



2SA1407/2SC3601

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=400MHz.
- High breakdown voltage : $V_{CEO} \geq 200V$.
- Small reverse transfer capacitance and excellent high-frequency characteristic
: $C_{re}=2.0pF$ (NPN), $2.5pF$ (PNP).
- Complementary PNP and NPN types.
- Adoption of FBET process.

() : 2SA1407

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)200	V
Collector-to-Emitter Voltage	V_{CEO}		(-)200	V
Emitter-to-Base Voltage	V_{EBO}		(-)4	V
Collector Current	I_C		(-)150	mA
Collector Current (Pulse)	I_{CP}		(-)300	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 $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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_{FE1}	$V_{CE} = (-)10V, I_C = (-)10mA$	40*		320*	
	h_{FE2}	$V_{CE} = (-)10V, I_C = (-)100mA$	20			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)30V, I_C = (-)50mA$		400		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)50mA, I_B = (-)5mA$			0.6	V
					(-)0.8	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 50mA, I_B = (-)5mA$			(-)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-)200			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)200			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)100\mu A, I_C = 0$	(-)4			V
Output Capacitance	C_{ob}	$V_{CB} = (-)30V, f = 1MHz$		2.5		pF
				(3.0)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB} = (-)30V, f = 1MHz$		2.0		pF
				(2.5)		pF

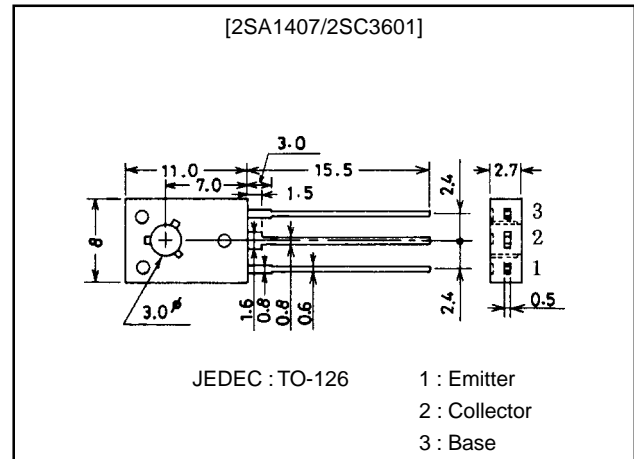
* : The 2SA1407/2SC3601 are classified by 10mA h_{FE} as follows :

