



2SA1696/2SC4473

High-Definition CRT Display, Video Output Applications

Applications

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

Features

- High f_T : $f_T=500\text{MHz}$.
- High breakdown voltage : $V_{CEO}=120\text{V min.}$
- Small reverse transfer capacitance and excellent high frequency characteristic :
 $C_{re}=2.7\text{pF/NPN, } 4.0\text{pF/PNP.}$
- Complementary PNP and NPN types.
- Adoption of FBET process.
- Micaless type.

() : 2SA1696

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		(-400	mA
Collector Current (Pulse)	I_{CP}		(-600	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	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)2\text{V, } I_C=0$			(-)1.0	μA
DC Current Gain	h_{FE1}	$V_{CE}=(-)10\text{V, } I_C=(-)10\text{mA}$	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

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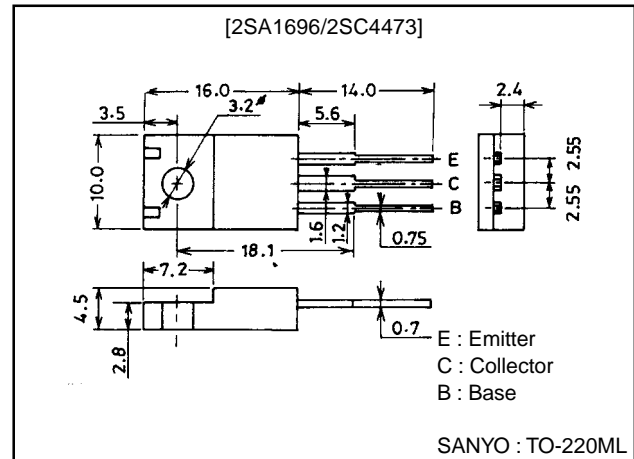
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Package Dimensions

