



## 2SA1474/2SC3780

### Ultrahigh-Definition CRT Display Video Output Applications

#### Applications

- Video Output.
- Color TV chroma output.
- Wide-band amp.

#### Features

- High  $f_T$  ( $f_T$  typ=800MHz).
- Small reverse transfer capacitance and excellent high frequency characteristic
  - :  $C_{re}$ =3.0pF (NPN), 4.7pF (PNP).
- Complementary PNP and NPN types.
- Adoption of FBET process.

( ) : 2SA1474

#### Specifications

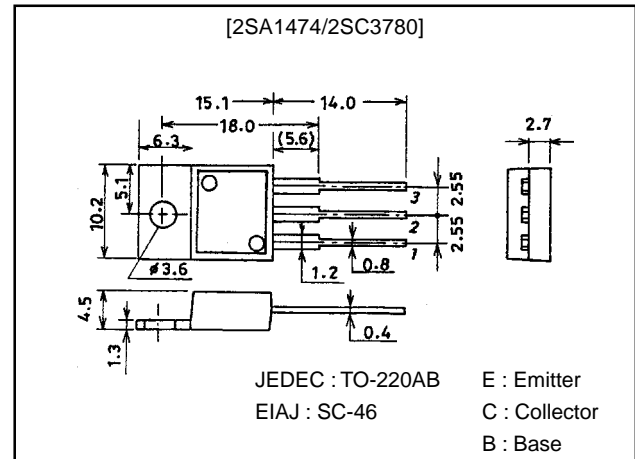
##### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		(-80)	V
Collector-to-Emitter Voltage	$V_{CEO}$		(-60)	V
Emitter-to-Base Voltage	$V_{EBO}$		(-4)	V
Collector Current	$I_C$		(-800)	mA
Peak Collector Current	$I_{CP}$		(-1)	A
Collector Dissipation	$P_C$		1.5	W
		$T_c=50^\circ\text{C}$	15	W
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

#### Package Dimensions

unit:mm

2010C



##### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=-60\text{V}, I_E=0$			(-0.1)	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=-2\text{V}, I_C=0$			(-1.0)	$\mu\text{A}$
DC Current Gain	$h_{FE1}$	$V_{CE}=-10\text{V}, I_C=-50\text{mA}$	40*		320*	
	$h_{FE2}$	$V_{CE}=-10\text{V}, I_C=-400\text{mA}$	20			
Gain-Bandwidth Product	$f_T$	$V_{CE}=-10\text{V}, I_C=-100\text{mA}$		800		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$			0.6	V
					(-0.8)	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$			(-1.0)	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	(-80)			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, R_{BE}=\infty$	(-60)			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	(-4)			V
Output Capacitance	$C_{ob}$	$V_{CB}=-30\text{V}, f=1\text{MHz}$		3.5		pF
				(5.3)		pF
Reverse Transfer Capacitance	$C_{re}$	$V_{CB}=-30\text{V}, f=1\text{MHz}$		3.0		pF
				(4.7)		pF

