



2SA1787/2SC4650

High-Definition CRT Display Video Output Applications

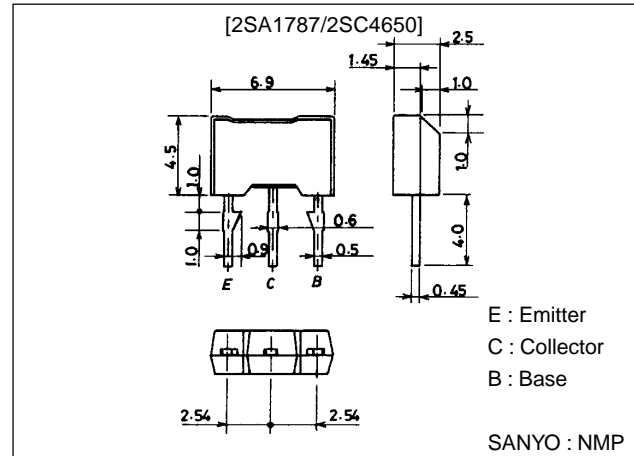
Features

- High breakdown voltage : $V_{CEO} \geq 200V$.
- Small reverse transfer capacitance and excellent high frequency characteristic:
 $C_{re} = 1.2pF$ (NPN), $1.7pF$ (PNP).
- Adoption of FBET processes.

Package Dimensions

unit:mm

2064



() : 2SA1786

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-200)	V
Collector-to-Emitter Voltage	V_{CEO}		(-200)	V
Emitter-to-Base Voltage	V_{EBO}		(-5)	V
Collector Current	I_C		(-100)	mA
Collector Current (Pulse)	I_{CP}		(-200)	mA
Collector Dissipation	P_C		1.0	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}	$V_{EB} = (-)4V, I_C = 0$			(-0.1)	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)10V, I_C = (-)10mA$	60		320	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)30V, I_C = (-)10mA$		150		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)30V, f = 1MHz$		(2.6)		pF
				1.7		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB} = (-)30V, f = 1MHz$		(1.7)		pF
				1.2		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)20mA, I_B = (-)2mA$			(-0.6)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)20mA, I_B = (-)2mA$			(-1.0)	V

