

# 2SA1787/2SC4650

# **High-Definition CRT Display Video Output Applications**

#### **Features**

- · High breakdown voltage : V<sub>CEO</sub>≥200V.
- · Small reverse transfer capacitance and excellent high frequency characteristic:

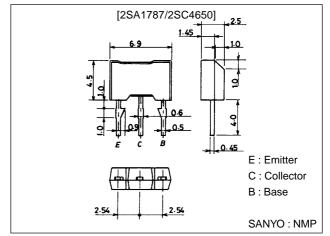
C<sub>re</sub>=1.2pF (NPN), 1.7pF (PNP).

· Adoption of FBET processes.

## **Package Dimensions**

unit:mm

2064



(): 2SA1786

## **Specifications**

## Absolute Maximum Ratings at Ta = 25°C

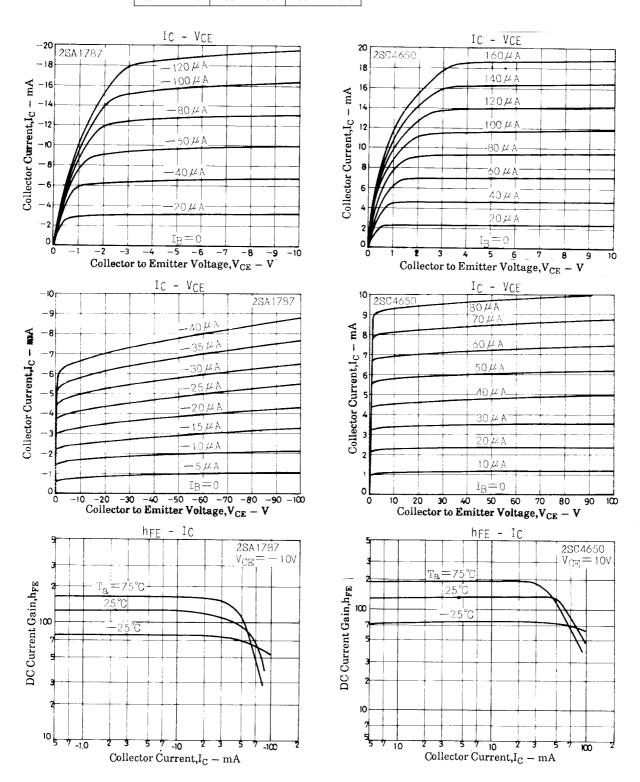
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		(-)200	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		(-)200	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		(-)5	V
Collector Current	IC		(-)100	mA
Colletor Current (Pulse)	I <sub>CP</sub>		(-)200	mA
Collector Dissipation	PC		1.0	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

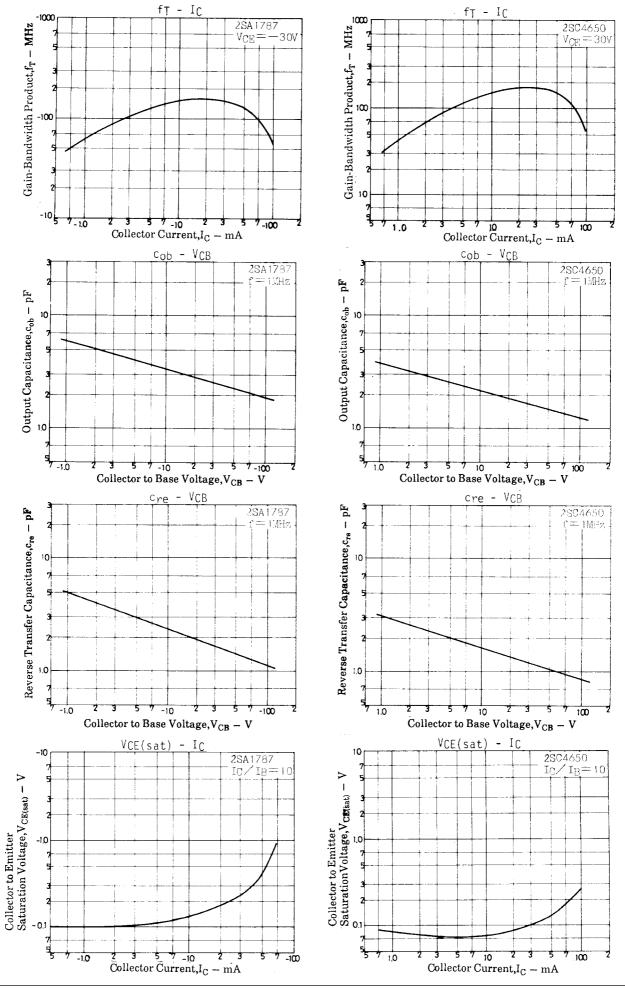
### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Uill
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =(-)150V, I <sub>E</sub> =0			(-)0.1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =(-)4V, I <sub>C</sub> =0			(–)0.1	μA
DC Current Gain	hFE	V <sub>CE</sub> =(-)10V, I <sub>C</sub> =(-)10mA	60		320	
Gain-Bandwidth Product	fT	V <sub>CE</sub> =(-)30V, I <sub>C</sub> =(-)10mA		150		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =(-)30V, f=1MHz		(2.6)		pF
				1.7		pF
Reverse Transfer Capacitance	C <sub>re</sub>	V <sub>CB</sub> =(-)30V, f=1MHz		(1.7)		pF
				1.2		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =(-)20mA, I <sub>B</sub> =(-)2mA			(–)0.6	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =(-)20mA, I <sub>B</sub> =(-)2mA			(–)1.0	V

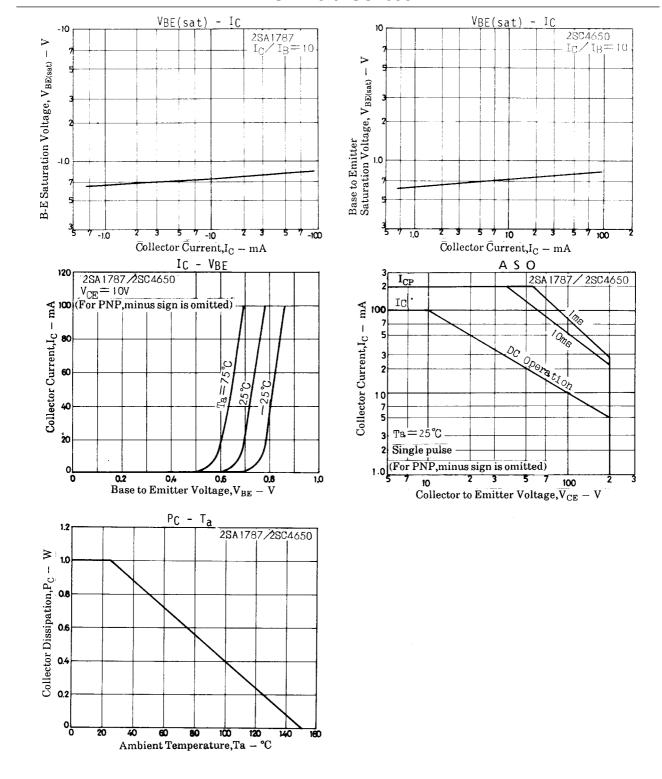
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Collector-to-Base Breakdown Voltage	V <sub>(BR)</sub> CBO	I <sub>C</sub> =(-)10μΑ, I <sub>E</sub> =0	(-)200			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)</sub> CEO	I <sub>C</sub> =(–)1mA, R <sub>BE</sub> =∞	(-)200			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =(-)10μA, I <sub>C</sub> =0	(–)5			V





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