

SANYO

No.1765A

2SA1406/2SC3600Silicon PNP/NPN Epitaxial Planar Transistor
VERY HIGH-DEFINITION CRT DISPLAY
VIDEO OUTPUT APPLICATIONS**Applications**

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

Features

- . High f_T . f_T typ=400MHz.
- . High breakdown voltage. $V_{CEO} \geq 200V$
- . Small reverse transfer capacitance and excellent HF response
cre=1.4pF(NPN), 1.7pF(PNP).
- . Complementary PNP and NPN types.
- . Adoption of FBET process.

(): 2SA1406

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

			unit
Collector-to-Base Voltage	V_{CBO}	(-)200	V
Collector-to-Emitter Voltage	V_{CEO}	(-)200	V
Emitter-to-Base Voltage	V_{EBO}	(-)4	V
Collector Current	I_C	(-)100	mA
Peak Collector Current	i_{cp}	(-)200	mA
Collector Dissipation	P_C	1.2	W
	$T_c=25^\circ C$	7	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

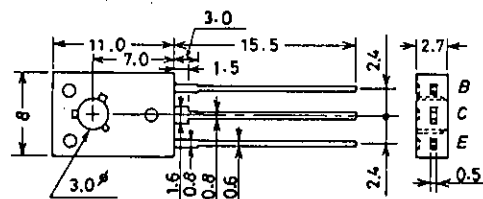
Electrical Characteristics at $T_a=25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)150V, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)2V, I_C=0$			(-)1.0	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)10V, I_C=(-)10mA$	40*		320*	
	$h_{FE}(2)$	$V_{CE}=(-)10V, I_C=(-)60mA$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)30mA$		400		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$			0.6	V
					(-0.8)	V

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*:The 2SA1406/2SC3600 are classified by 10mA h_{FE} as follows:

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

Package Dimensions 2009A
(unit: mm)

