

SANYO	No.1764B	2SA1405/2SC3599
		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 = 500MHz.
- High breakdown voltage: $V_{CEO} \geq 120V$.
- Small reverse transfer capacitance and excellent high-frequency characteristic :
Cre = 2.5pF(NPN), 3.8pF(PNP)
- Complementary pair with the 2SA1405/2SC3599.
- Adoption of FBET process.

() : 2SA1405

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

			unit
Collector-to-Base Voltage	V_{CBO}	(-)120	V
Collector-to-Emitter Voltage	V_{CEO}	(-)120	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
		8	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

				min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)80V, I_E = 0$				(-)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	$V_{CE} = (-)10V, I_C = (-)50mA$			500		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)70mA, I_B = (-)7mA$				0.6	V
						(-0.8)	

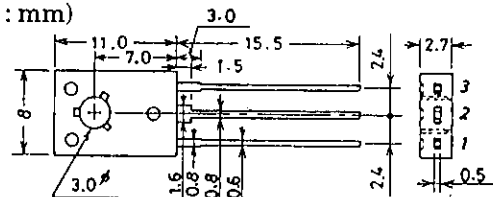
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* : The 2SA1405/2SC3599 are classified by 50mA h_{FE} as follows :

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

Package Dimensions 2009B

(unit : mm)



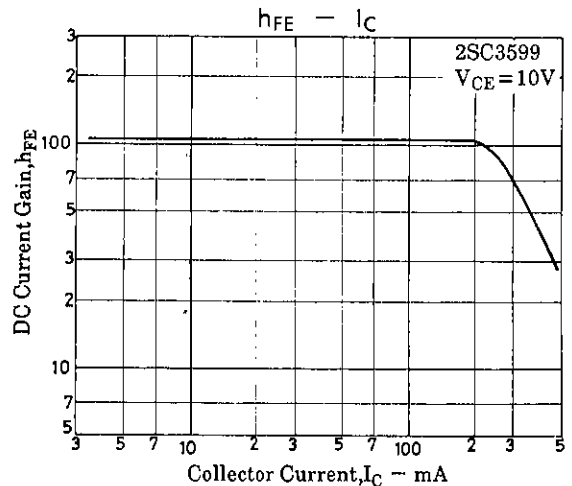
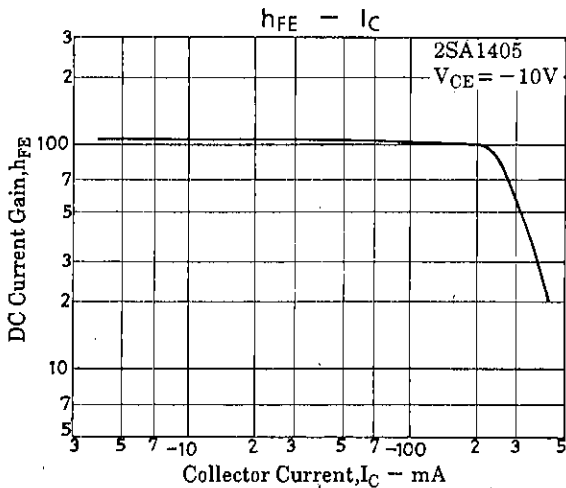
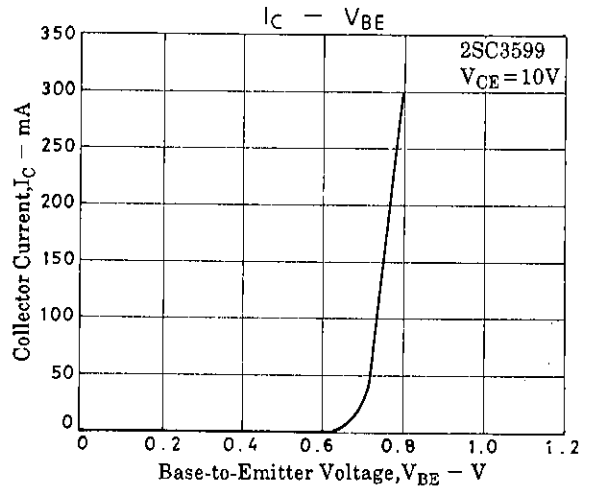
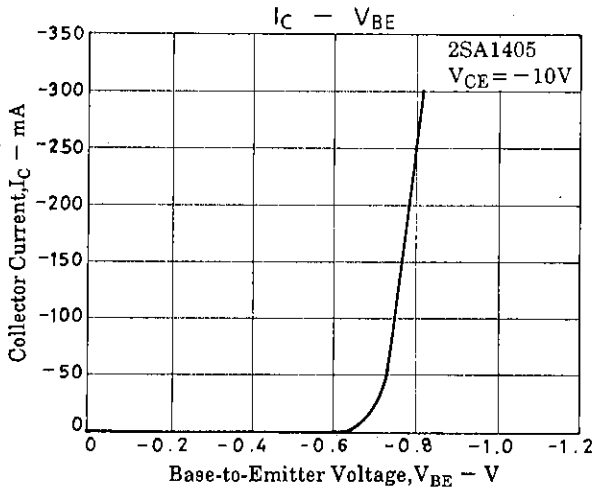
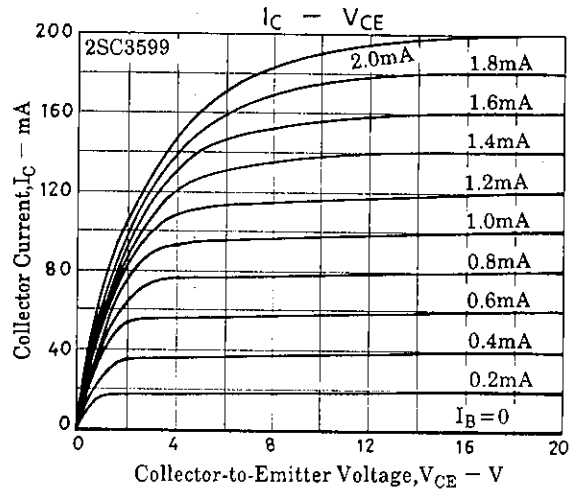
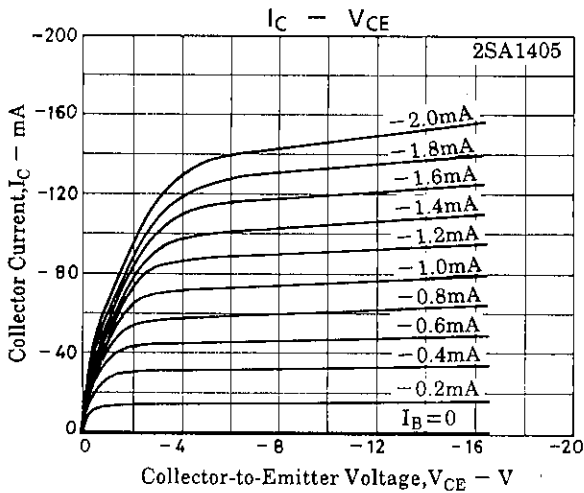
- 1: Emitter
- 2: Collector
- 3: Base

