

**SANYO**

No.3018

**2SA1697/2SC4474**

PNP/NPN Epitaxial Planar Silicon Transistors

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

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

**Features**

- High  $f_T$ :  $f_T = 300\text{MHz}$
- High breakdown voltage:  $V_{CEO} = 200\text{Vmin}$
- 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.

( ): PNP

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

			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
Peak Collector Current	$i_{cp}$	(- )300	mA
Collector Dissipation	$P_C$	1.8	W
		10	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

 $T_c = 50^\circ\text{C}$ **Electrical Characteristics at  $T_a = 25^\circ\text{C}$** 

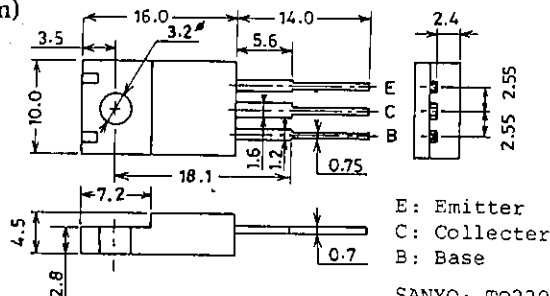
			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = (-)150\text{V}, I_E = 0$			(- )0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = (-)2\text{V}, I_C = 0$			(- )1.0	$\mu\text{A}$
DC Current Gain	$h_{FE1}$	$V_{CE} = (-)10\text{V}, I_C = (-)10\text{mA}$	40※		320※	
	$h_{FE2}$	$V_{CE} = (-)10\text{V}, I_C = (-)100\text{mA}$	20			
Gain-Bandwidth Product	$f_T$	$V_{CE} = (-)30\text{V}, I_C = (-)50\text{mA}$		300		MHz
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
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)30\text{mA}, I_B = (-)3\text{mA}$			(- )1.0	V
E-B Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)30\text{mA}, I_B = (-)3\text{mA}$			(- )1.0	V