JEDEC: TO-126

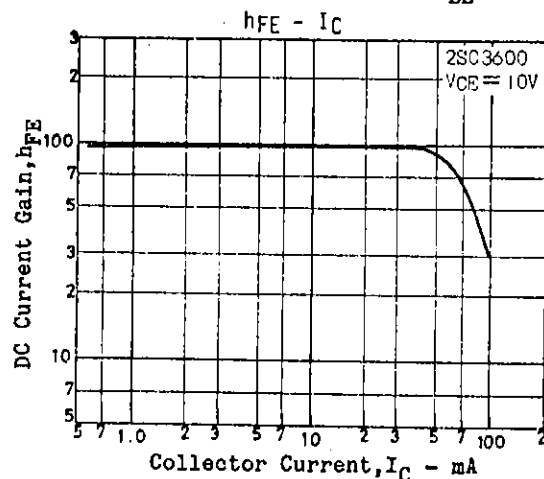
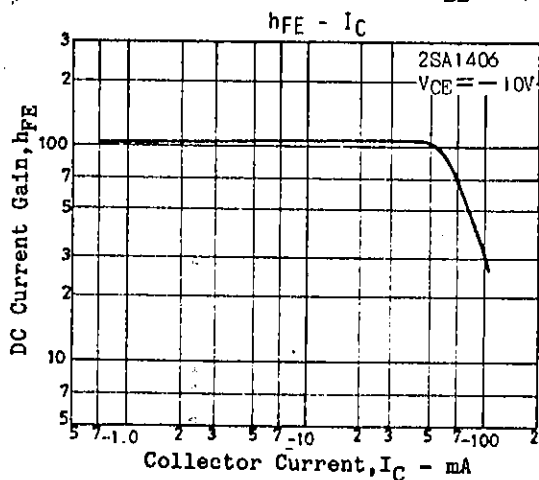
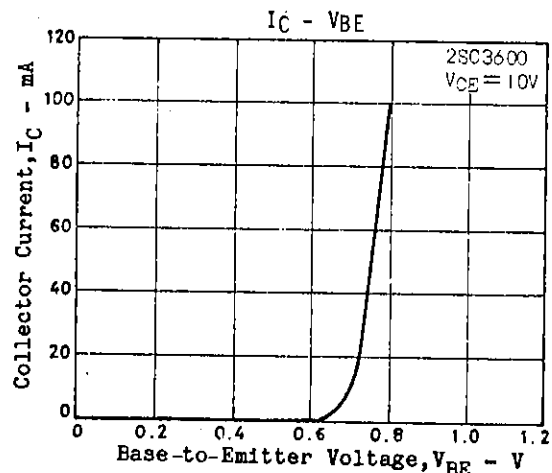
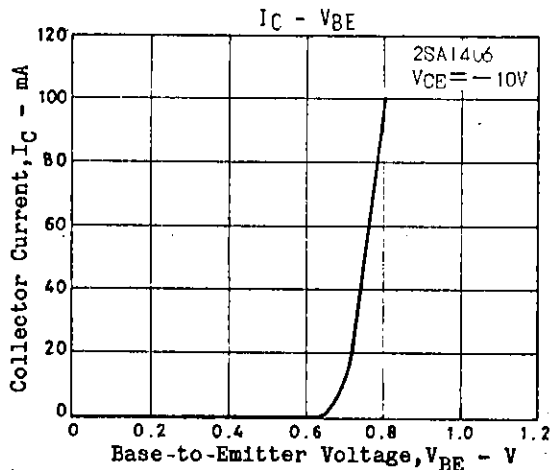
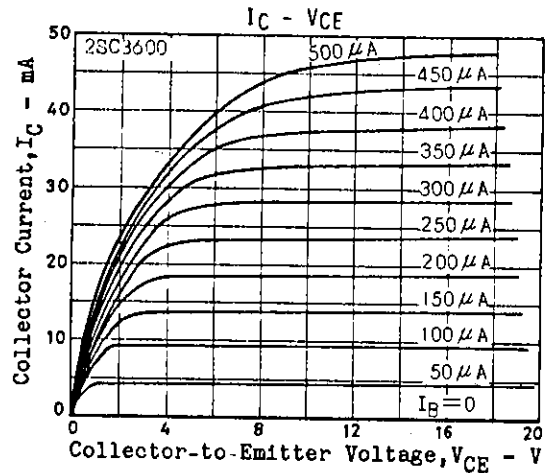
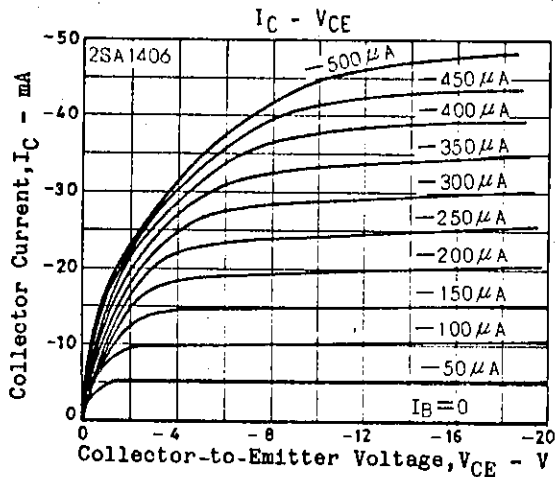
B: Base
C: Collector
E: Emitter**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

