

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-120)	V
Collector-to-Emitter Voltage	V_{CEO}		(-120)	V
Emitter-to-Base Voltage	V_{EBO}		(-3)	V
Collector Current	I_C		(-200)	mA
Collector Current (Pulse)	I_{CP}		(-400)	mA
Collector Dissipation	P_C		1.3	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}	$V_{CB}=(-)80\text{V}$, $I_E=0$			(-0.1)	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)2\text{V}$, $I_C=0$			(-1.0)	μA
DC Current Gain	h_{FE1}	$V_{CE}=(-)10\text{V}$, $I_C=(-)10\text{mA}$	60*		320*	
	h_{FE2}	$V_{CE}=(-)10\text{V}$, $I_C=(-)100\text{mA}$	20			

* : The 2SA1850/2SC4824 are classified by 10mA h_{FE} as follows :

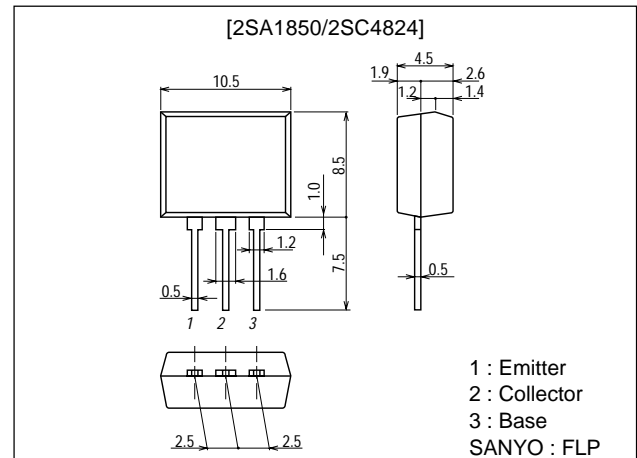
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Rank	D	E	F
h_{FE}	60 to 120	100 to 200	160 to 320

