



## 2SA1697/2SC4474

### High-Definition CRT Display, Video Output Applications

#### Applications

- High-definition CRT display video output, wide-band amplifier.

#### Features

- High  $f_T$  :  $f_T=300\text{MHz}$ .
- High breakdown voltage :  $V_{CEO}=200\text{V min.}$
- Small reverse transfer capacitance and excellent high frequency characteristic :  
 $C_{re}=2.2\text{pF/NPN, } 2.7\text{ pF/PNP}$
- Adoption of FBET process.
- Micaless type.

( ) : 2SA1697

#### 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	$P_C$		1.8	W
		$T_c=50^\circ\text{C}$	10	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	$h_{FE1}$	$V_{CE}=(-)10\text{V, } I_C=(-)10\text{mA}$	40*		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

\*  $h_{FE1}$  : The 2SA1697/2SC4474 are classified by 10mA  $h_{FE}$  as follows :

40	C	80	60	D	120	100	E	200	160	F	320
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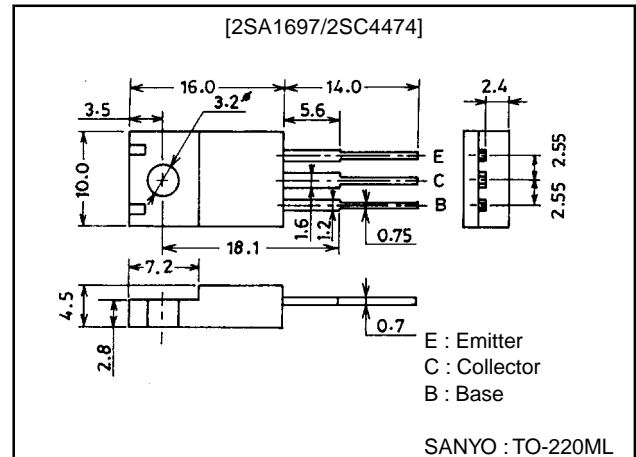
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#### Package Dimensions

