

SANYO

No.1762B

2SA1403/2SC3597

PNP/NPN Epitaxial Planar Silicon Transistors

Ultrahigh-Definition CRT Display
Video Output Applications

Applications

- Ultrahigh-definition CRT display.
- Video output.
- Color TV chroma output.
- Wide-band amp.

Features

- High f_T : f_T typ = 800MHz.
- Small reverse transfer capacitance and excellent high-frequency characteristic :
 $C_{re} = 2.9\text{pF}$ (NPN), 4.6pF (PNP)
- Complementary pair with the 2SA1403/2SC3597.
- Adoption of FBET process.

() : 2SA1403

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

			unit
Collector-to-Base Voltage	V_{CB0}	(-)80	V
Collector-to-Emitter Voltage	V_{CE0}	(-)60	V
Emitter-to-Base Voltage	V_{EB0}	(-)4	V
Collector Current	I_C	(-)500	mA
Collector Current (Pulse)	I_{CP}	(-)1	A
Collector Dissipation	P_C	1.2	W
		$T_c = 25^\circ\text{C}$	10
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

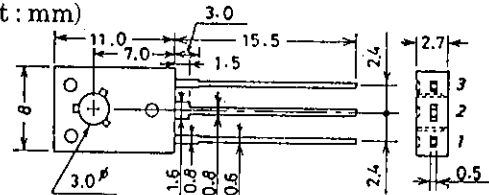
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB} = (-)60\text{V}, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = (-)2\text{V}, I_C = 0$			(-)1.0	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = (-)10\text{V}, I_C = (-)50\text{mA}$	40*		320*	
	$h_{FE}(2)$	$V_{CE} = (-)10\text{V}, I_C = (-)400\text{mA}$	20			
Gain Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)100\text{mA}$		800		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)100\text{mA}, I_B = (-)10\text{mA}$			0.6	V
					(-0.8)	

Continued on next page.

* : The 2SA1403/2SC3597 are classified by 50mA h_{FE} as follows :

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

Package Dimensions 2009B
(unit : mm)