Package Dimensions

unit:mm

2084B



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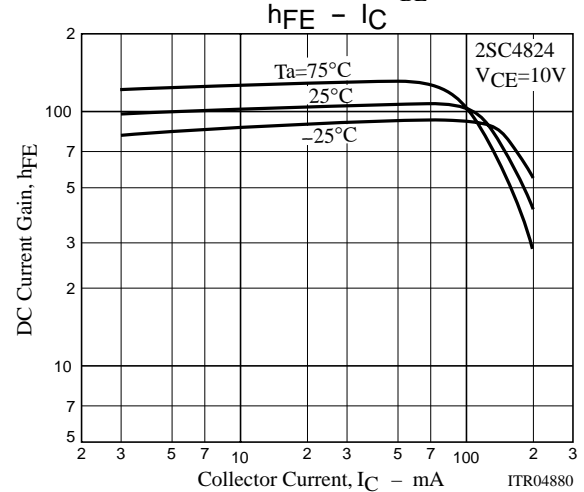
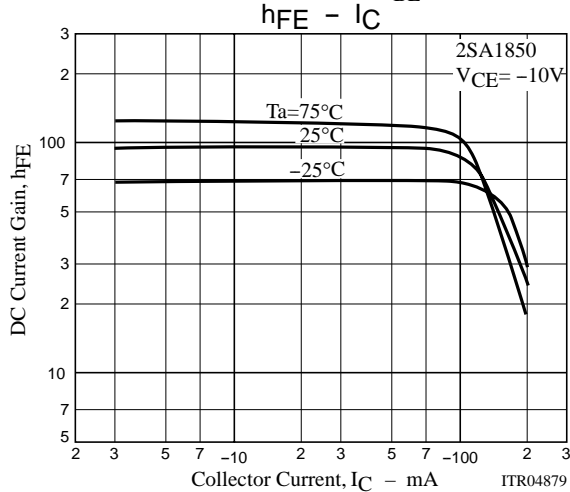
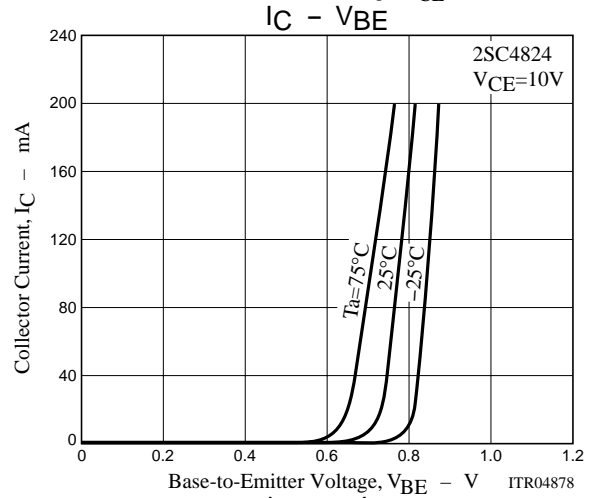
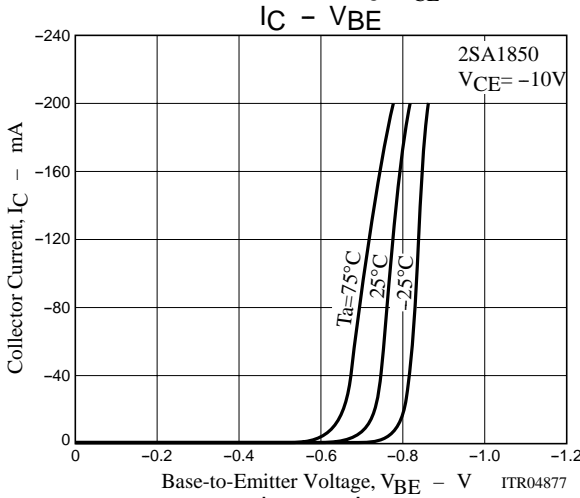
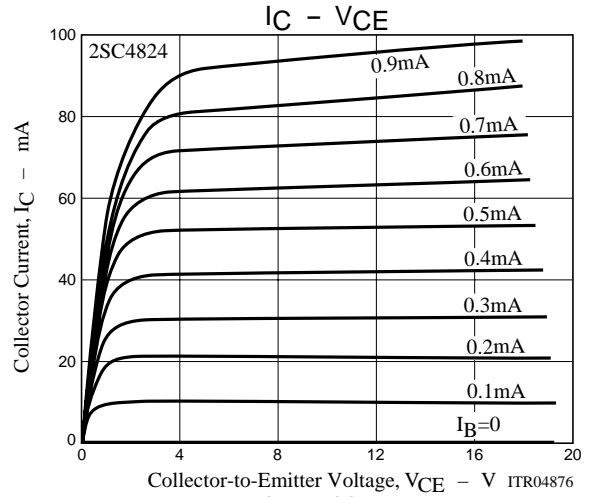
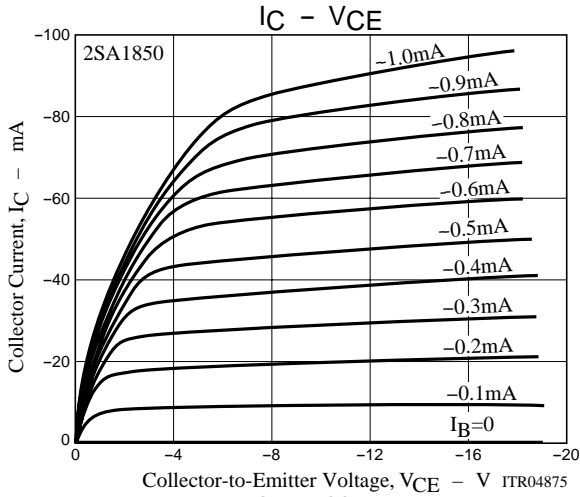
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82003TN (KT)/91098HA (KT)/5122MH (KOTO) No.4132-1/4