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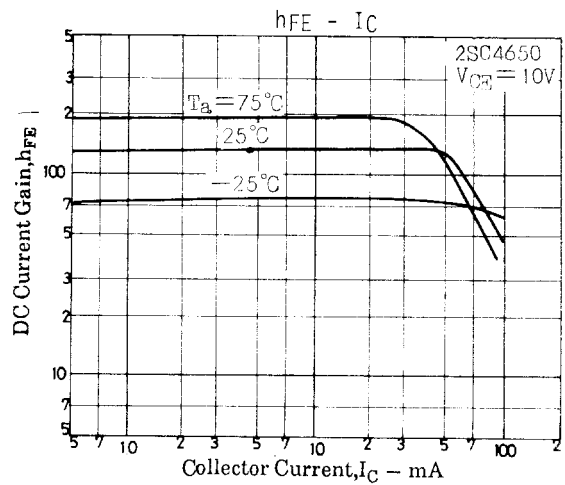
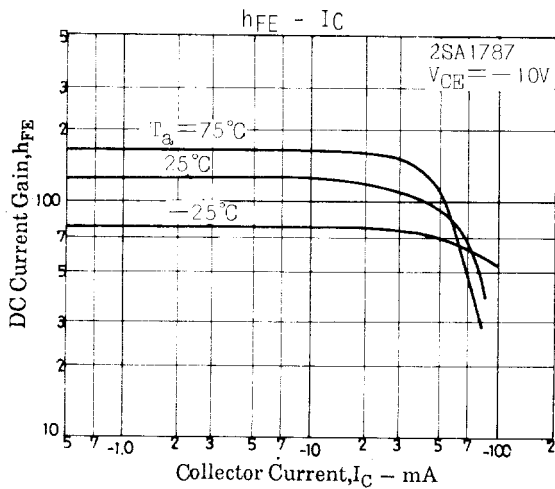
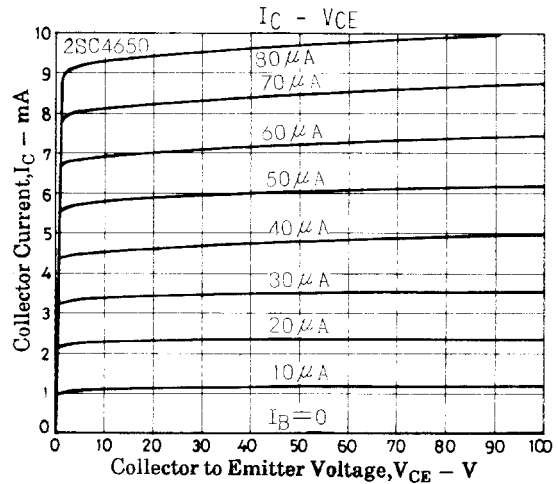
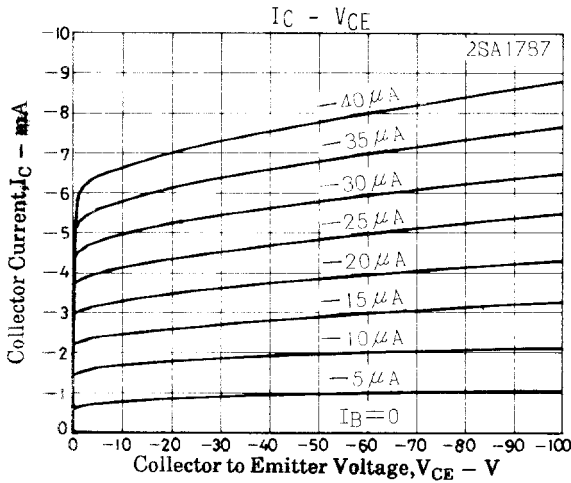
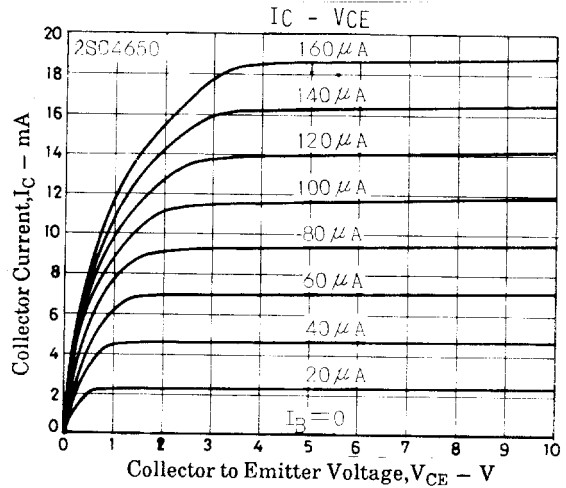
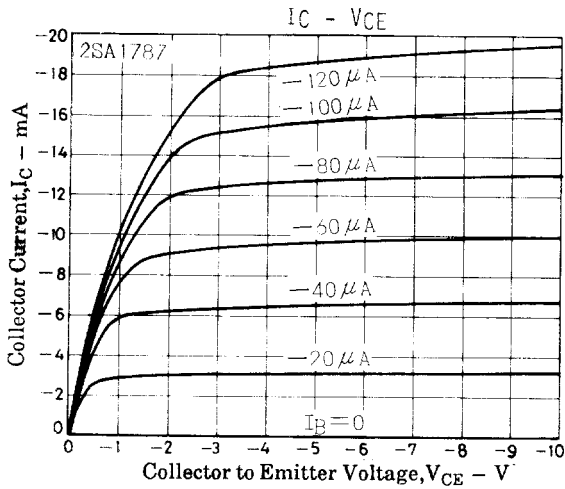
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2SA1787/2SC4650