1 : Emitter
2 : Collector
3 : Base

JEDEC : TO126

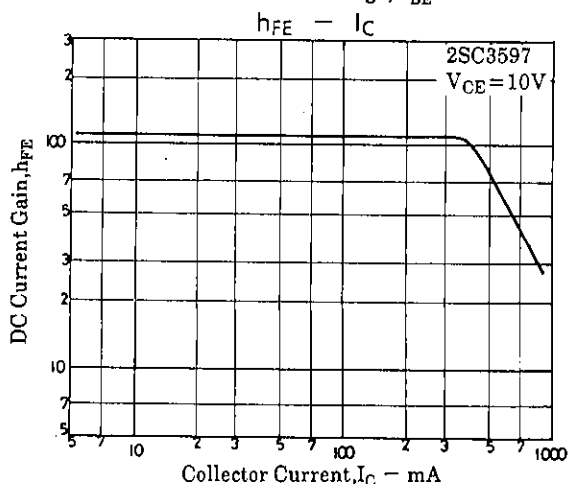
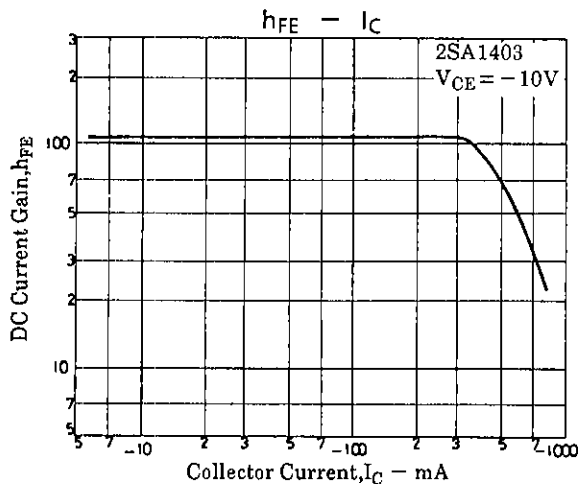
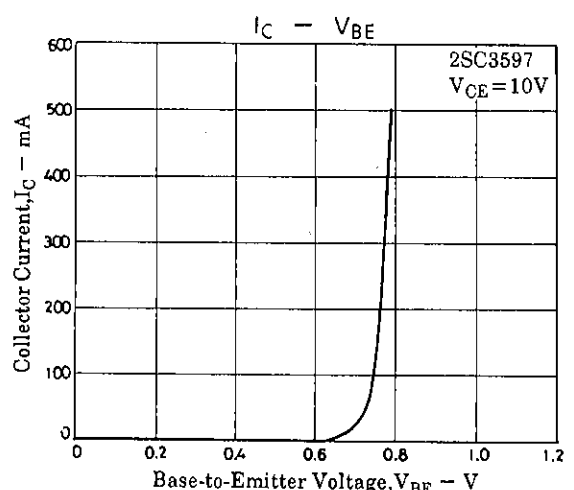
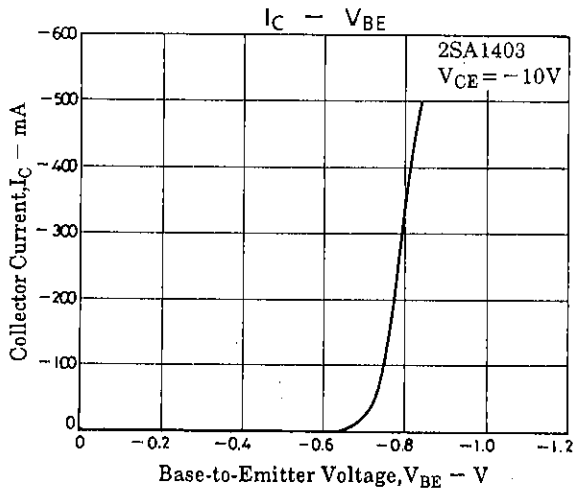
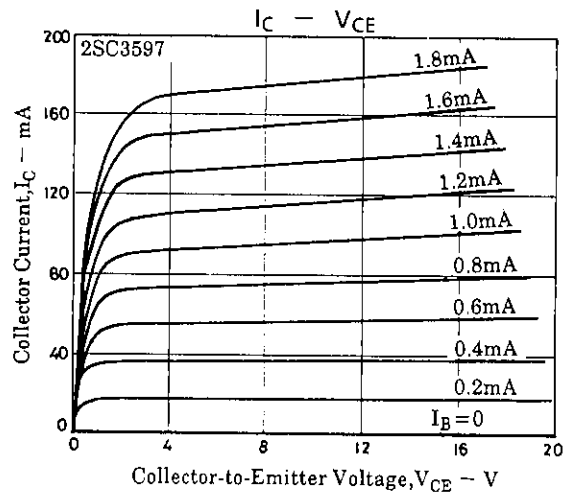
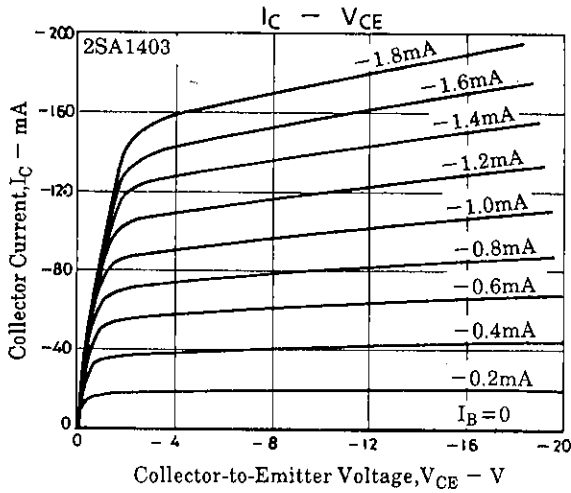
SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