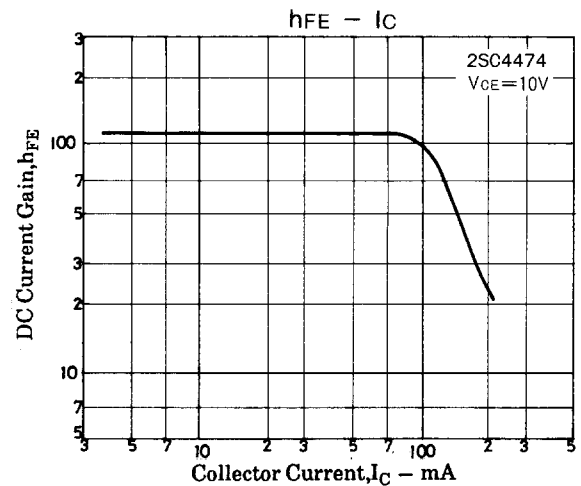
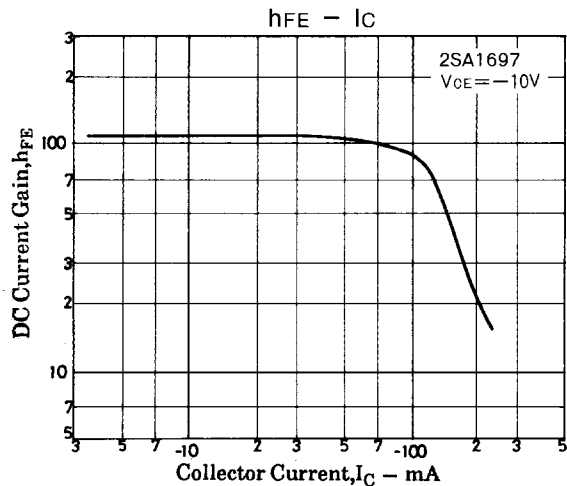
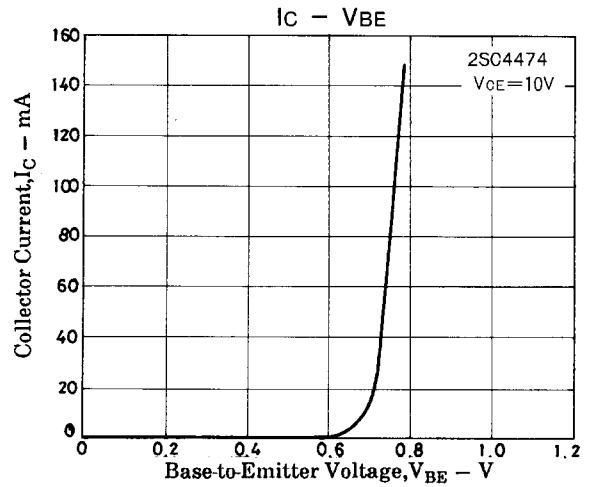
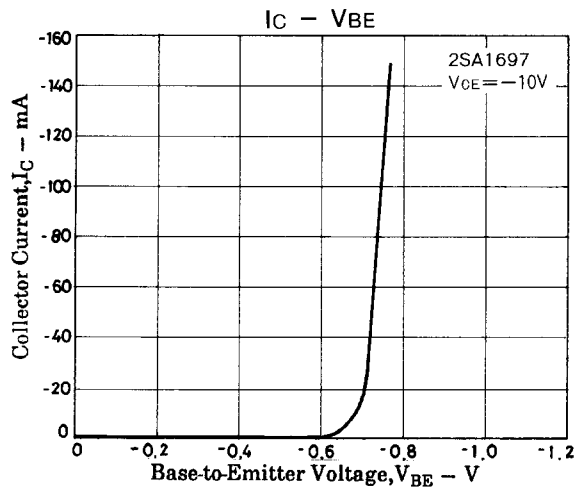
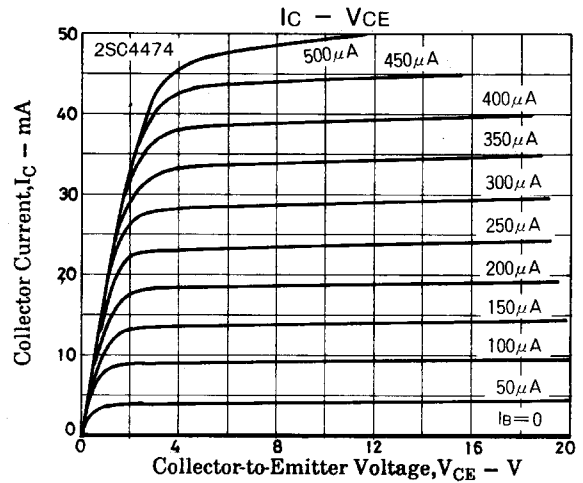
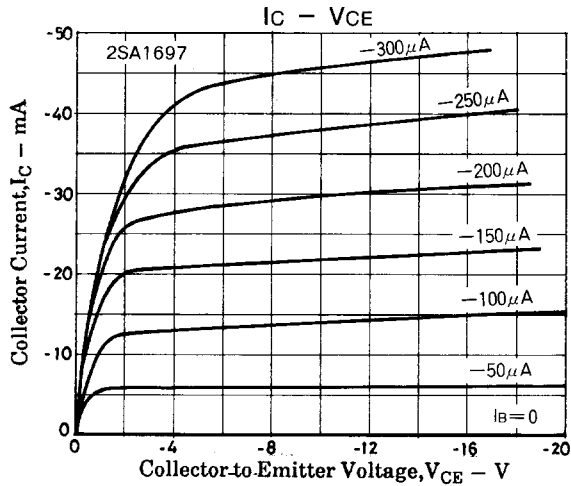
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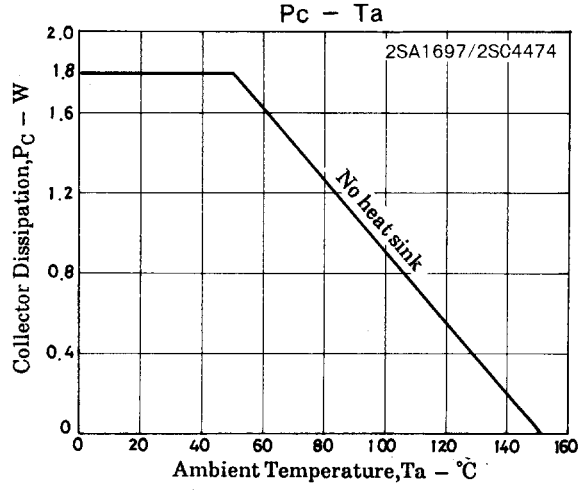
