



## 2SA1853/2SC4827

### High Definition CRT Display Video Output Applications

#### Applications

- High-definition CRT display video output. Wide-band amplifier.

#### Features

- Adoption of FBET process.
- High  $f_T$  :  $f_T=300\text{MHz}$ .
- High breakdown voltage :  $V_{CEO}=200\text{V}$ .
- Small reverse transfer capacitance and excellent high-frequency characteristic :  
 $C_{re}=2.2\text{pF/NPN}$ ,  $2.7\text{pF/PNP}$ .
- Possible to offer the 2SA1853/2SC4827 devices in a tepla reel packaging, which facilitates automatic incertion.

( ) : 2SA1853

#### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		(-200)	V
Collector-to-Emitter Voltage	$V_{CEO}$		(-200)	V
Emitter-to-Base Voltage	$V_{EBO}$		(-3)	V
Collector Current	$I_C$		(-200)	mA
Collector Current (Pulse)	$I_{CP}$		(-300)	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	$I_{CBO}$	$V_{CB}=(-)150\text{V}$ , $I_E=0$			(-0.1)	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)2\text{V}$ , $I_C=0$			(-1.0)	$\mu\text{A}$
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			
Gain Bandwidth Product	$f_T$	$V_{CE}=(-)30\text{V}$ , $I_C=(-)50\text{mA}$		300		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=(-)30\text{V}$ , $f=1\text{MHz}$		2.7		pF
				(3.2)		pF
Reverse Transfer Capacitance	$C_{re}$	$V_{CB}=(-)30\text{V}$ , $f=1\text{MHz}$		2.2		pF
				(2.7)		pF

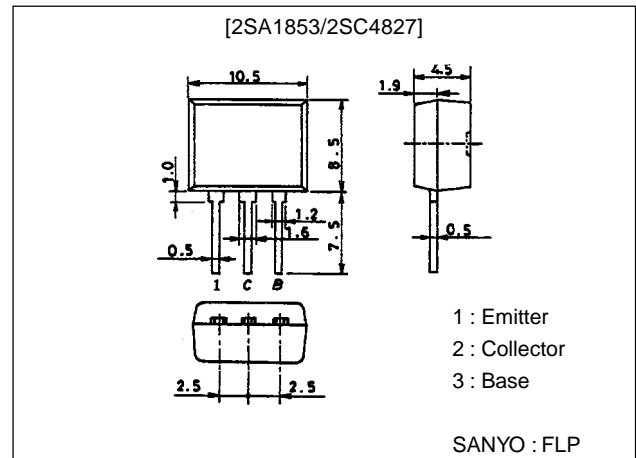
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#### Package Dimensions