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

unit:mm

2009B

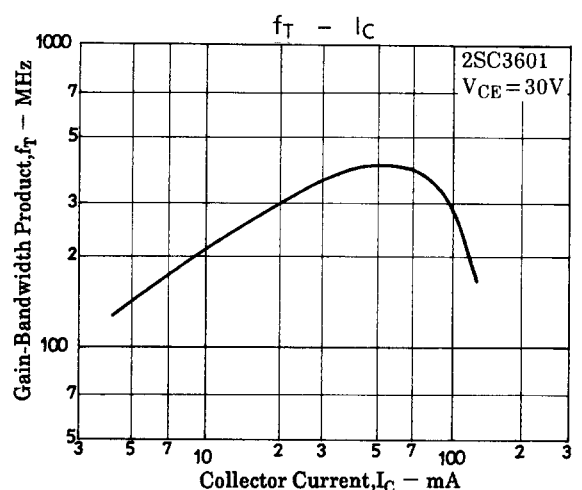
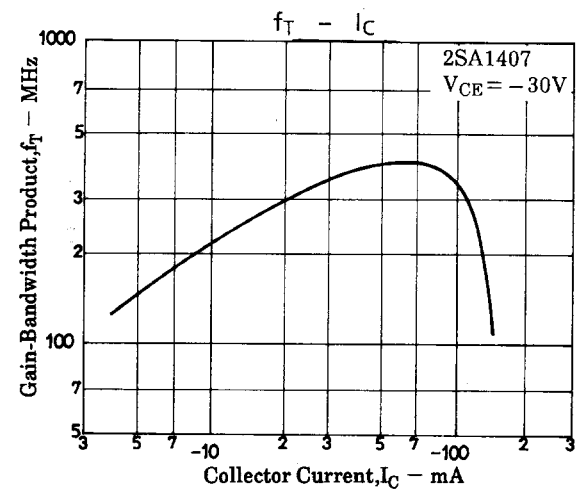
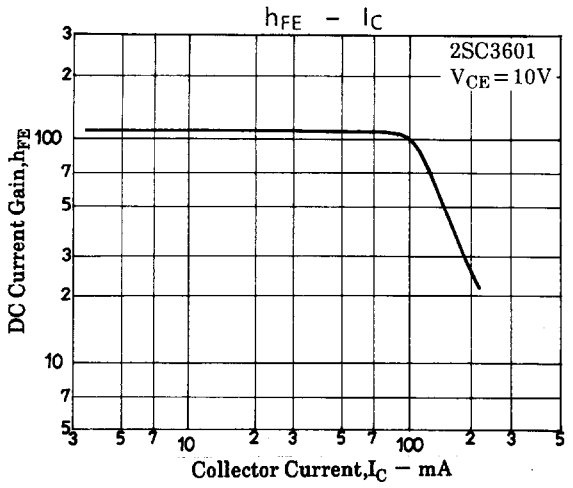