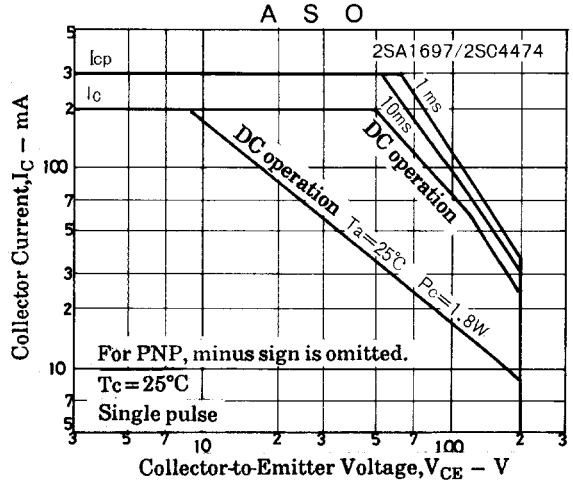
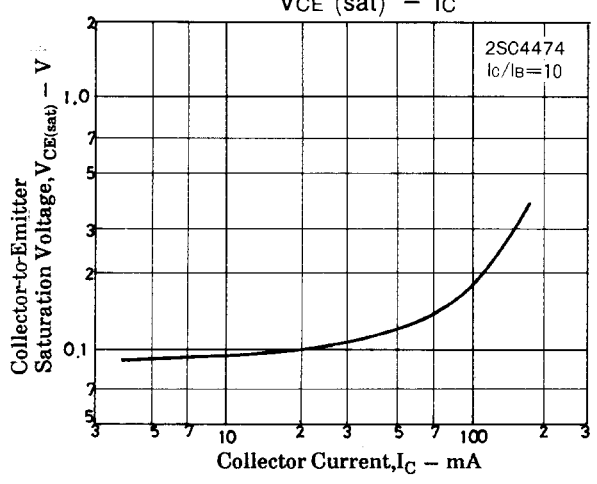
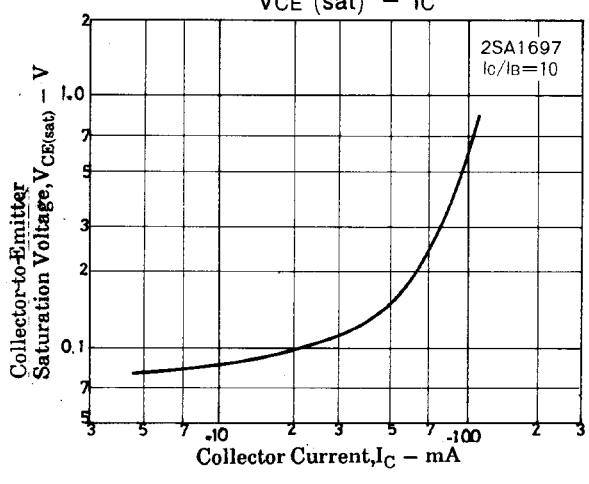
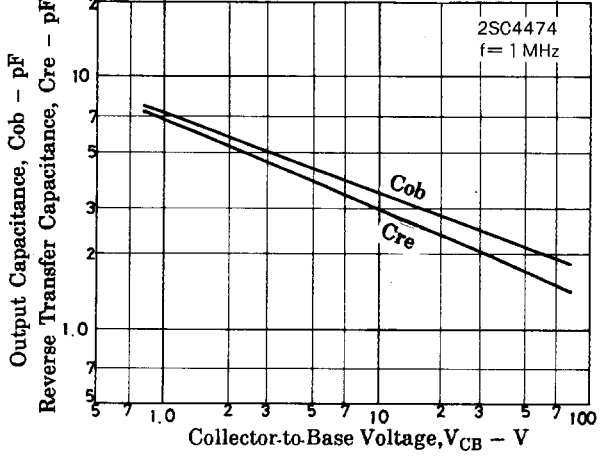
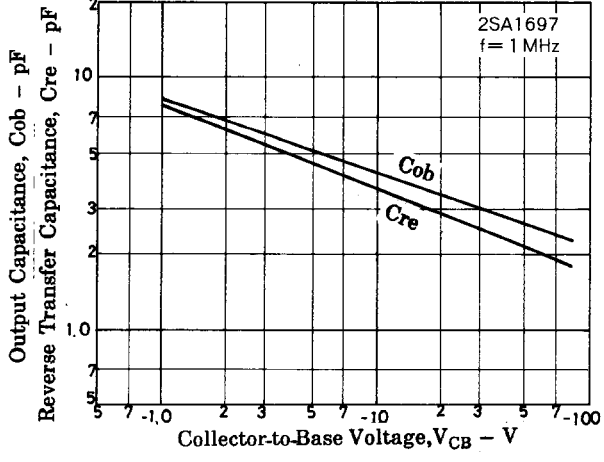
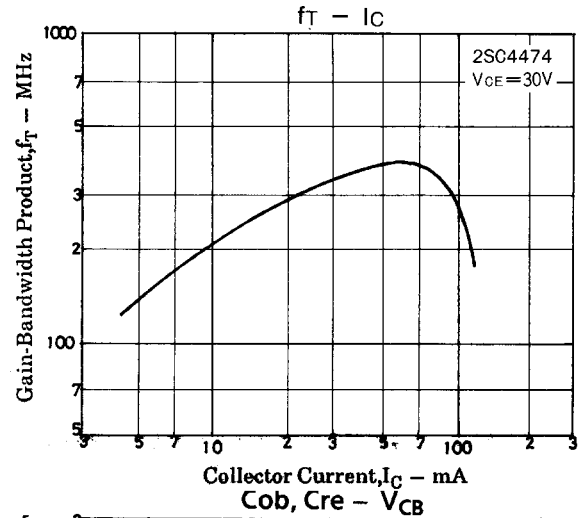
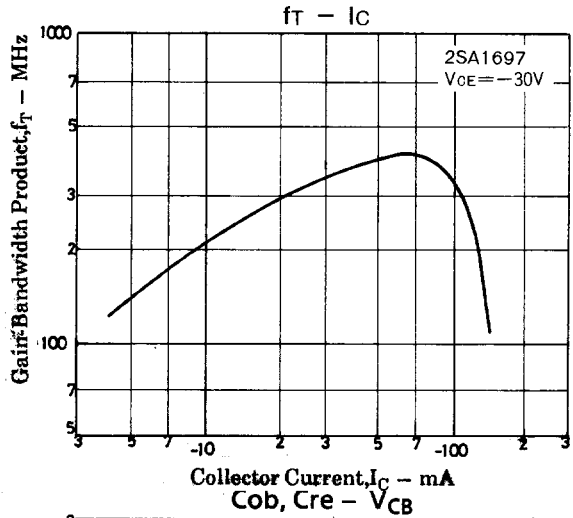