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

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

**Package Dimensions 2041**

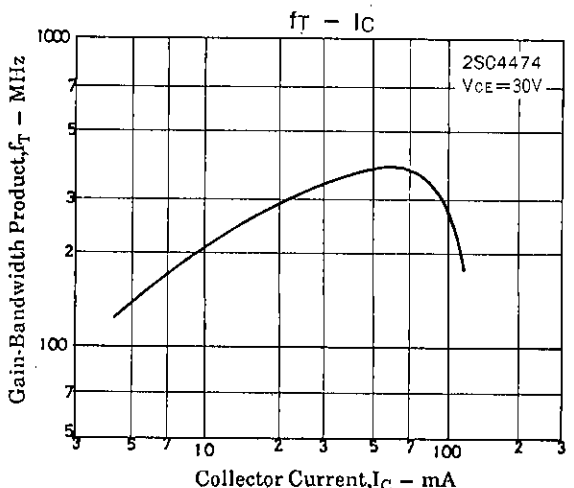
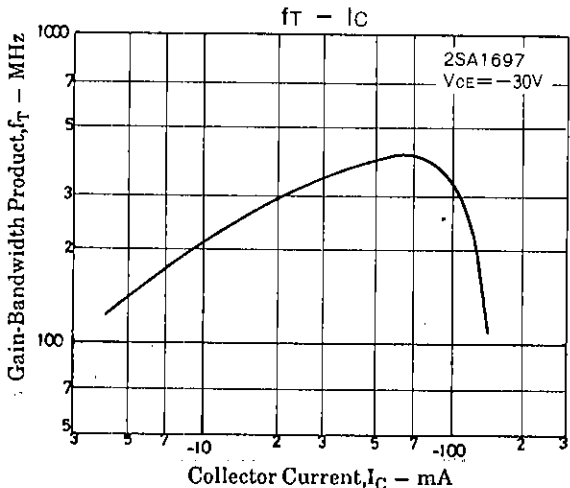