unit:mm

2041



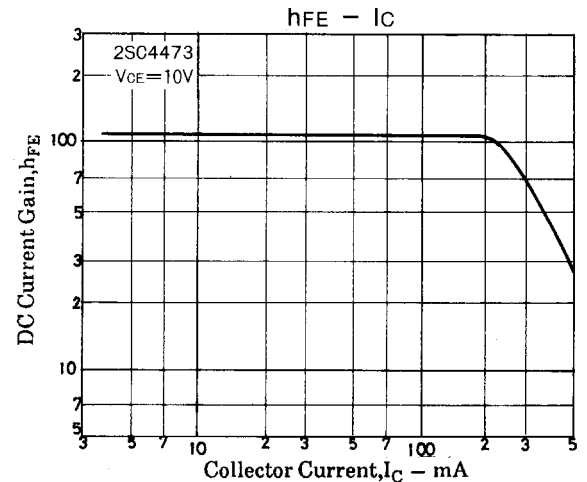
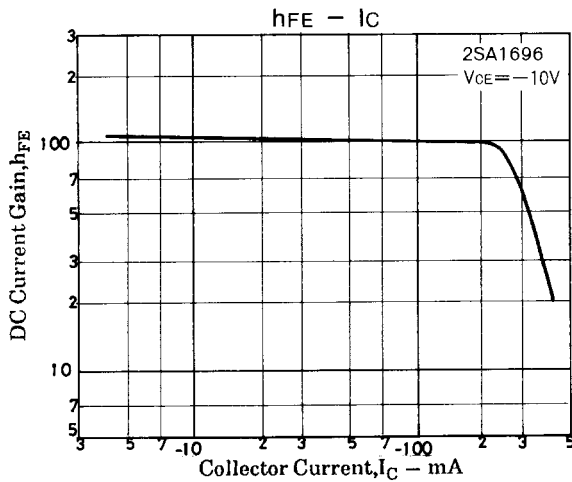
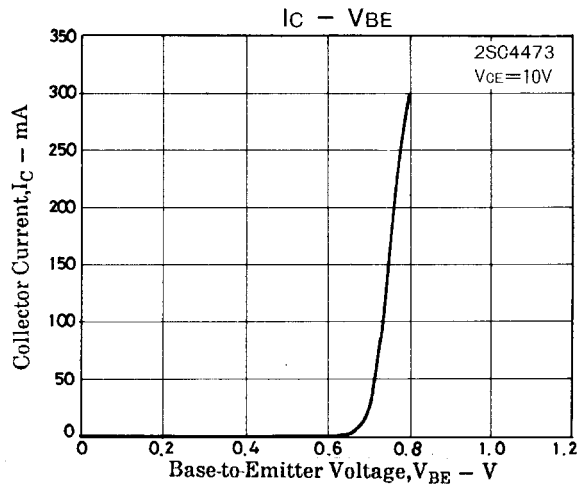
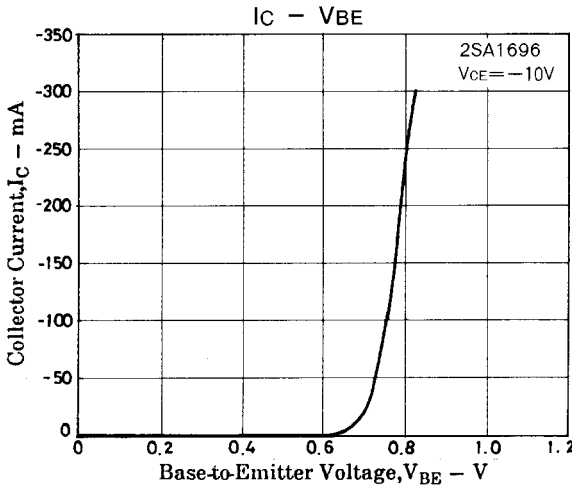
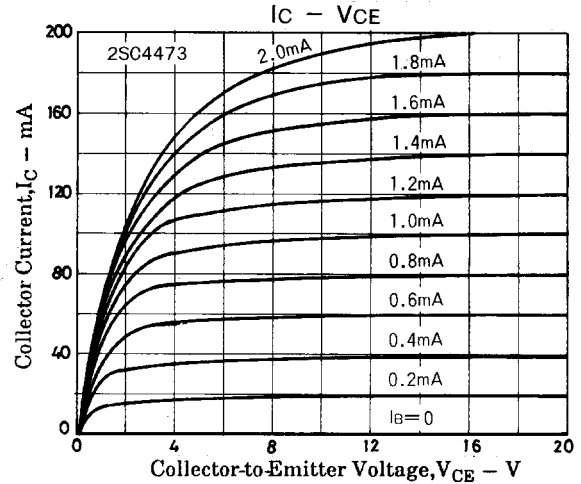
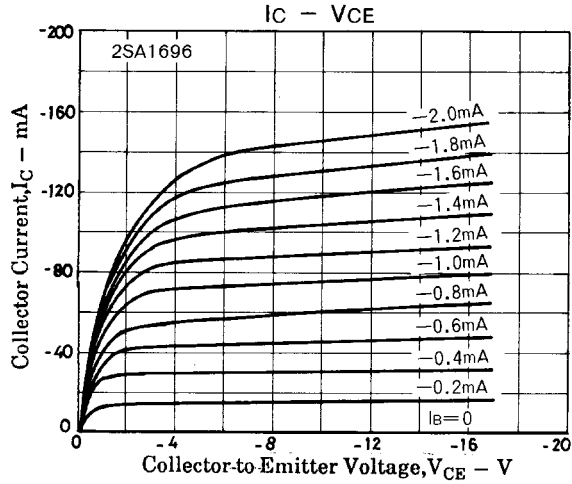
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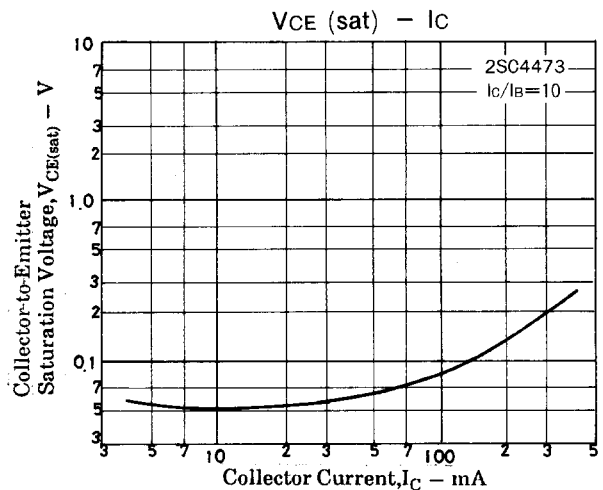
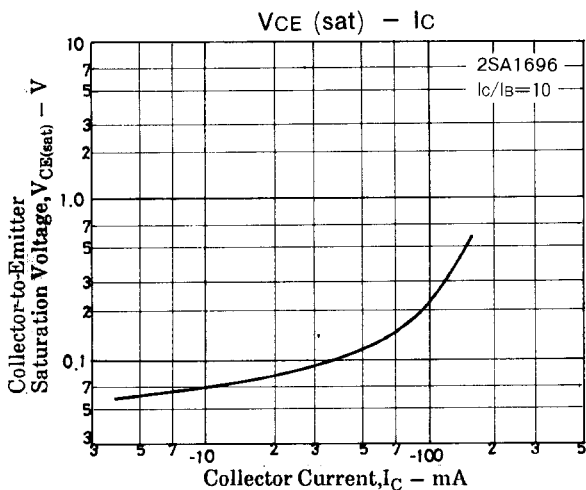
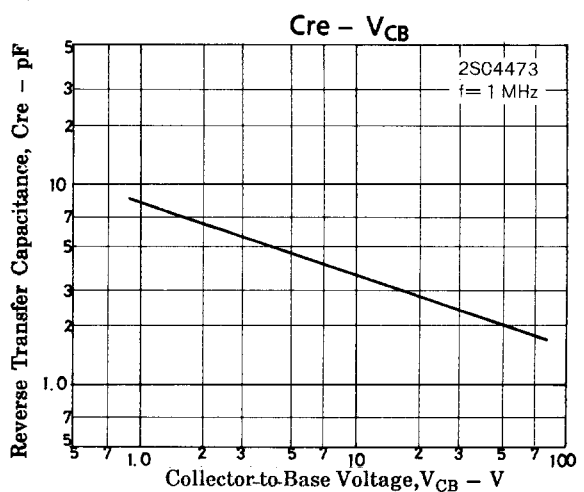
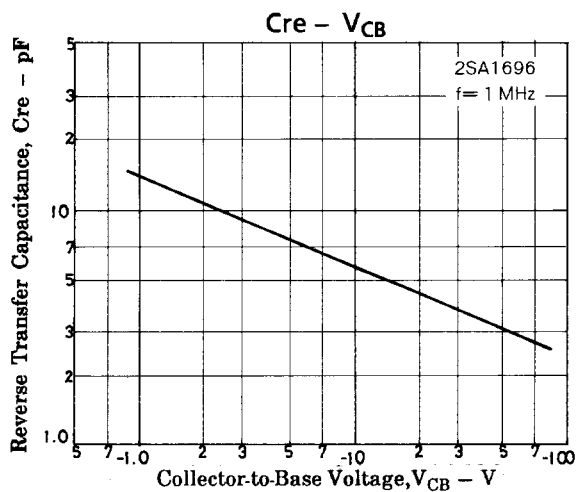
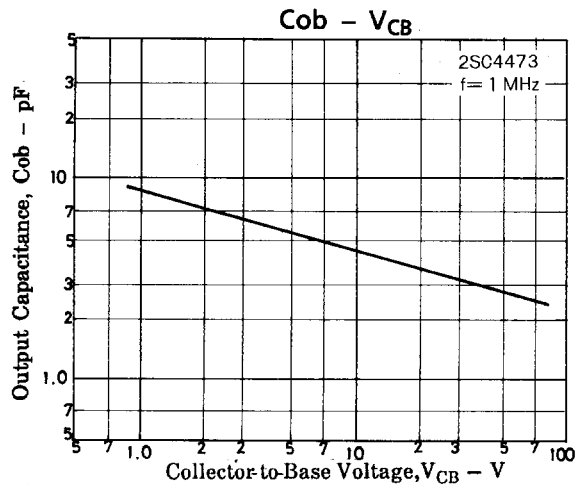