JEDEC: TO126

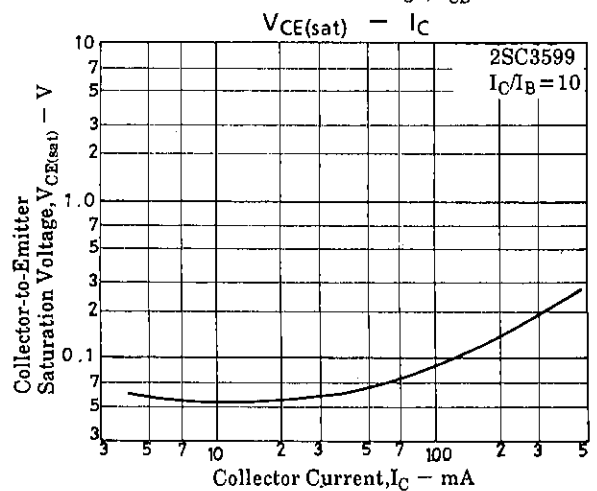
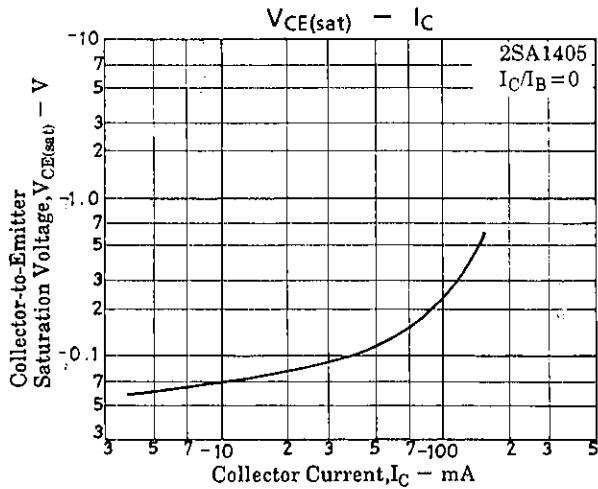
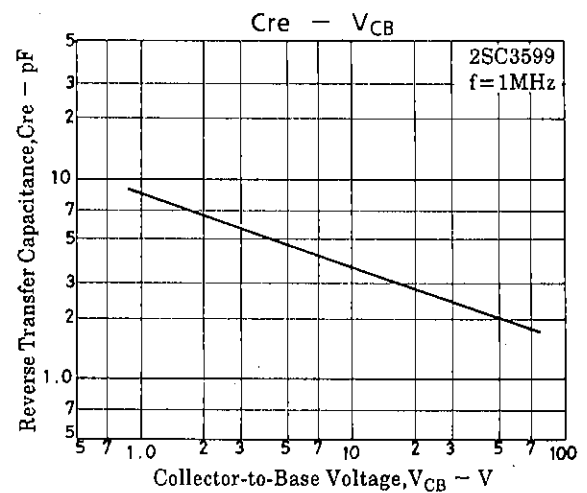
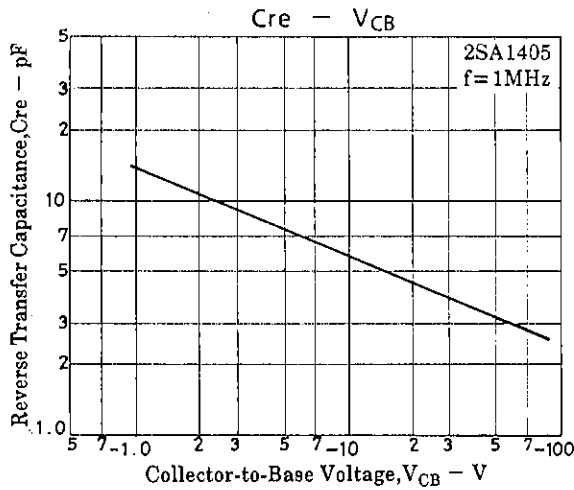
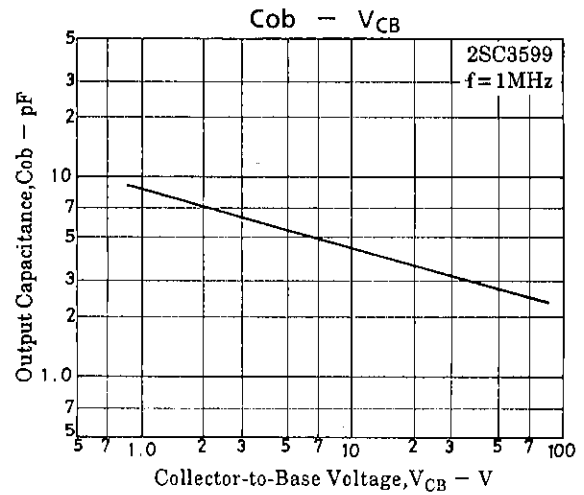
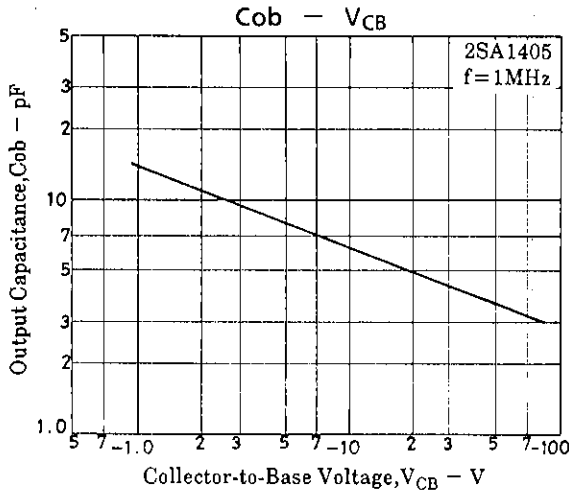
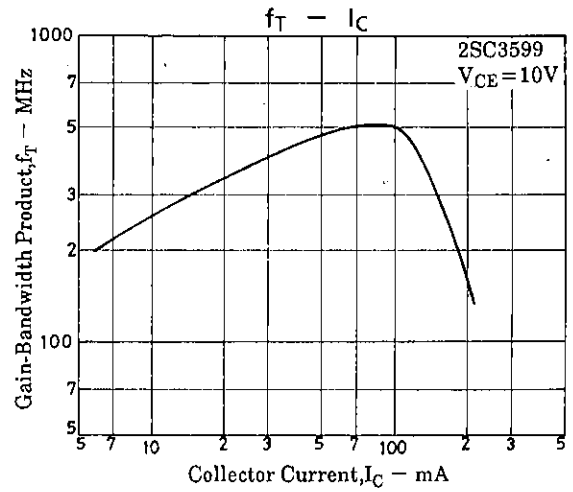
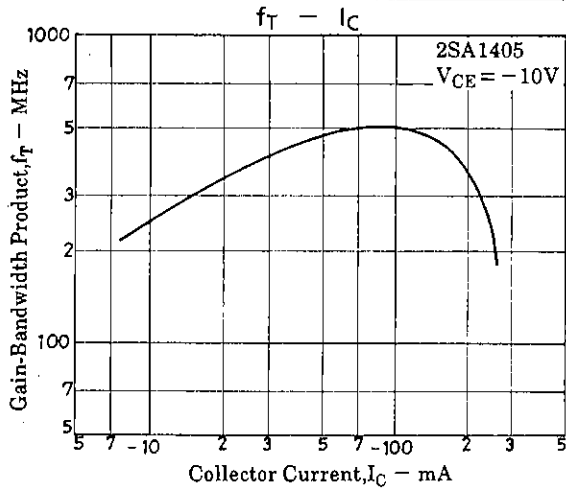
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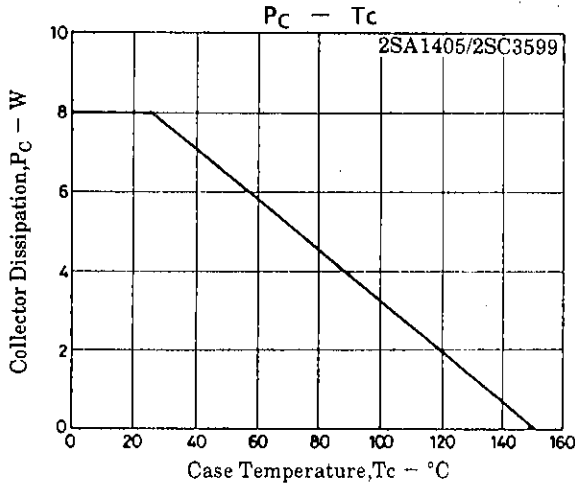
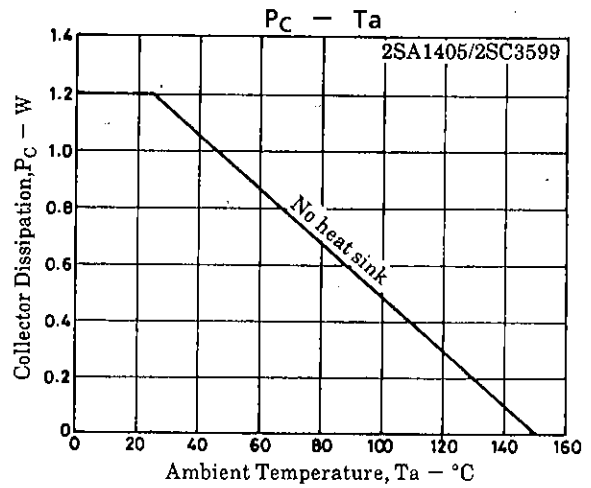
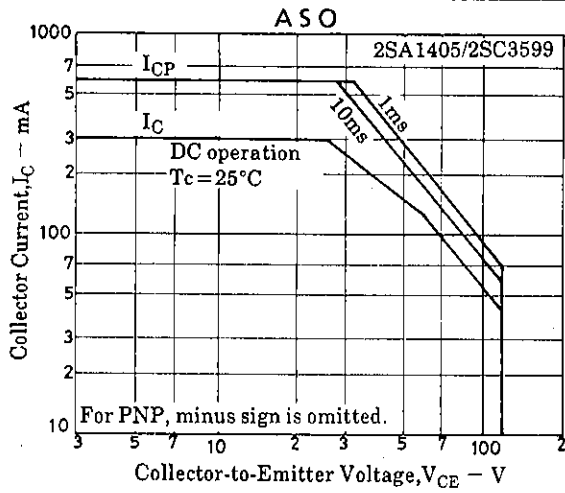
			min	typ	max	unit
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)70\text{mA}, I_B = (-)7\text{mA}$			(-) 1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-) 120			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-) 120			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)100\mu\text{A}, I_C = 0$	(-) 4			V
Output Capacitance	C_{ob}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		2.9		pF
				(4.3)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		2.5		pF
				(3.8)		pF



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