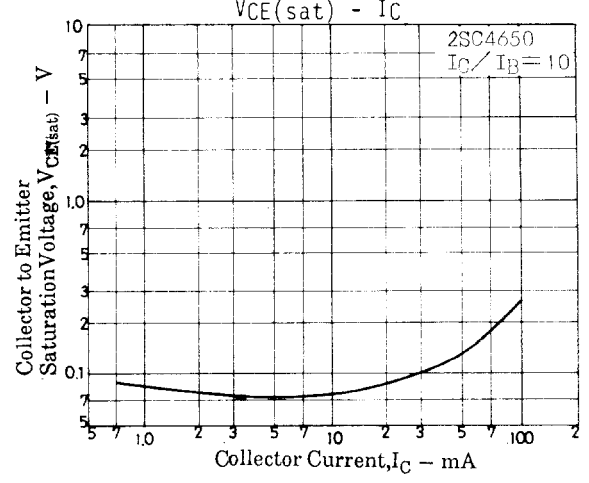
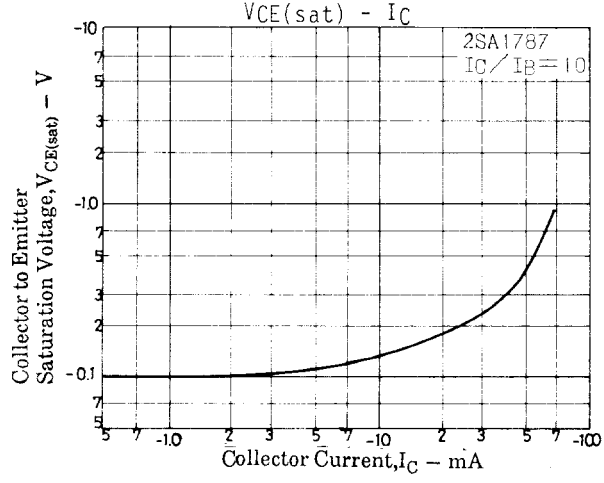
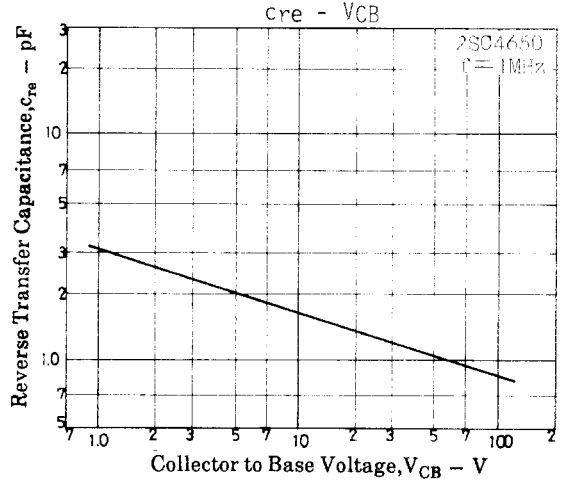
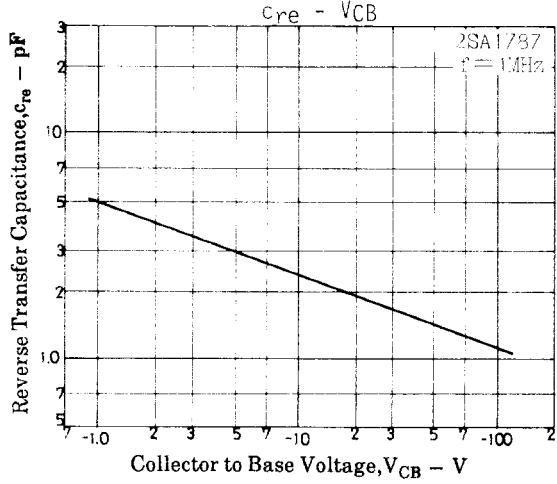
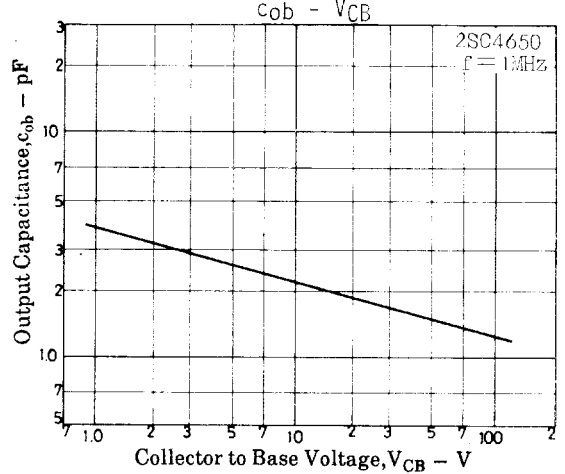
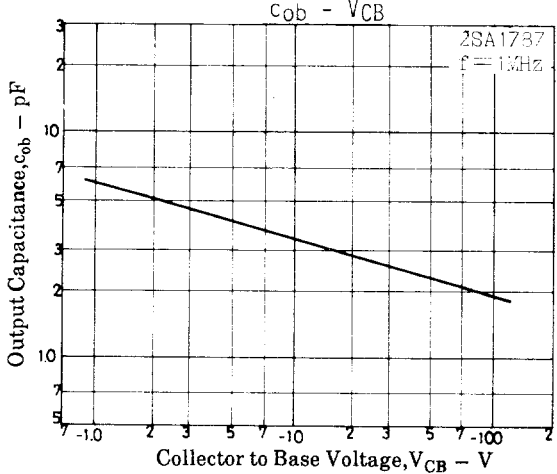