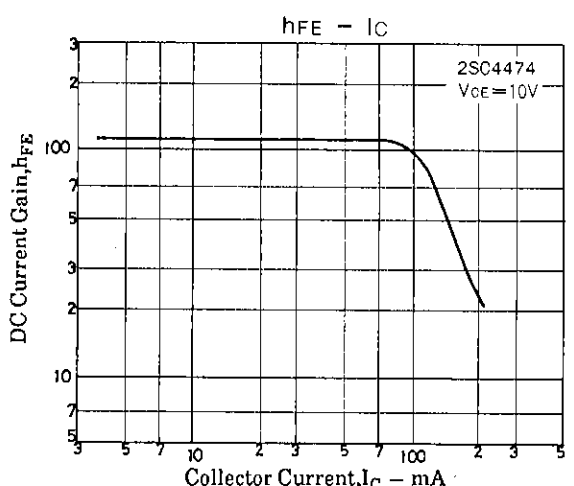
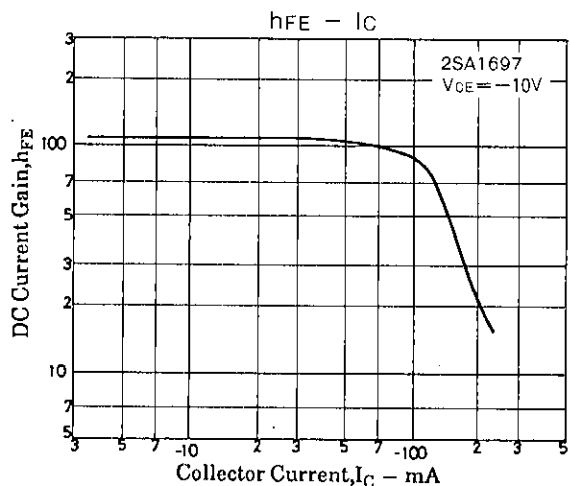
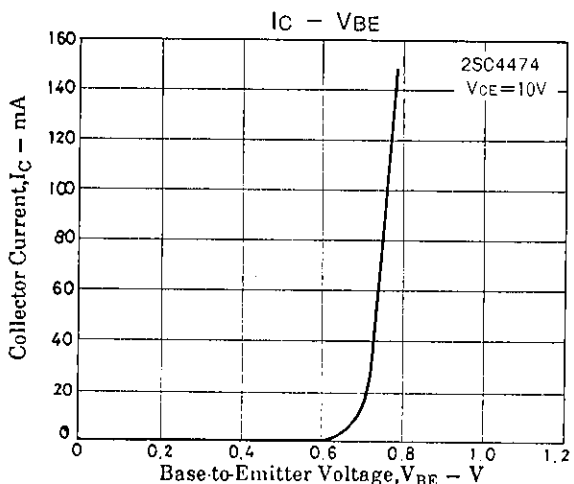
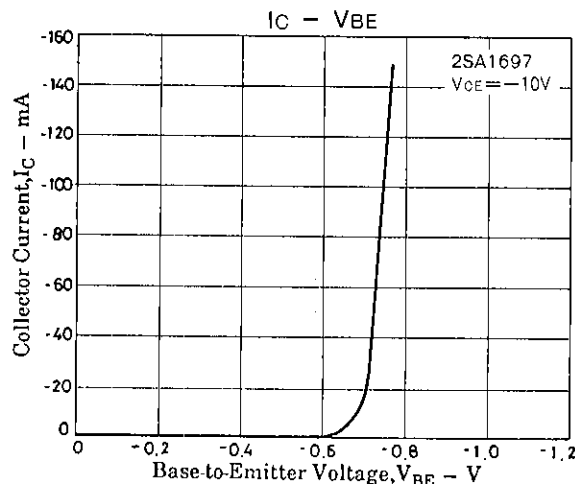
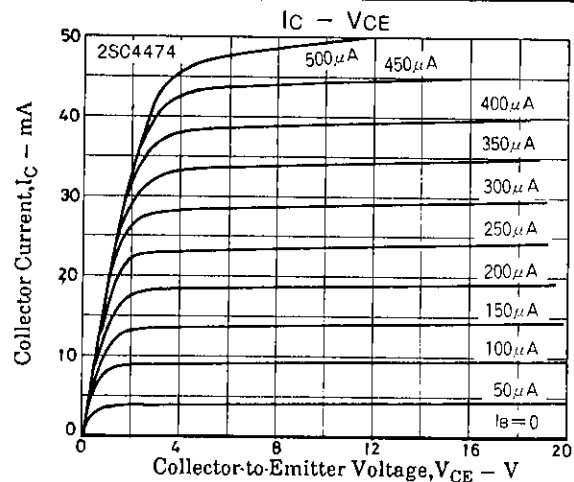
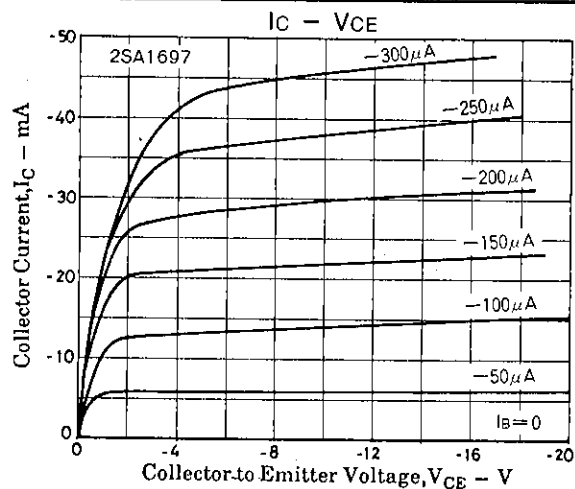
(unit: mm)