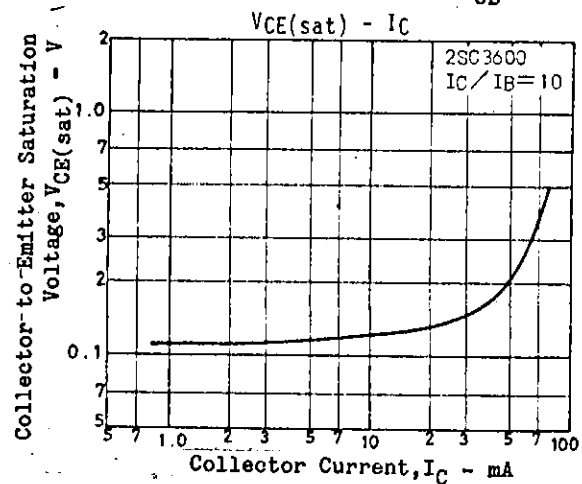
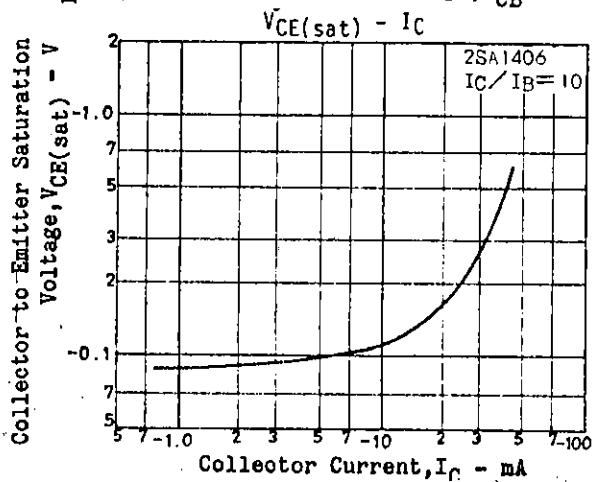
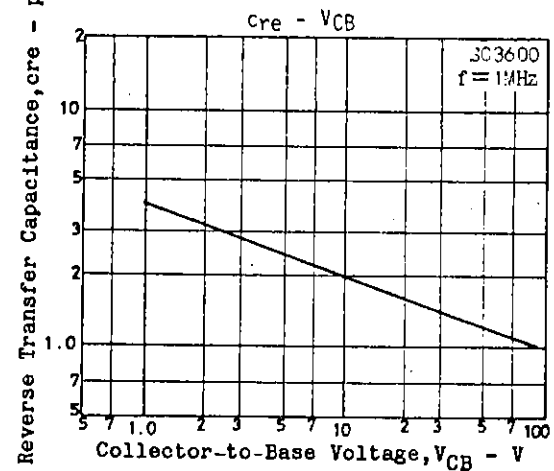
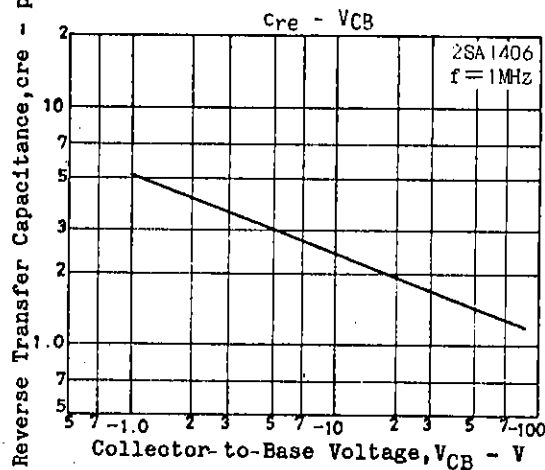
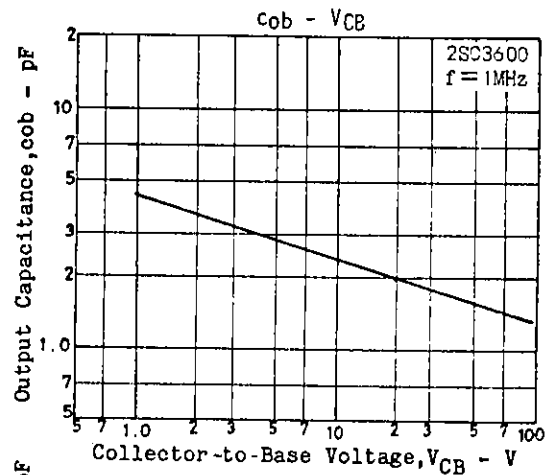
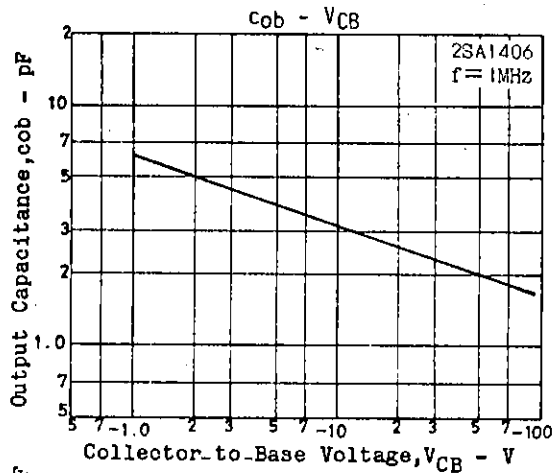
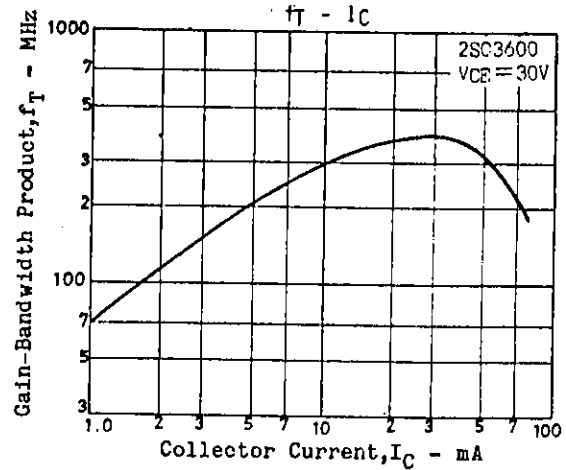
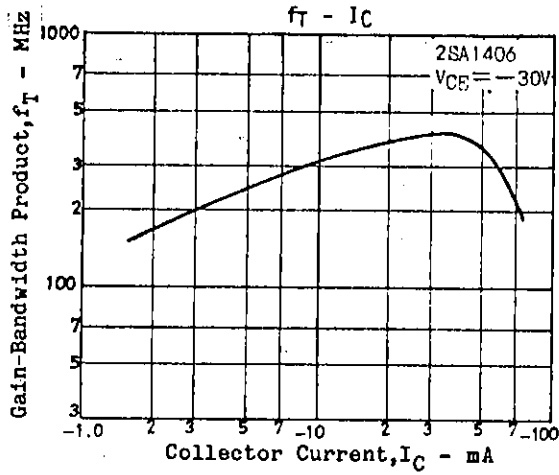
3127KI/2225MW, TS No.1765-1/4