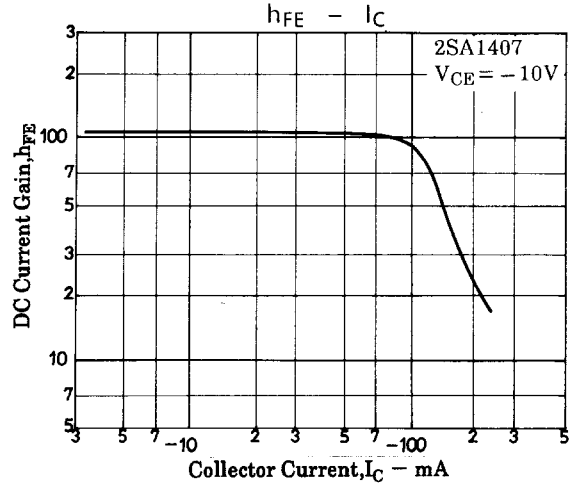
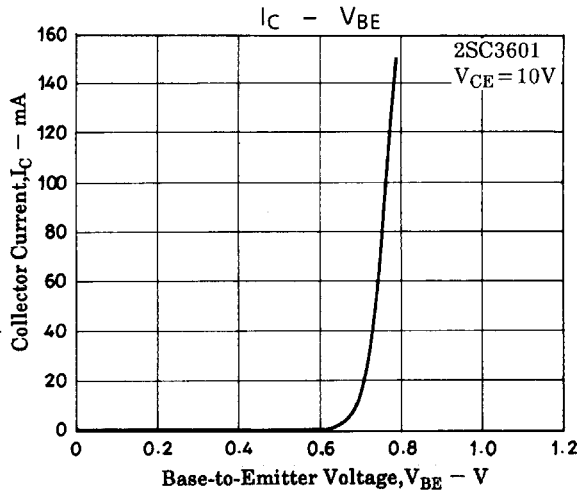
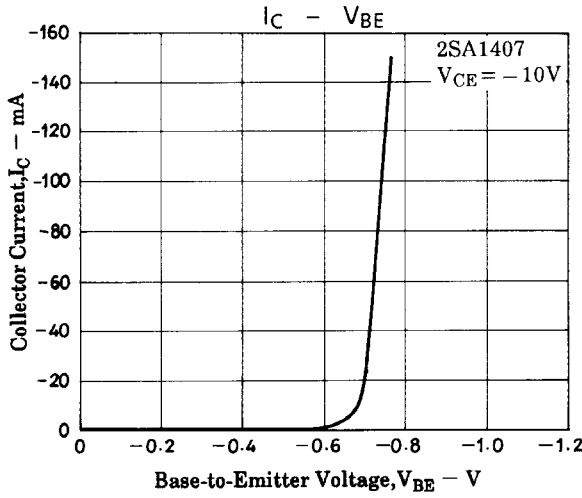
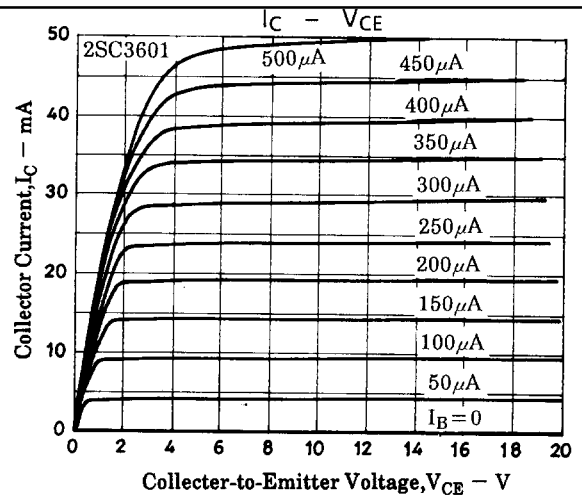
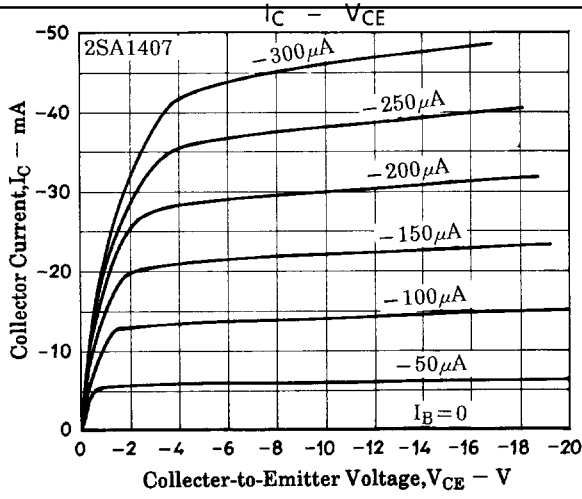


