Ordering number : EN 1761B

SANYO

No.1761B

2SA1402/2SC3596

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 = 700MHz.
- Small reverse transfer capacitance and excellent high-frequency characteristic : Cre = 1.8pF(NPN), 2.3pF(PNP)
- Complementary pair with the 2SA1402/2SC3596.
- Adoption of FBET process.

( ) : 2SA1402

Absolute Maximum Ratings at Ta = 25°C

				unit
Collector-to-Base Voltage	V_{CBO}		(−)80	V
Collector-to-Emitter Voltage	V_{CEO}		(−)60	V
Emitter-to-Base Voltage	V_{EBO}		(−)4	V
Collector Current	I_C		(−)300	mA
Collector Current (Pulse)	I_{CP}		(−)600	mA
Collector Dissipation	P_C		1.2	W
		Tc = 25°C	8	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta = 25°C

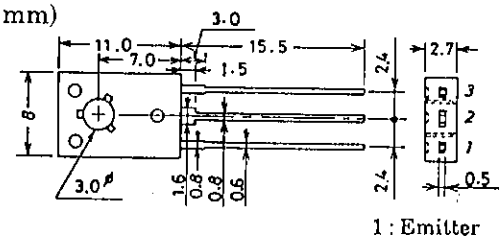
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB} = (−)60V, I_E = 0			(−)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = (−)2V, I_C = 0			(−)1.0	μA
DC Current Gain	$h_{FE}(1)$	V_{CE} = (−)10V, I_C = (−)50mA	40※		320※	
	$h_{FE}(2)$	V_{CE} = (−)10V, I_C = (−)250mA	20			
Gain Bandwidth Product	f_T	V_{CE} = (−)10V, I_C = (−)100mA		700		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	I_C = (−)100mA, I_B = (−)10mA			0.6 (−0.8)	V

Continued on next page.

