

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
		10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

$T_c = 25^\circ\text{C}$

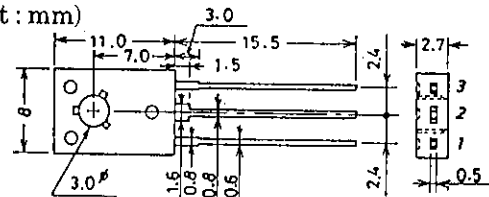
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			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)	

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※ : 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

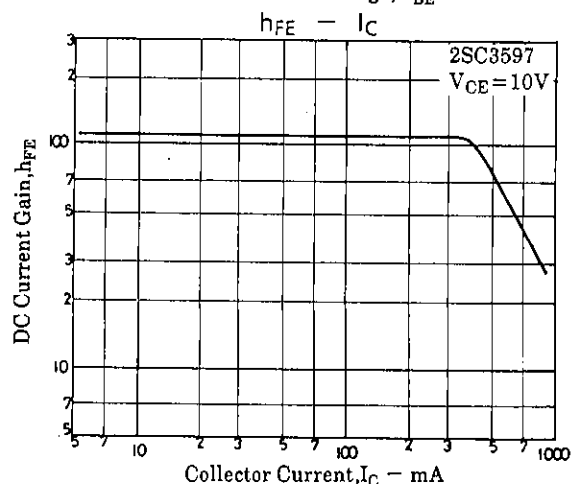
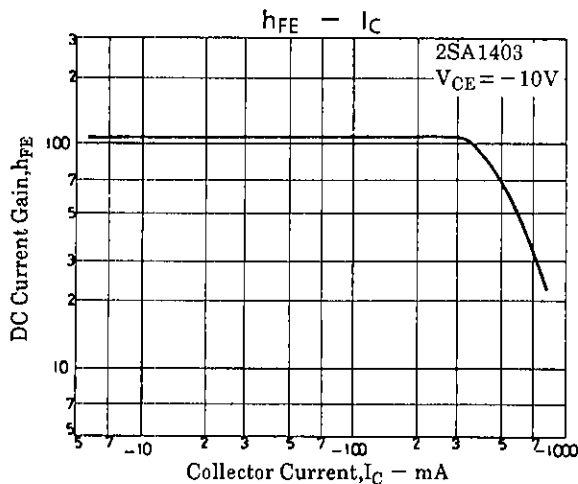
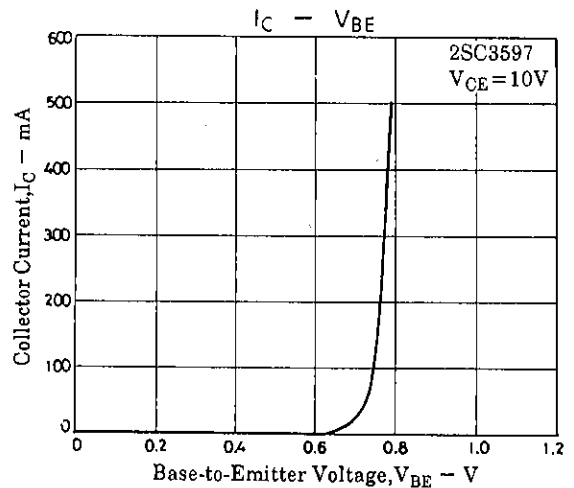
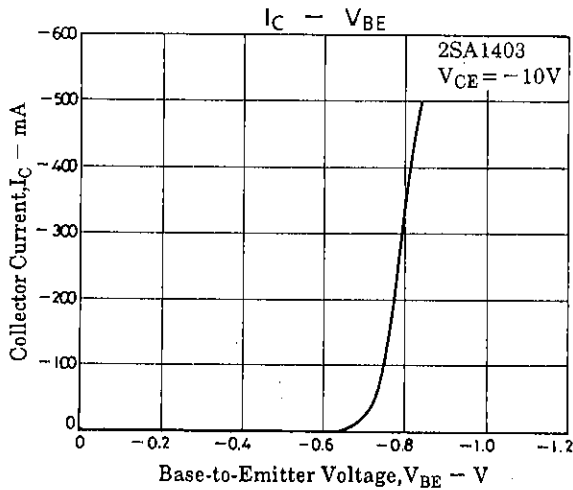
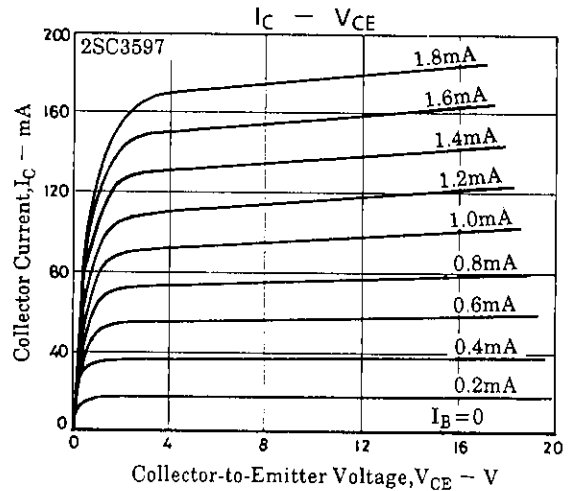
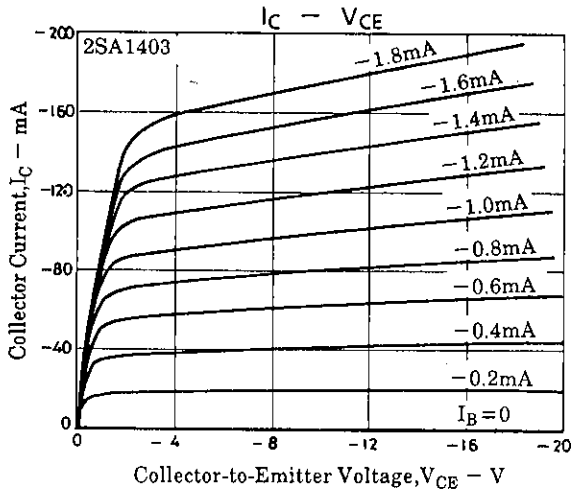
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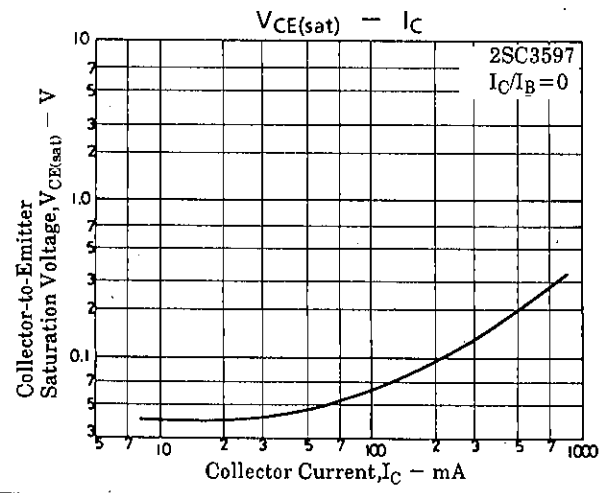
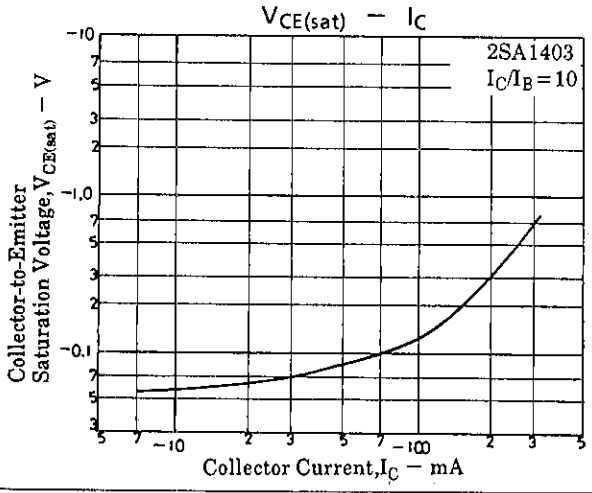
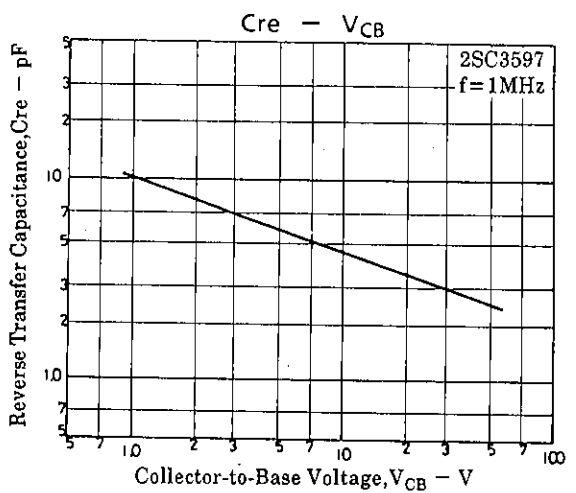