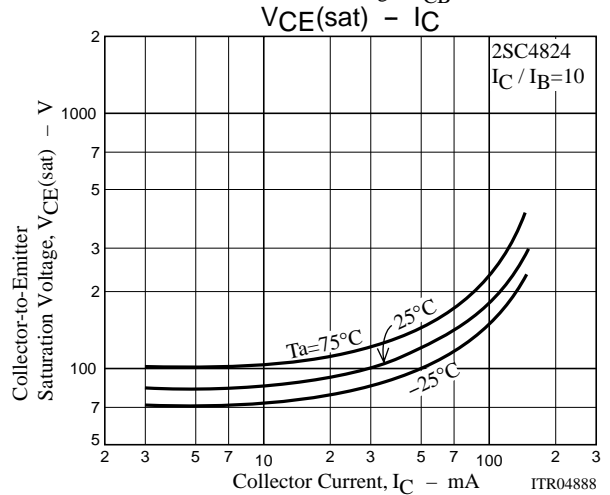
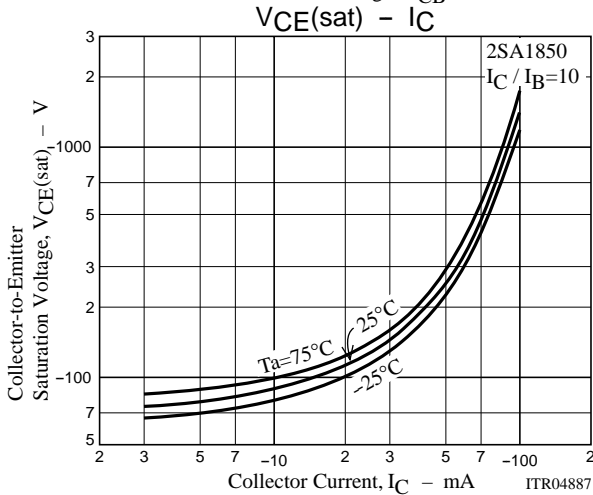
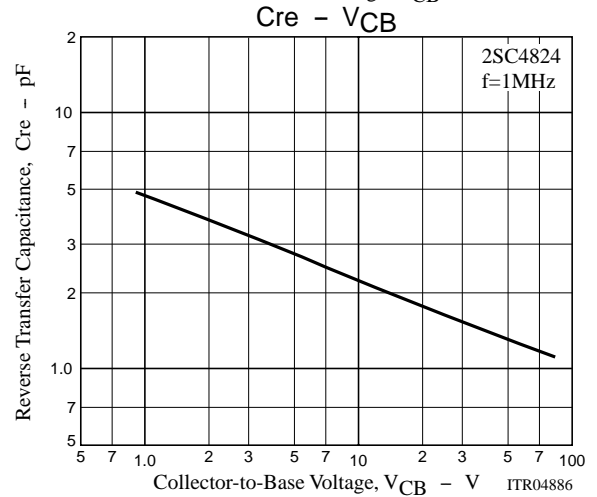
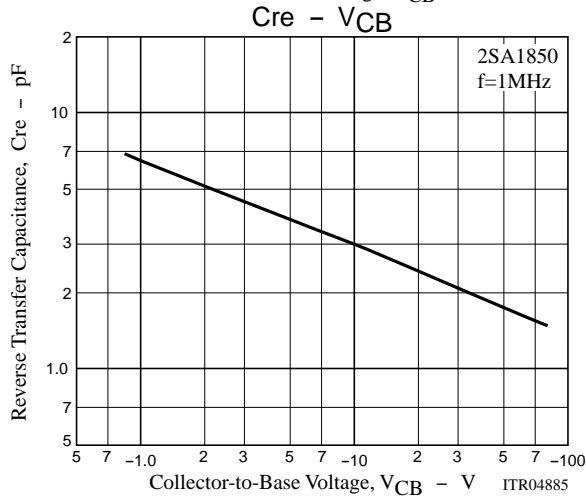
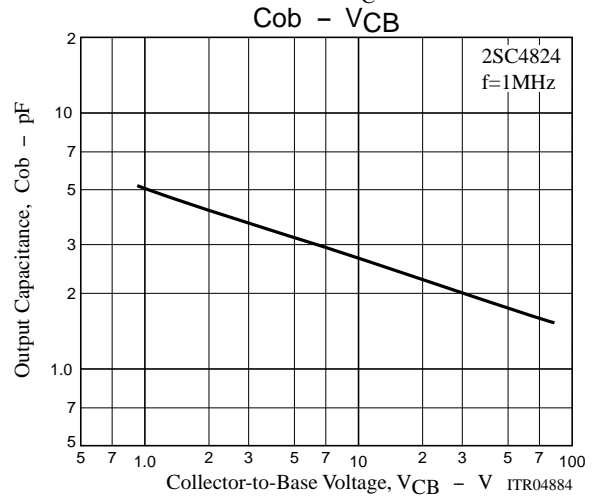
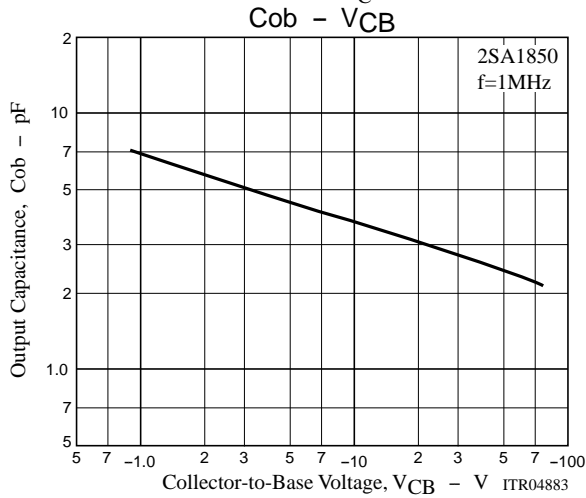
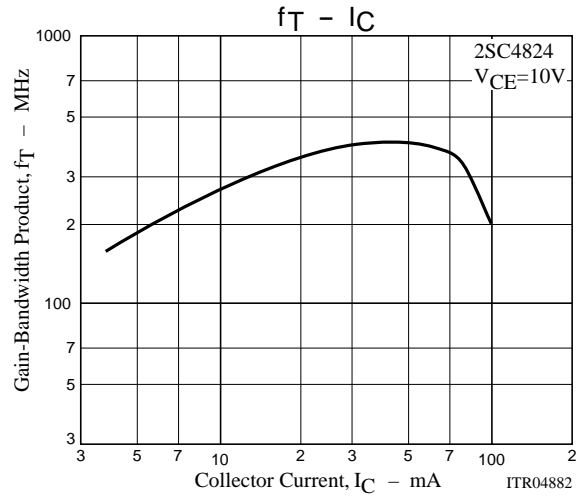
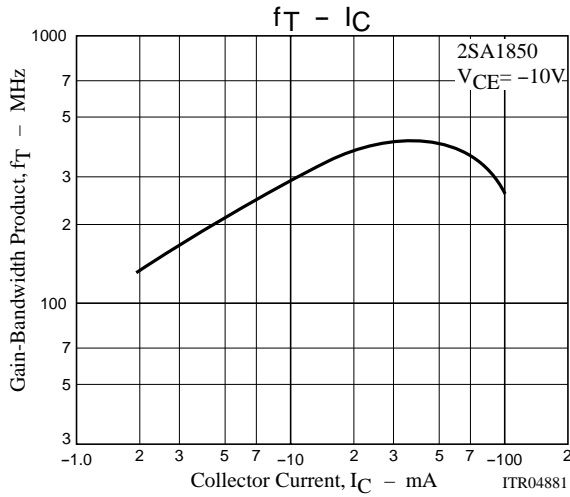