※ : The 2SA1402/2SC3596 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

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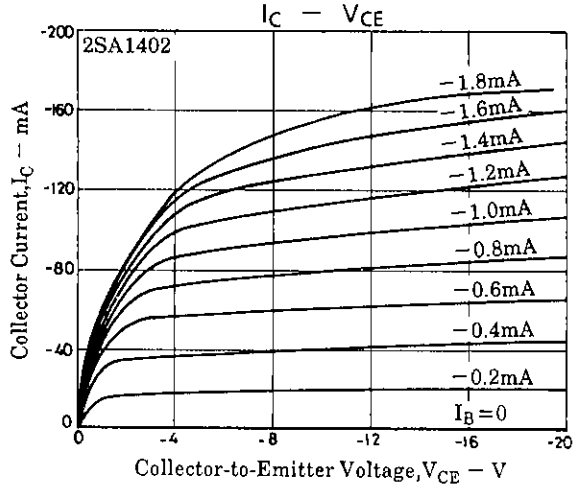
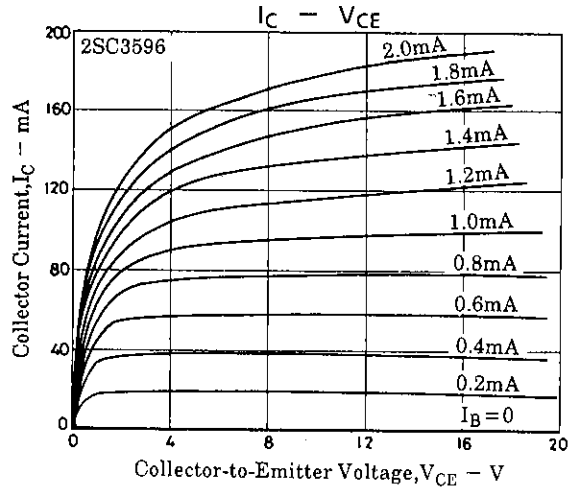
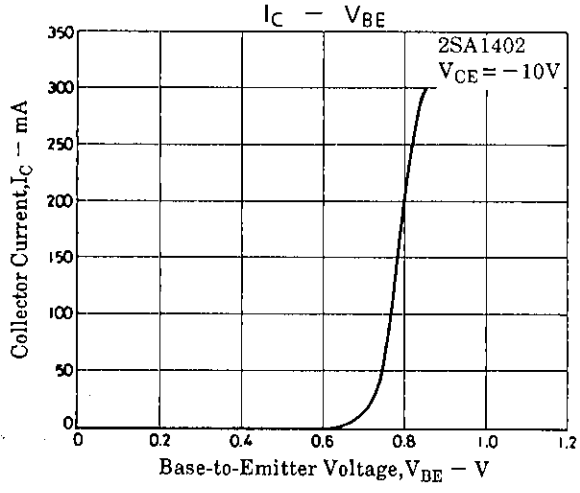
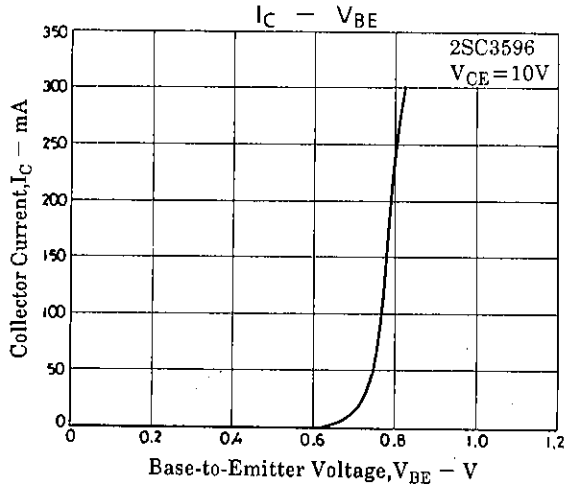
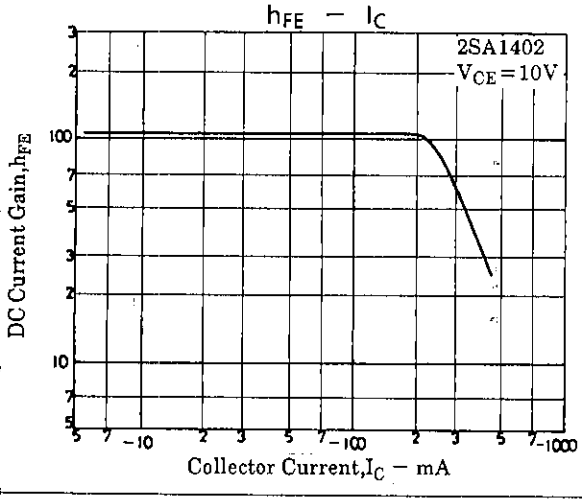
			min	typ	max	unit
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=(−)100mA, I_B=(−)10mA			(−)1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=(−)10μA, I_E=0	(−)80			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(−)1mA, R_{BE}=∞	(−)60			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=(−)100μA, I_C=0	(−)4			V
Output Capacitance	Cob	V_{CB}=(−)30V, f=1MHz		2.3		pF
				(3.0)		pF
Reverse Transfer Capacitance	Cre	V_{CB}=(−)30V, f=1MHz		1.8		pF
				(2.3)		pF