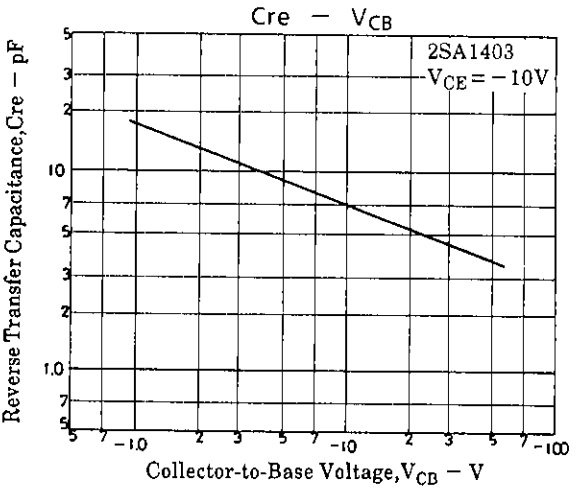
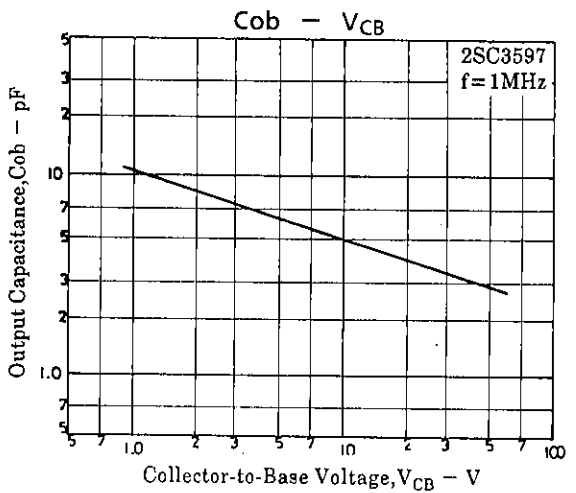
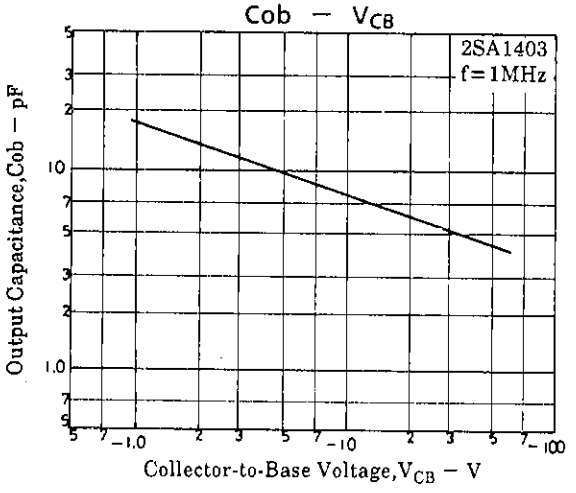
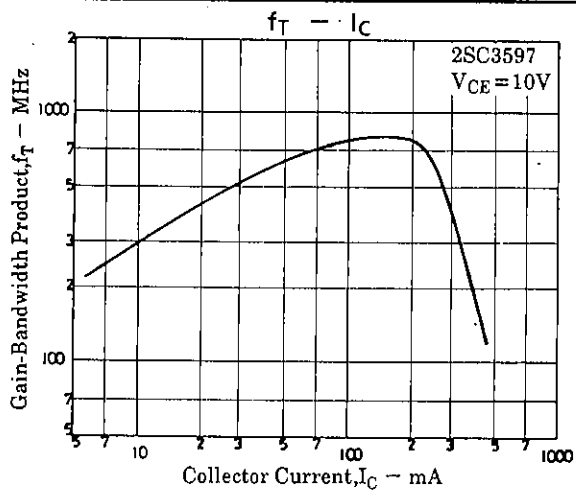
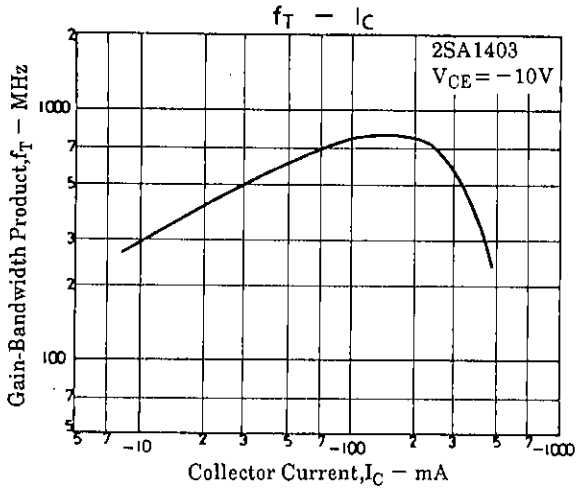
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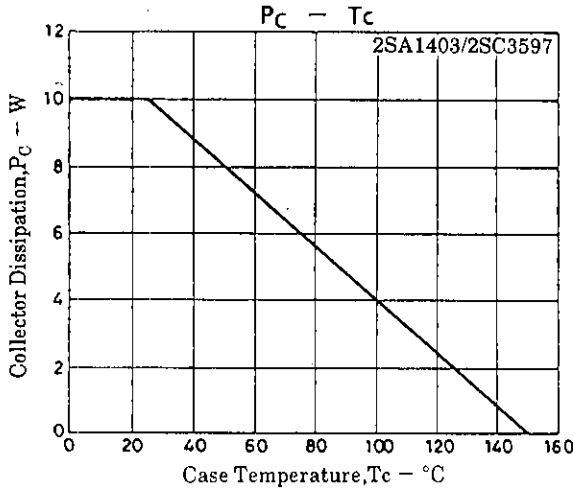
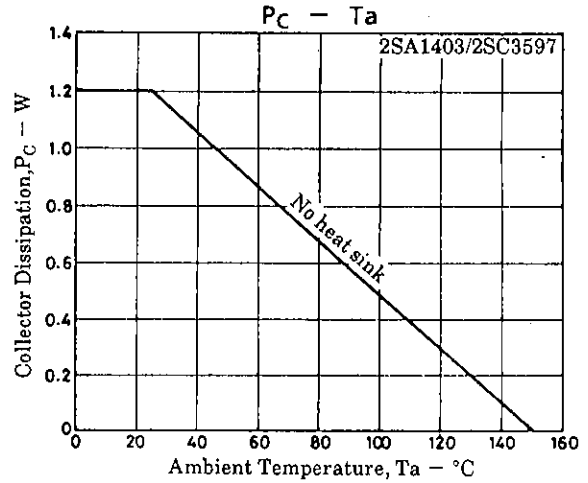
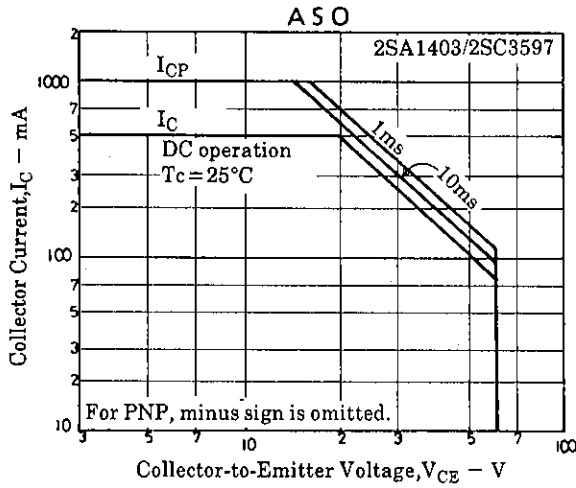
			min	typ	max	unit
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)100\text{mA}, I_B = (-)10\text{mA}$			(-)1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-)80			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)60			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)100\mu\text{A}, I_C = 0$	(-)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



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