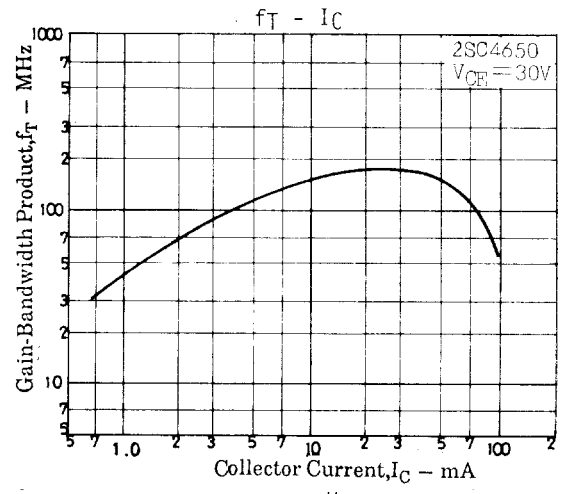
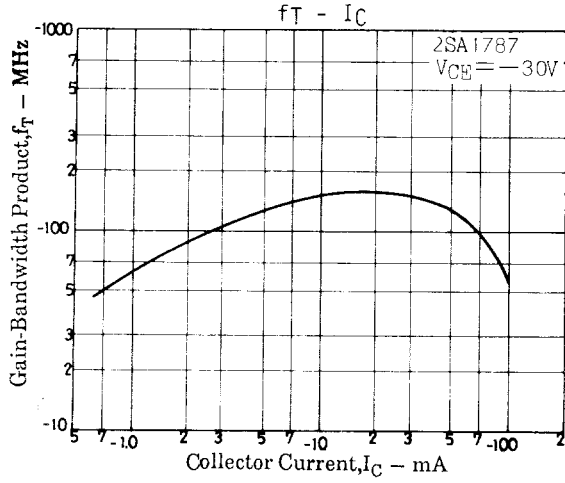
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-200)			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-200)			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu A, I_C = 0$	(-5)			V