unit:mm

2084B

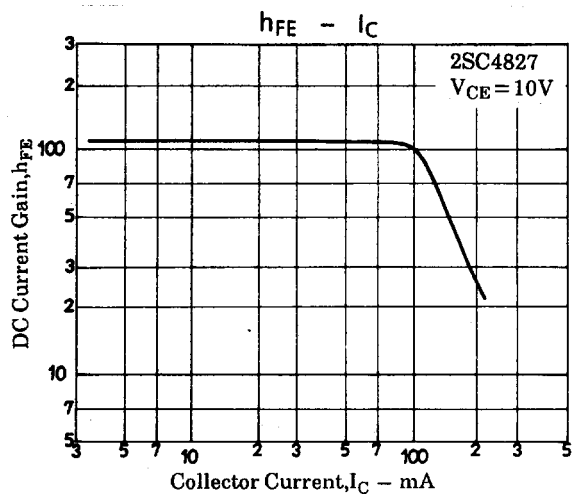
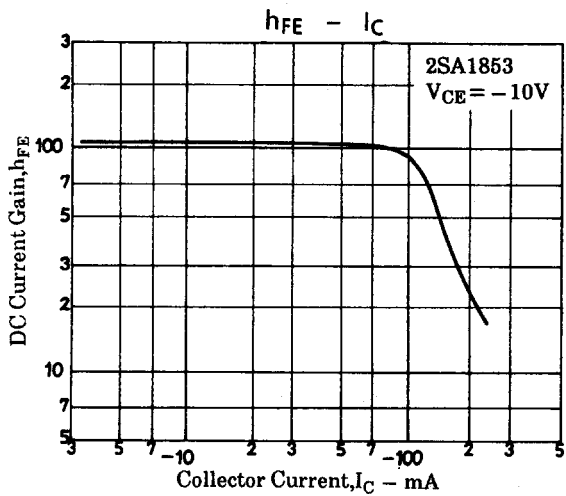
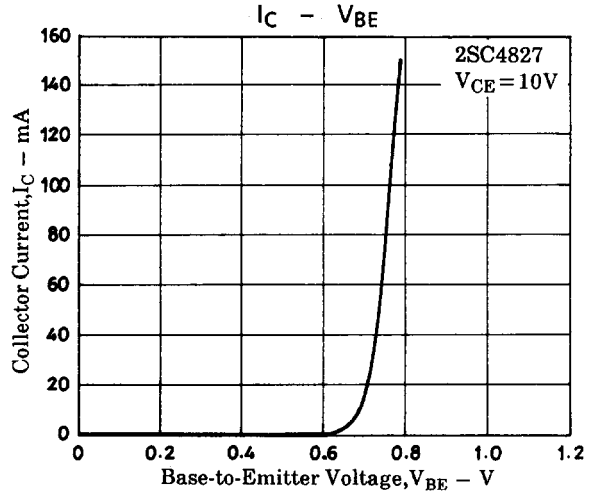
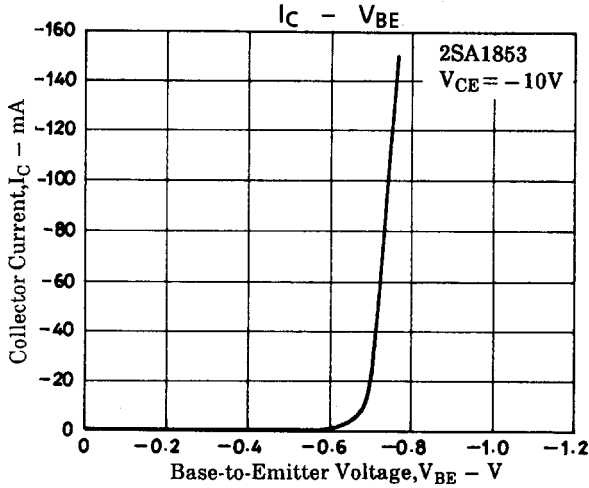
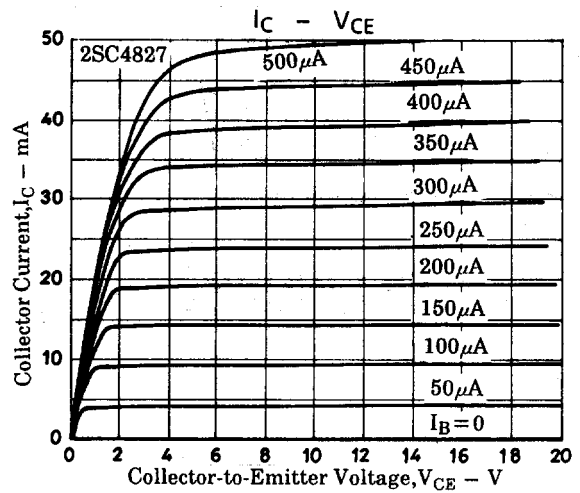
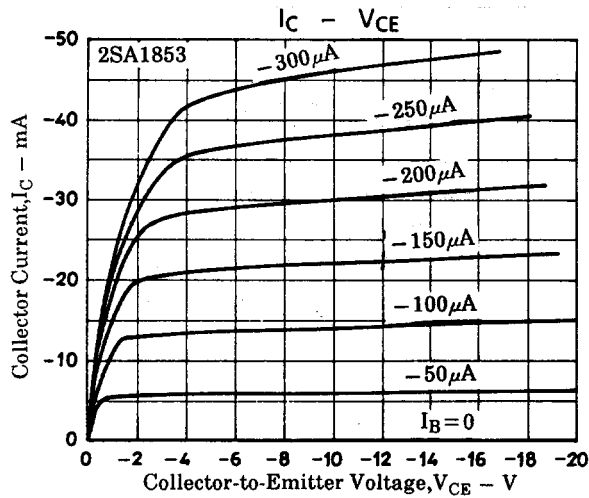