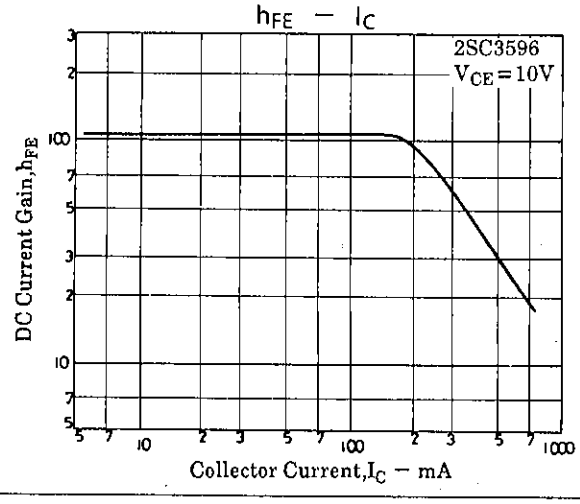




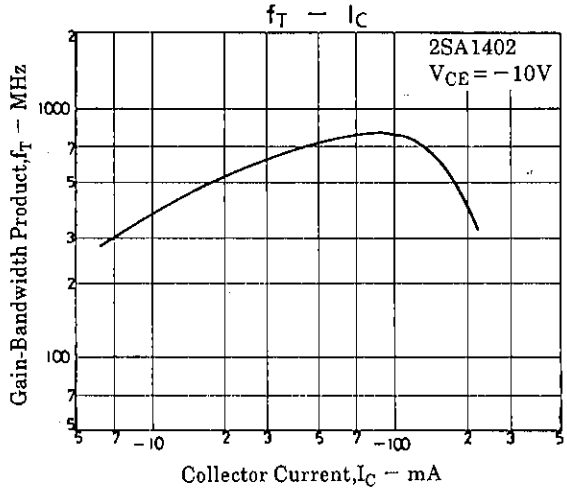




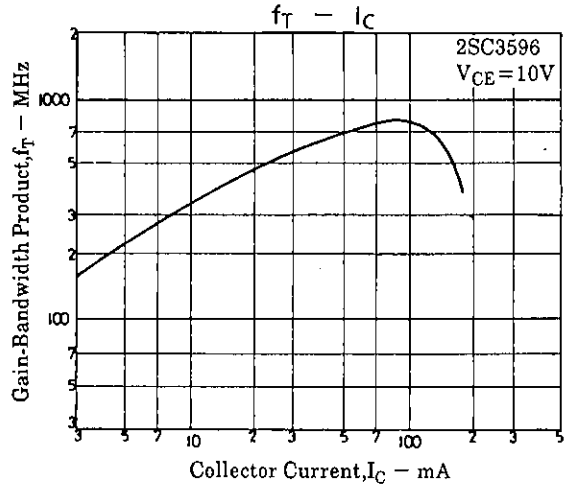




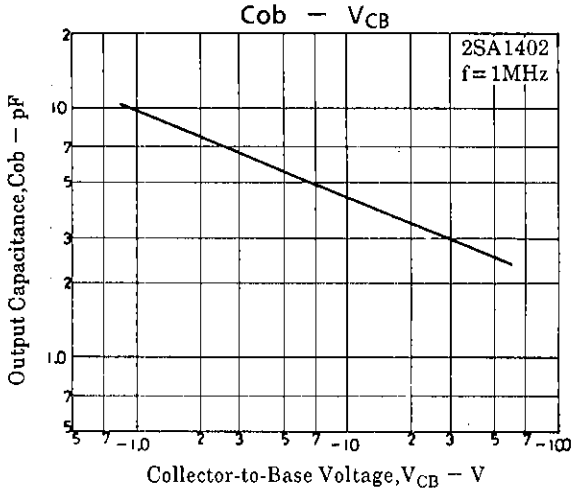
f_T – I_C



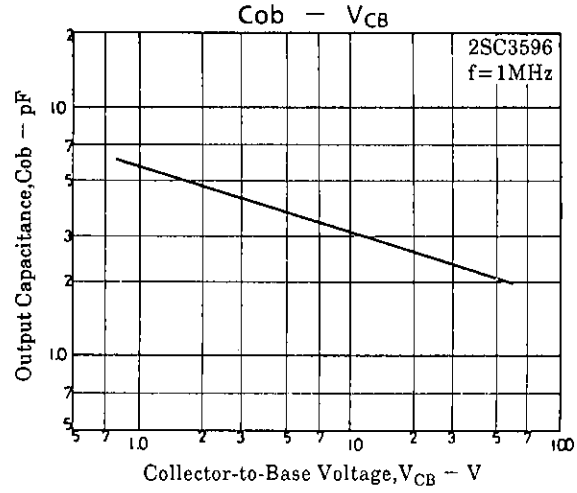
f_T – I_C



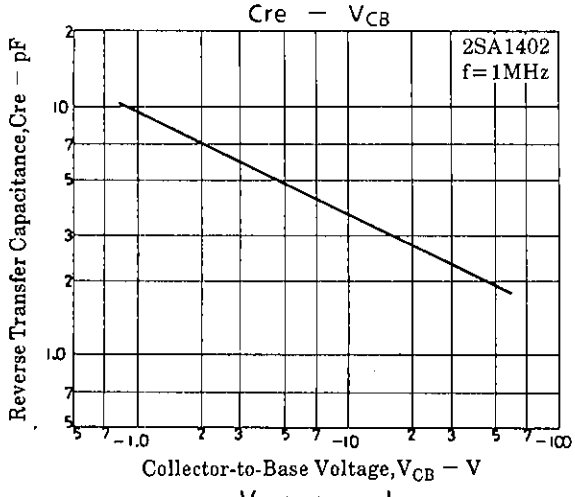
Cob – V_{CB}