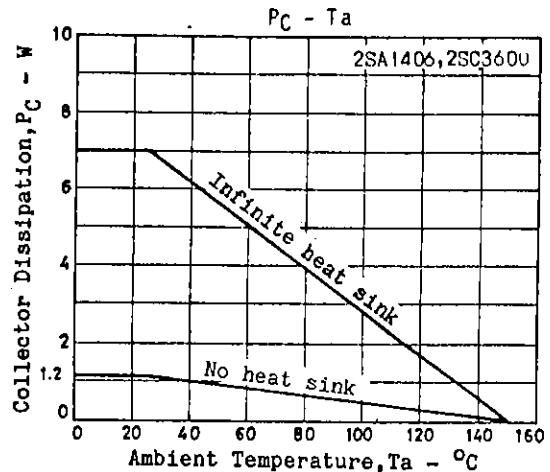
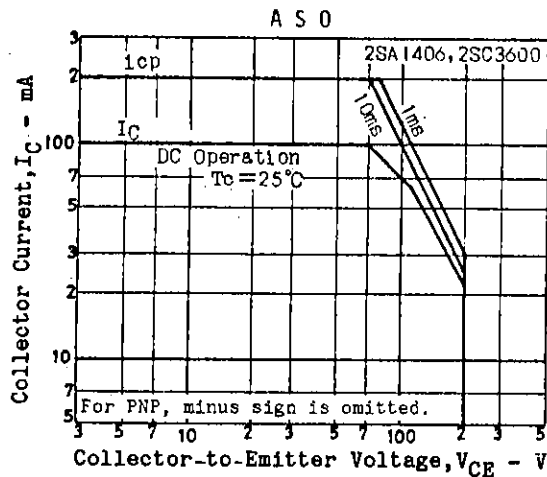
2SA1406/2SC3600

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		min	typ	max	unit
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$		$(-)1.0$	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	$(-)200$		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	$(-)200$		V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)100\mu A, I_C=0$	$(-)4$		V
Output Capacitance	c_{ob}	$V_{CB}=(-)30V, f=1MHz$	1.8		pF
			(2.3)		pF
Reverse Transfer Capacitance c_{re}		$V_{CB}=(-)30V, f=1MHz$	1.4		pF
			(1.7)		pF







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