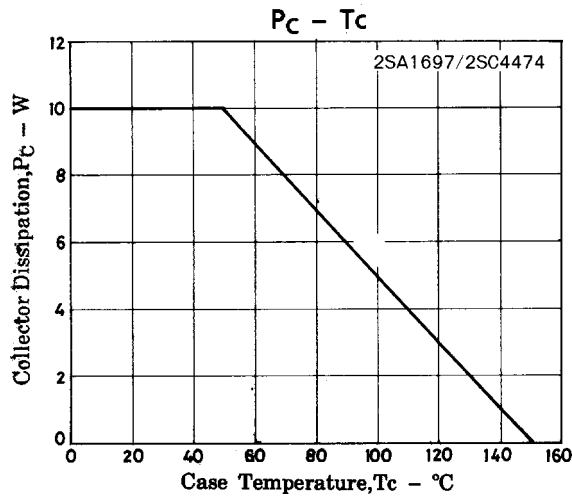
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Capacitance	$C_{ob}$	$V_{CB}=(-)30V, f=1MHz$		2.7		pF
Reverse Transfer Capacitance	$C_{re}$	$V_{CB}=(-)30V, f=1MHz$		(3.2)		pF
				2.2		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$			(-)	1.0 V
Emitter-to-Base Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$			(-)	1.0 V



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