12696TS (KOTO) X-7235/3237KI/2225MW, TS No.1762-1/4

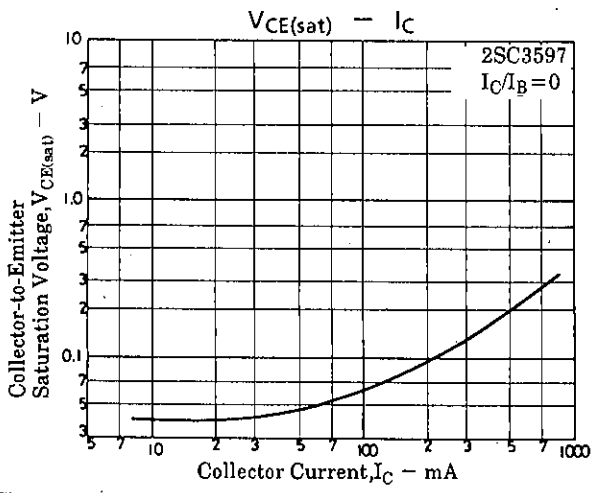
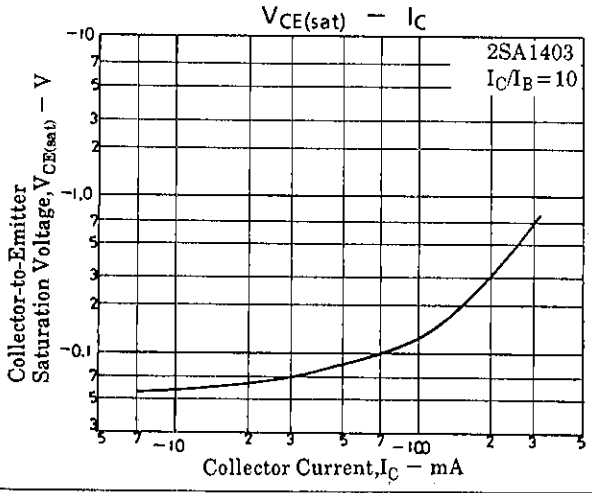
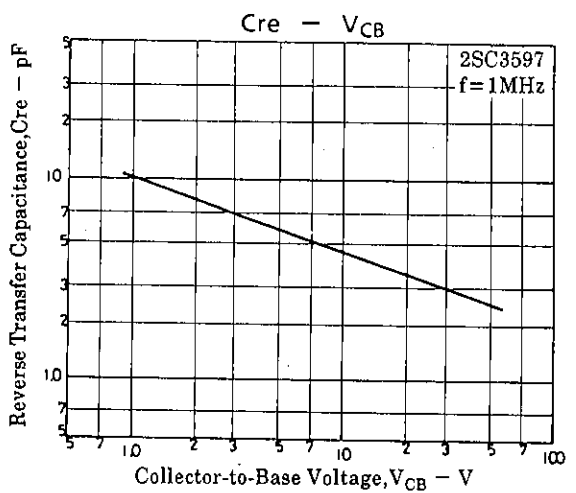
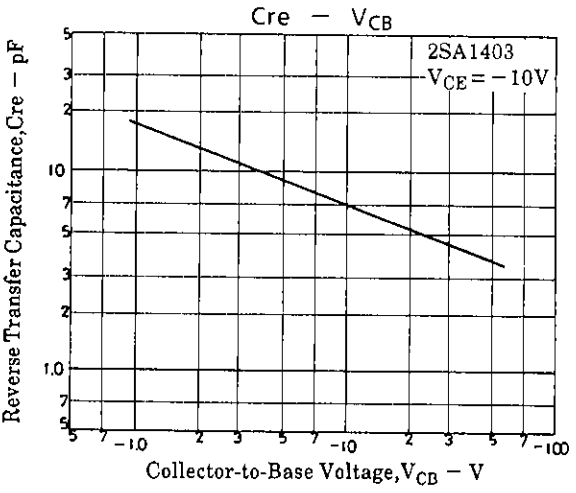
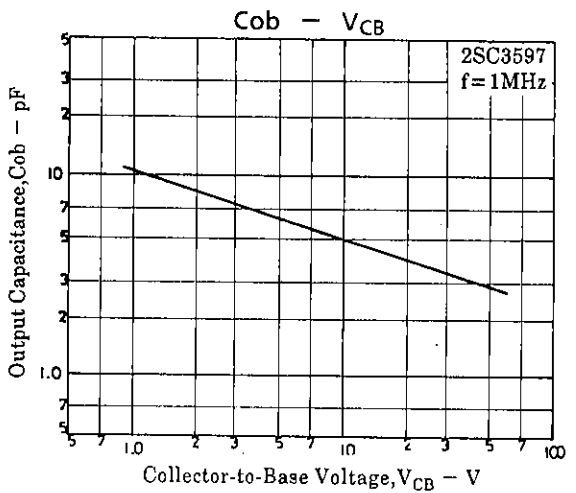
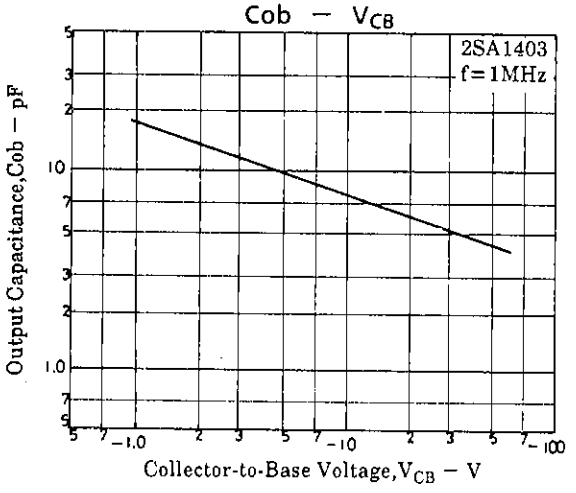
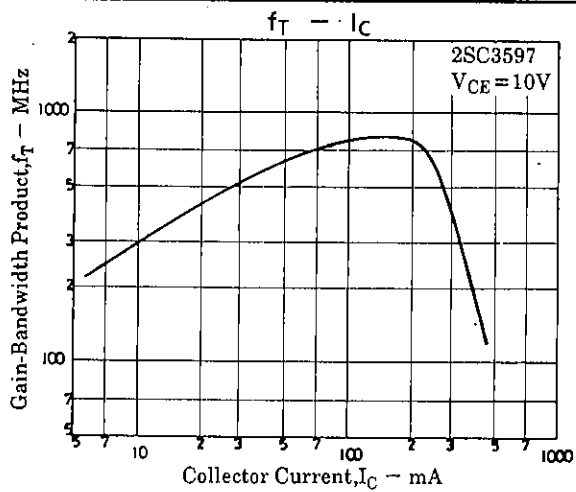
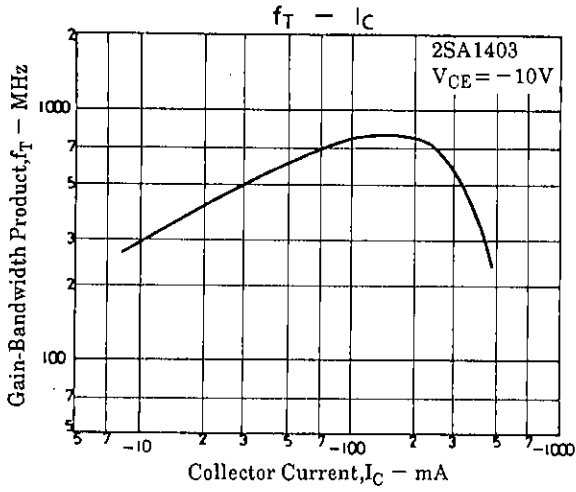
2SA1403/2SC3597