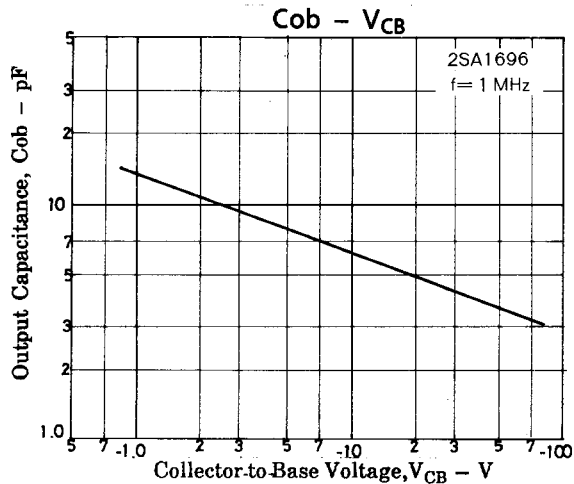
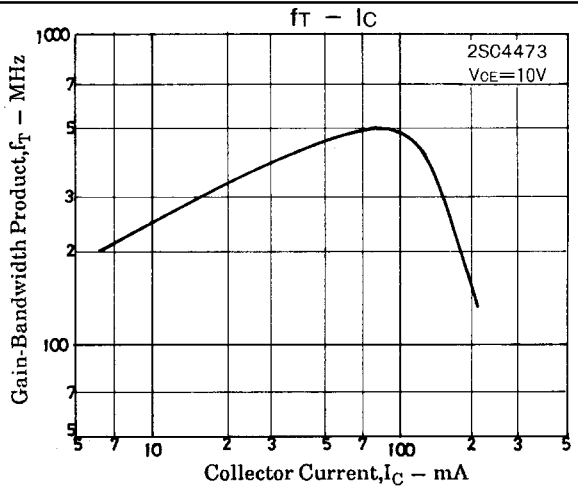
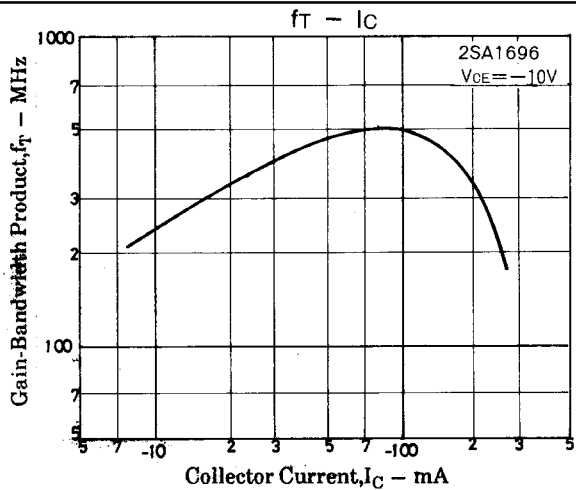
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Capacitance	C_{ob}	$V_{CB}=(-)30V, f=1MHz$		3.1		pF
				(4.4)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)30V, f=1MHz$		2.7		pF
				(4.0)		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)50mA, I_B=(-)5mA$			(-1.0)	V
Emitter-to-Base Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)50mA, I_B=(-)5mA$			(-1.0)	V