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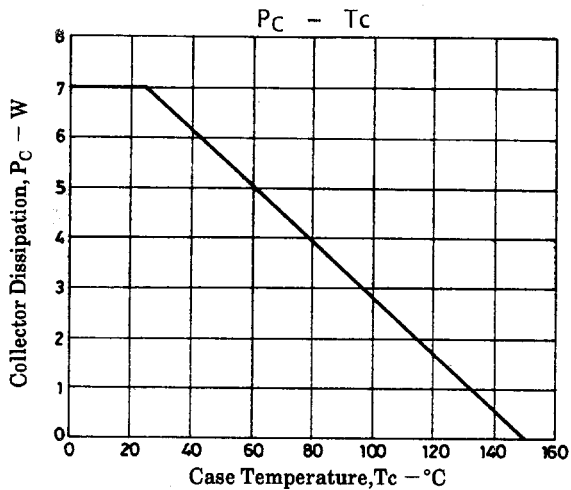
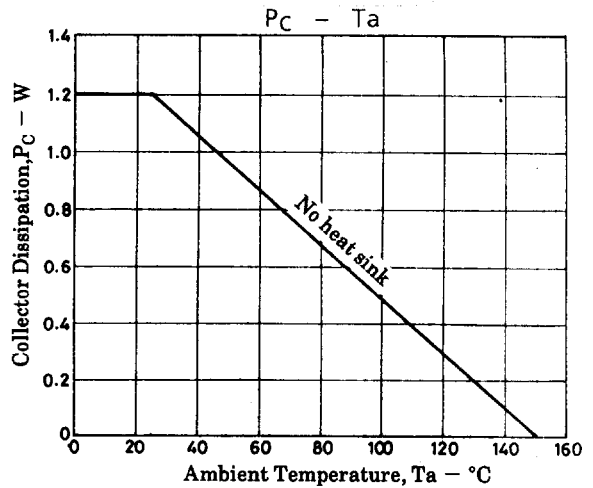
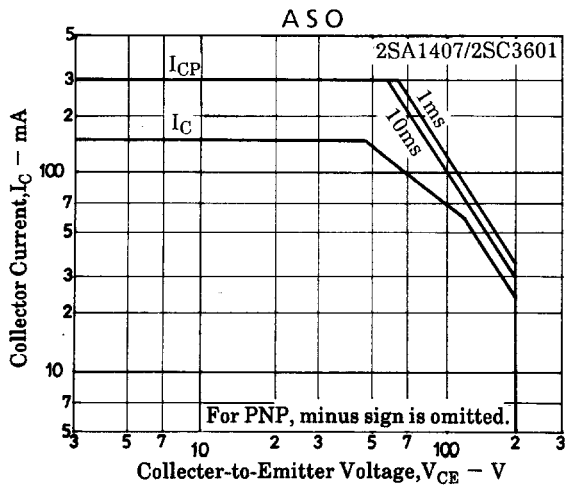
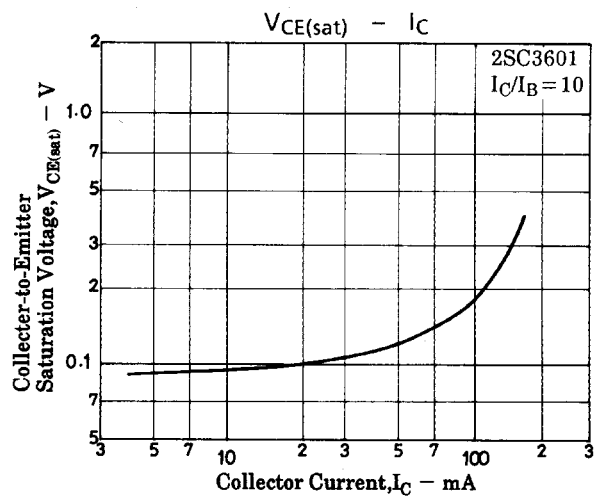
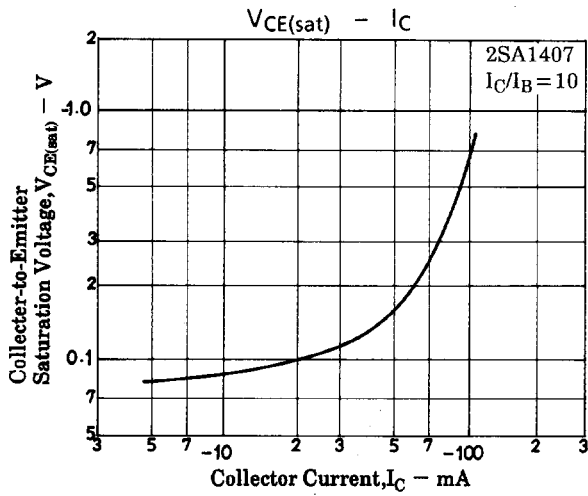
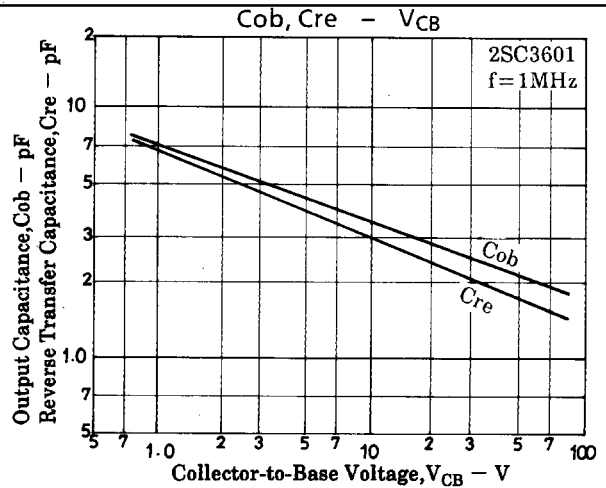
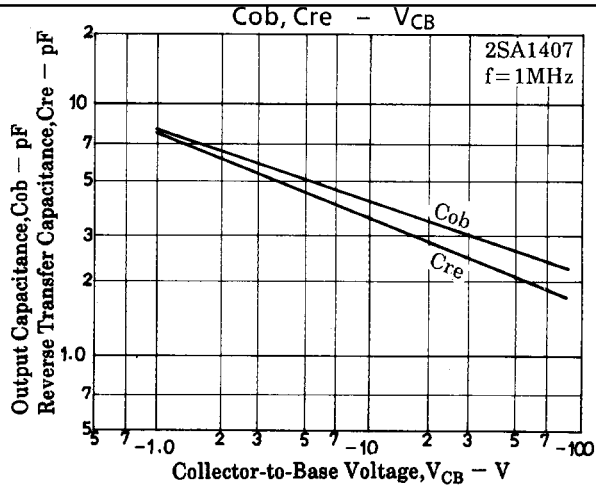
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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