Continued from preceding page.

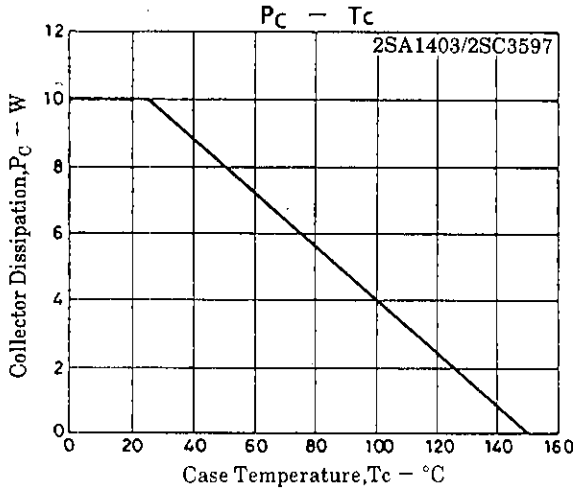
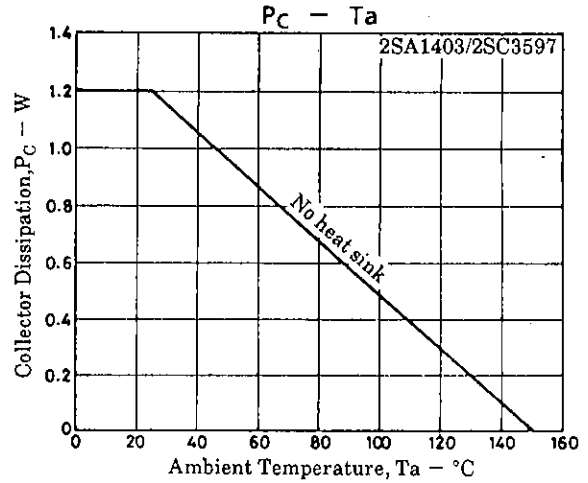
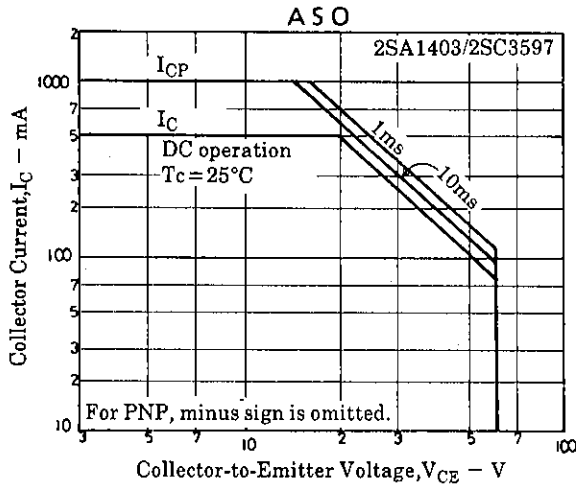
			min	typ	max	unit
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)100\text{mA}, I_B = (-)10\text{mA}$			(-) 1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-) 80			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-) 60			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)100\mu\text{A}, I_C = 0$	(-) 4			V
Output Capacitance	C_{ob}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		3.4		pF
				(5.2)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		2.9		pF
				(4.6)		pF



2SA1403/2SC3597



2SA1403/2SC3597



- 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.

This catalog provides information as of January, 1996. Specifications and information herein are subject to change without notice.