* h_{FEI} : The 2SA1696/2SC4473 are classified by 50mA h_{FE} as follows :

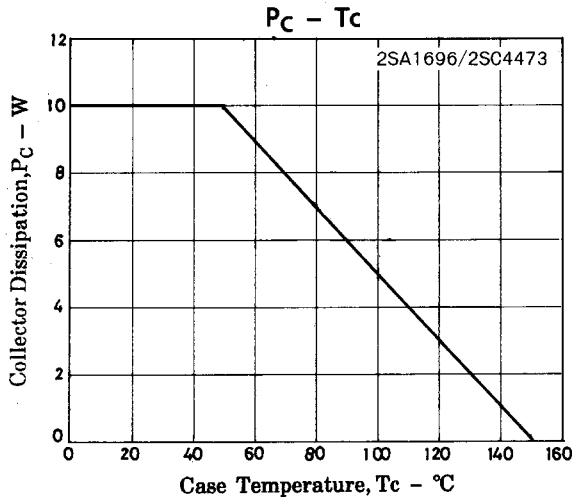
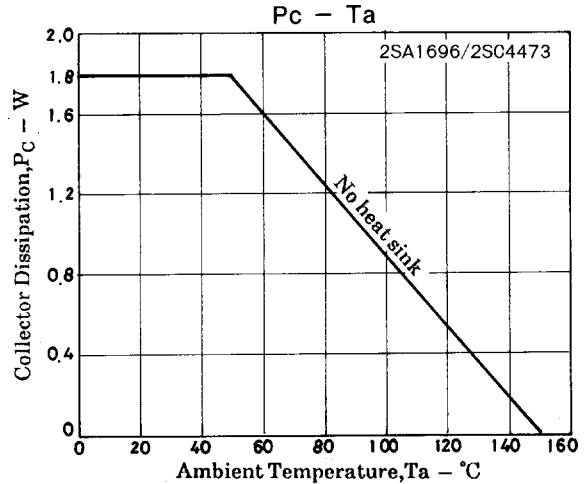
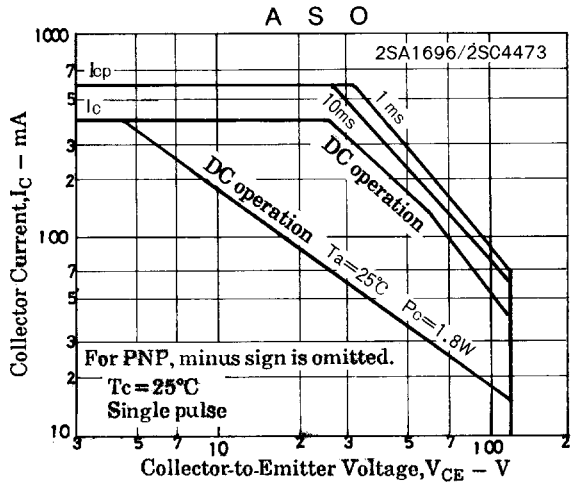
40	C	80	60	D	120	100	E	200	160	F	320
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