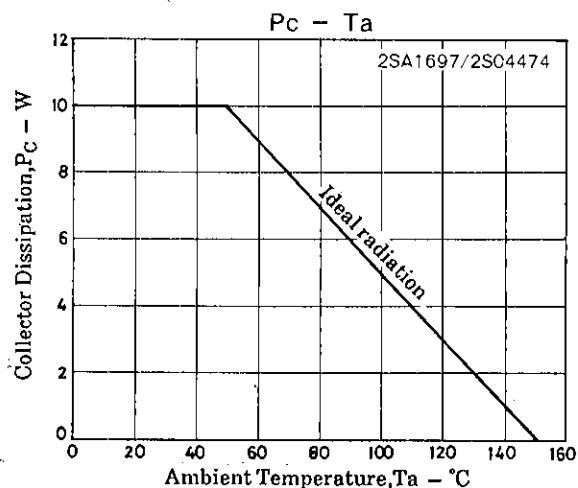
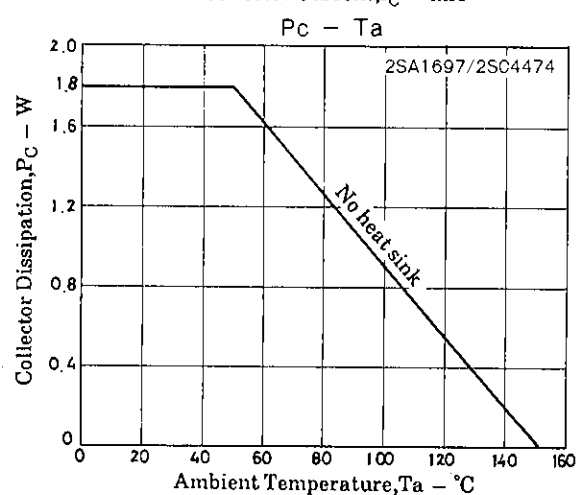
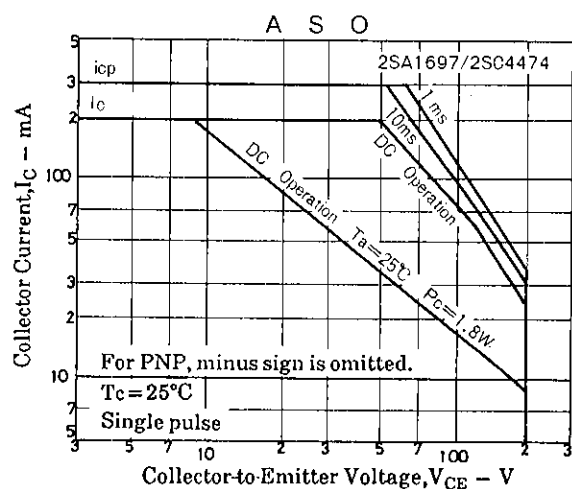
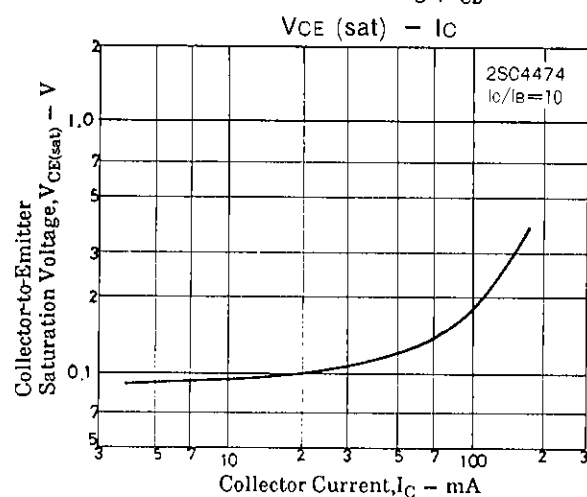
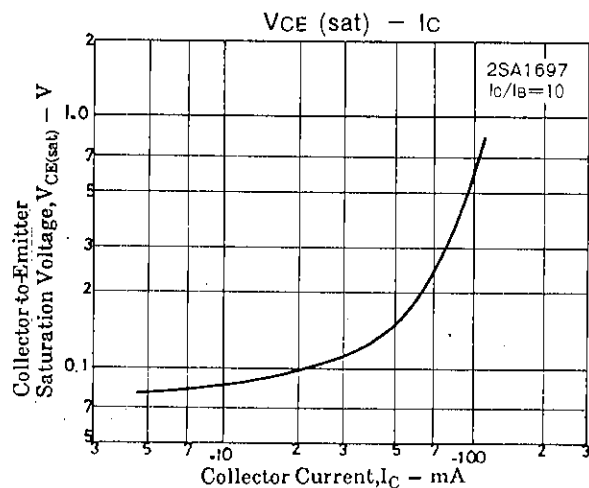
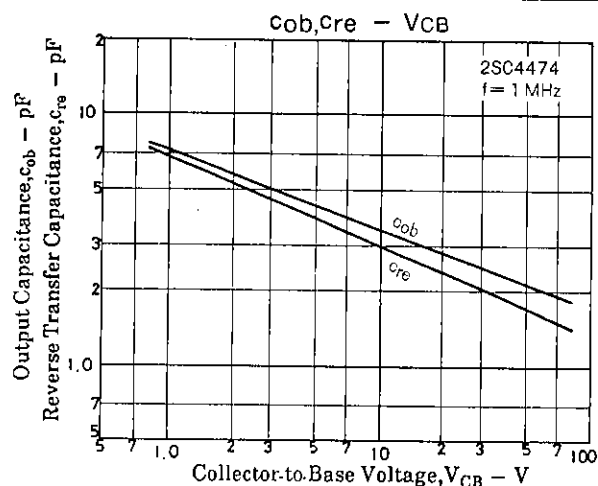
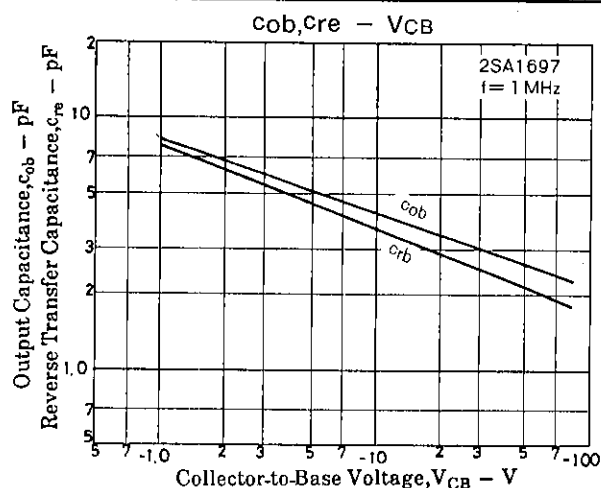
E: Emitter  
C: Collector  
B: Base

SANYO: TO220ML

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**  
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

# 2SA1697/2SC4474





- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
  - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.