* : The 2SA1787/2SC4650 are classified by 10mA h_{FE} as follows :

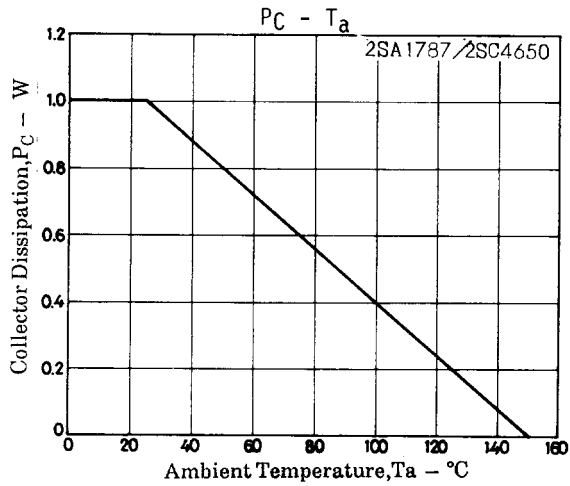
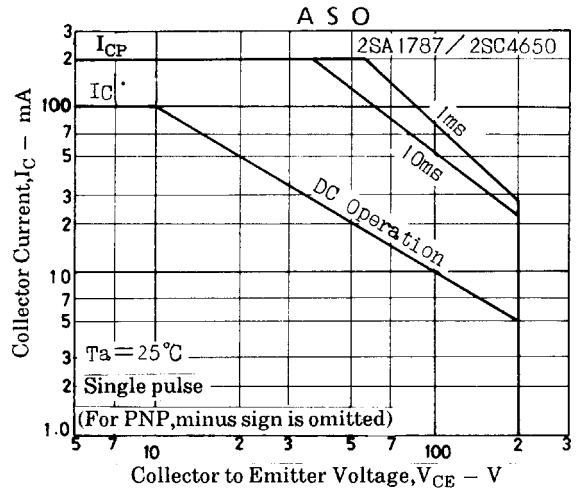
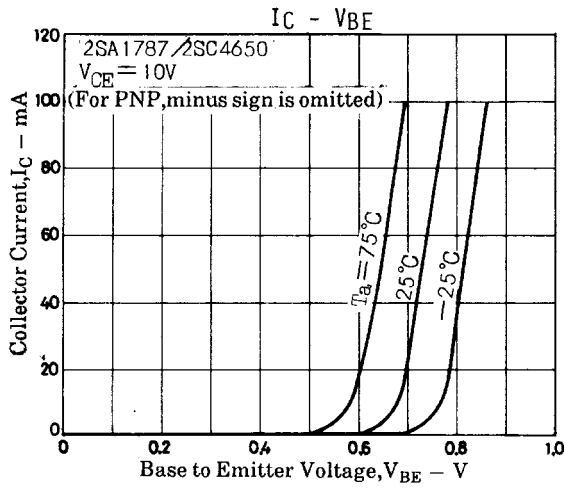
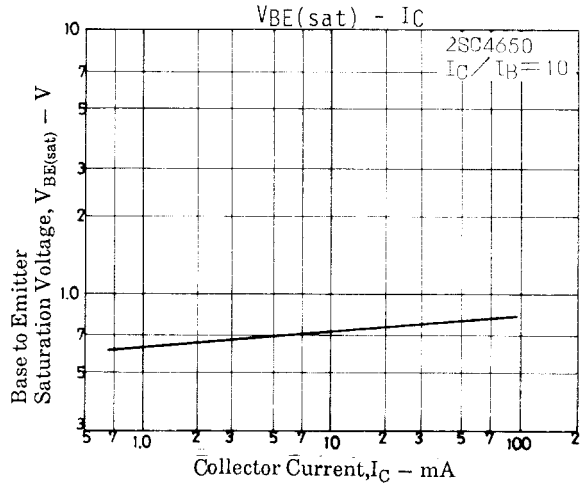
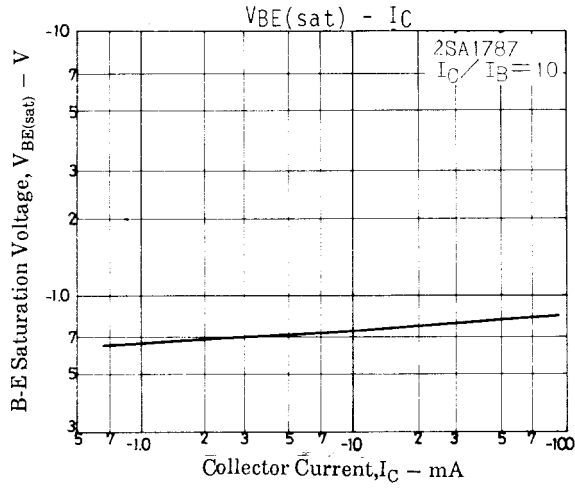
60	D	120	100	E	200	160	F	320
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2SA1787/2SC4650



2SA1787/2SC4650



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