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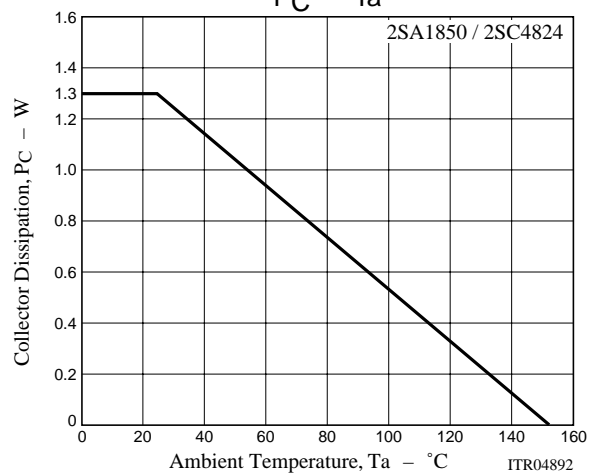
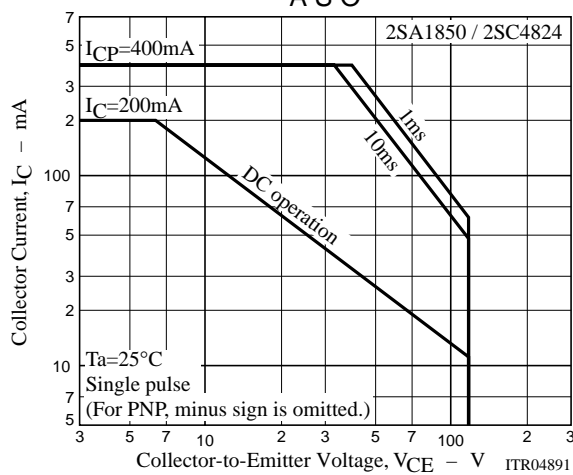
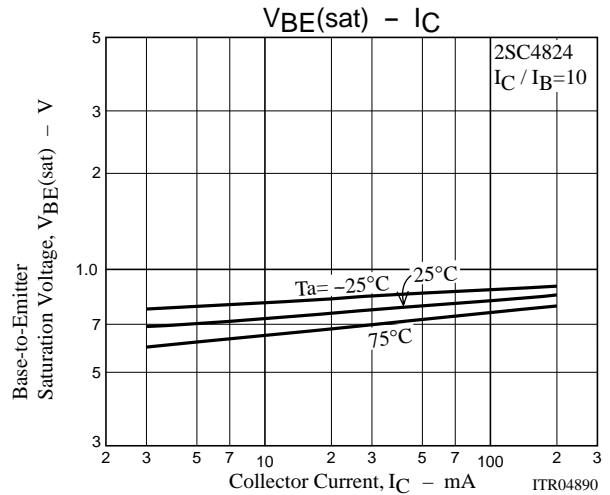
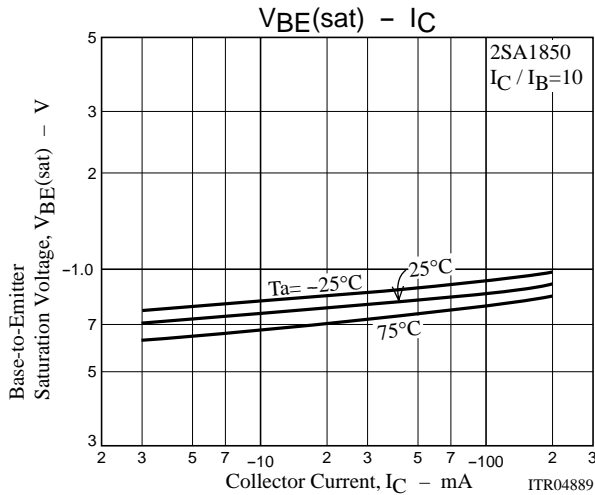
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)50mA$		400		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)30V, f=1MHz$		(2.8)		pF
				2.1		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)30V, f=1MHz$		(2.2)		pF
				1.7		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$			(-1.0)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$			(-1.0)	V



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