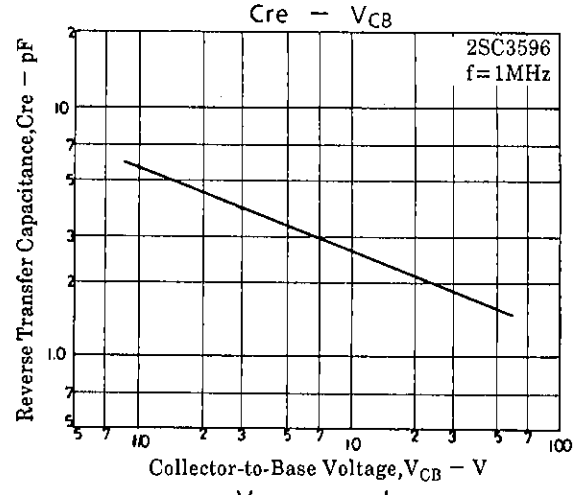
Cob – V_{CB}



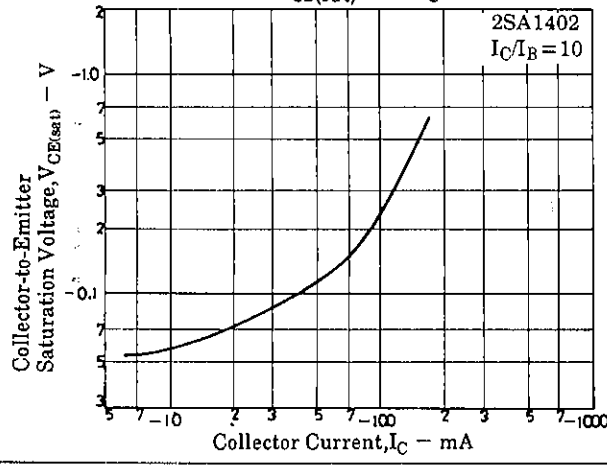
Cre – V_{CB}



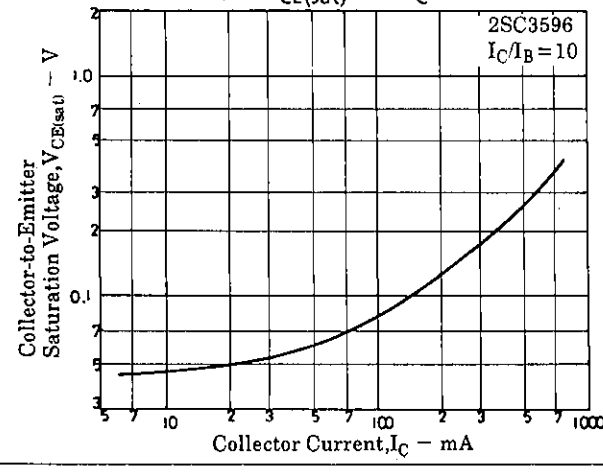
Cre – V_{CB}



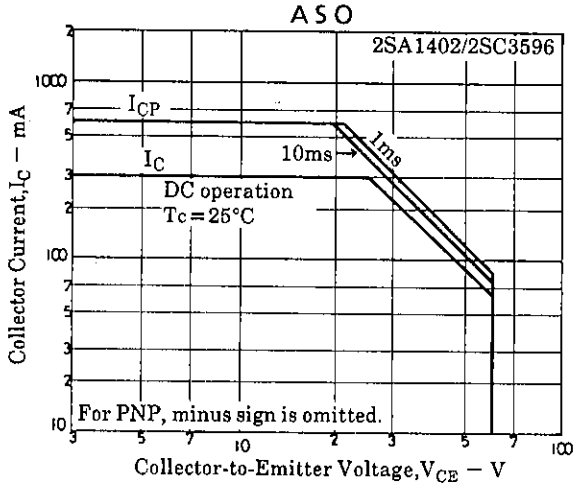
$V_{CE(sat)}$ – I_C



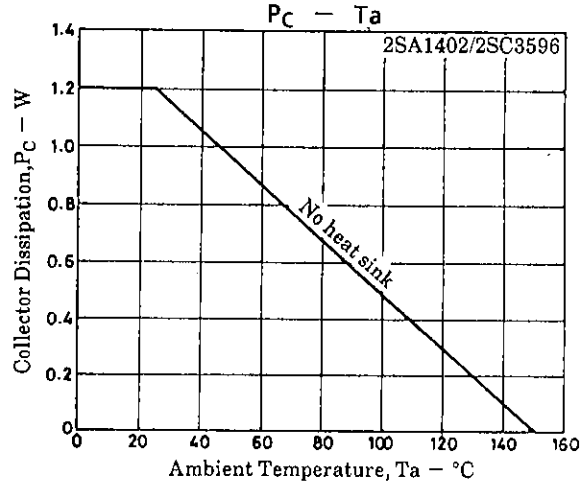
$V_{CE(sat)}$ – I_C



ASO



P_C – Ta



P_C – Tc