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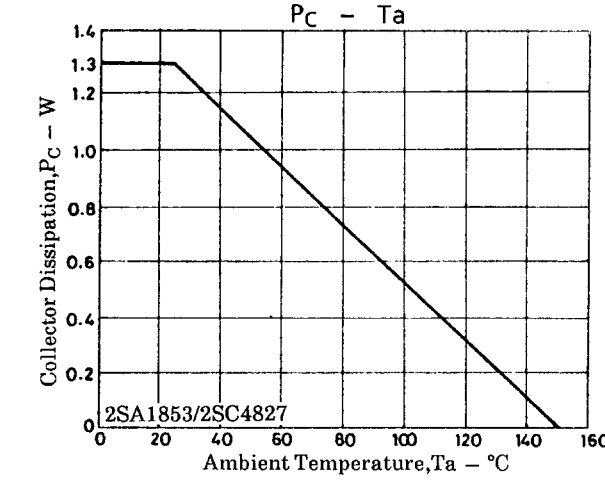
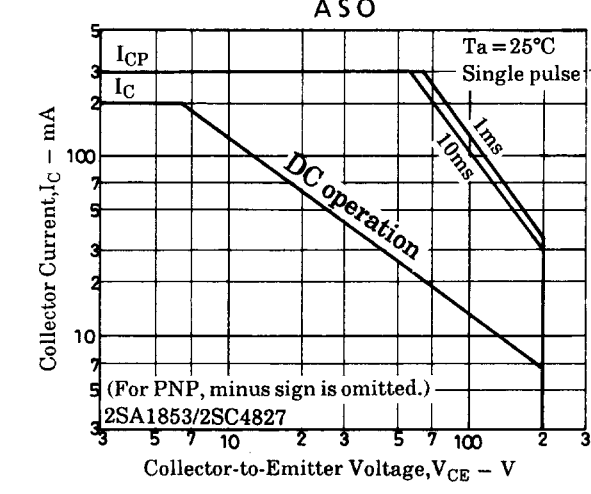
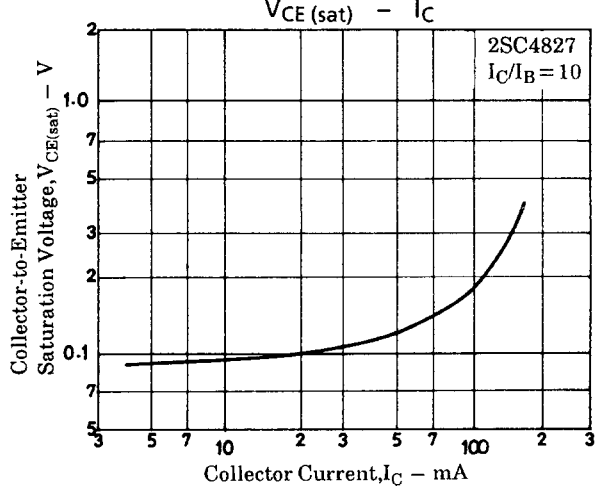
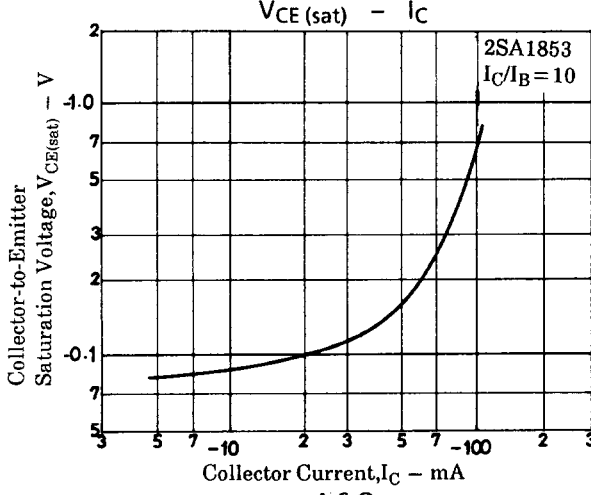
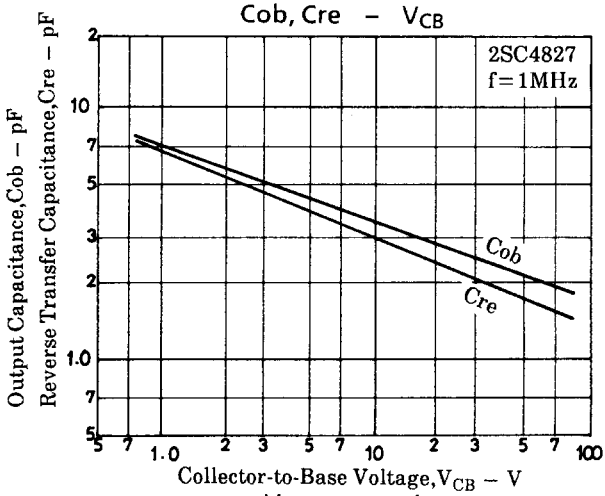
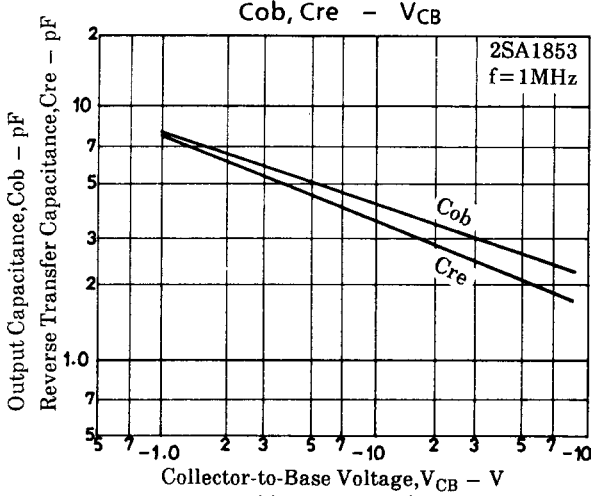
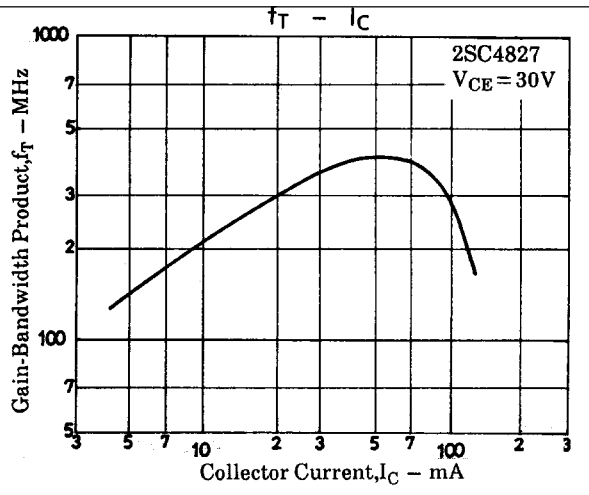
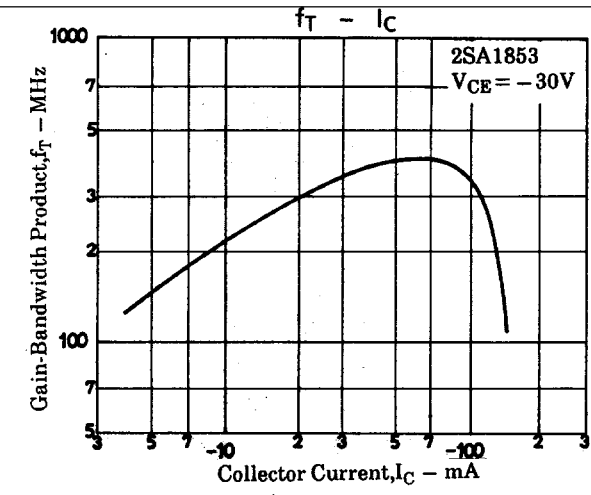
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)30\text{mA}, I_B=(-)3\text{mA}$			(-1.0)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)30\text{mA}, I_B=(-)3\text{mA}$			(-1.0)	V

\* : The 2SA1853/2SC4827 are classified by 10mA  $h_{FE}$  as follows :

60	D	120	100	E	200	160	F	320
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