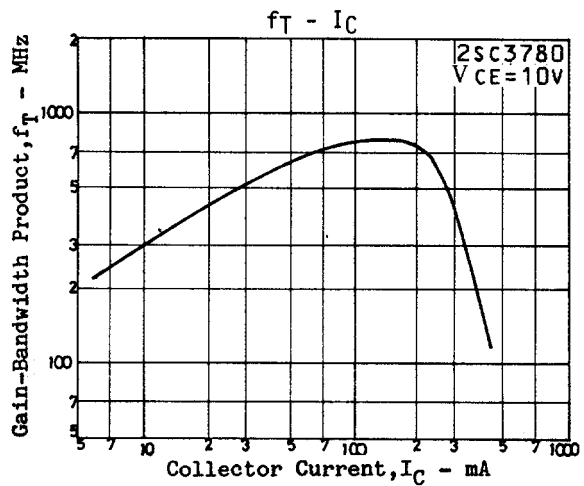
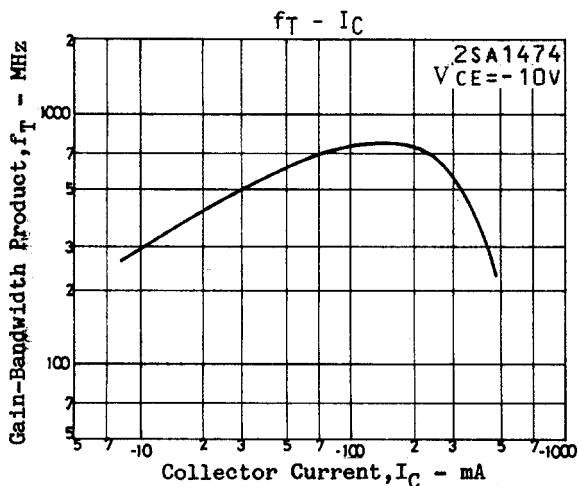
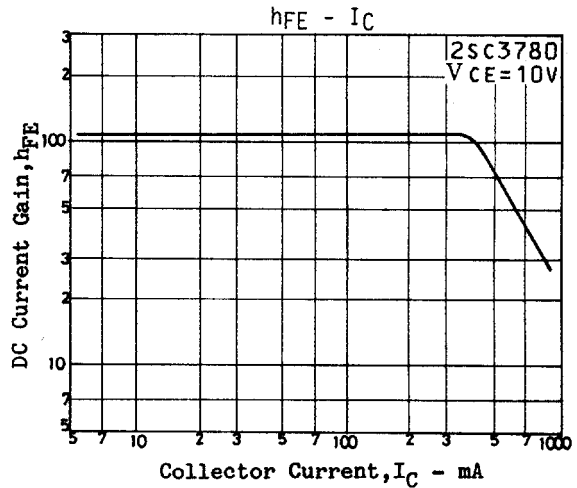
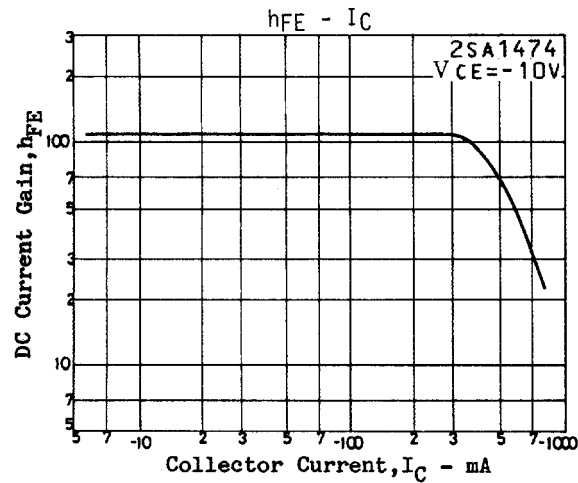
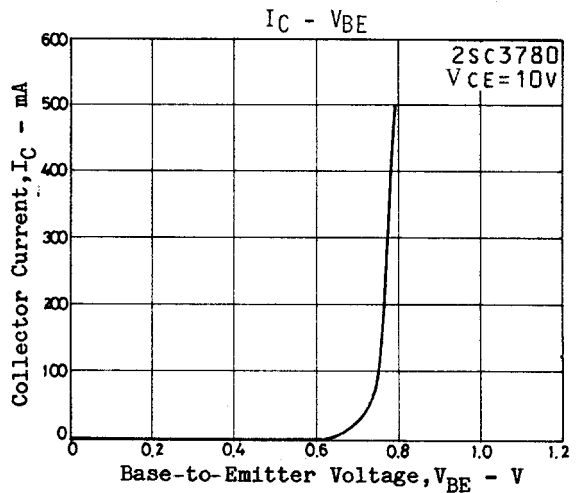
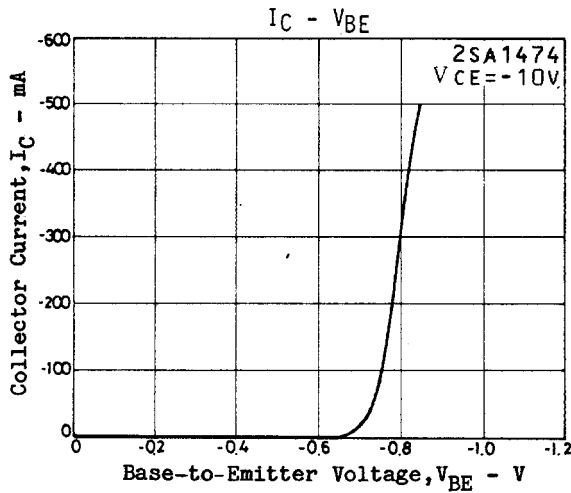
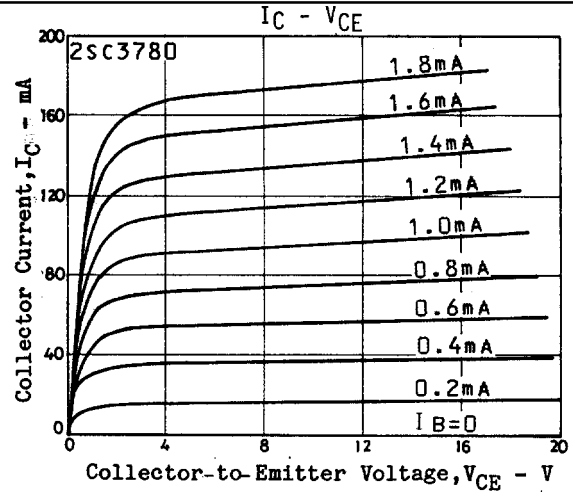
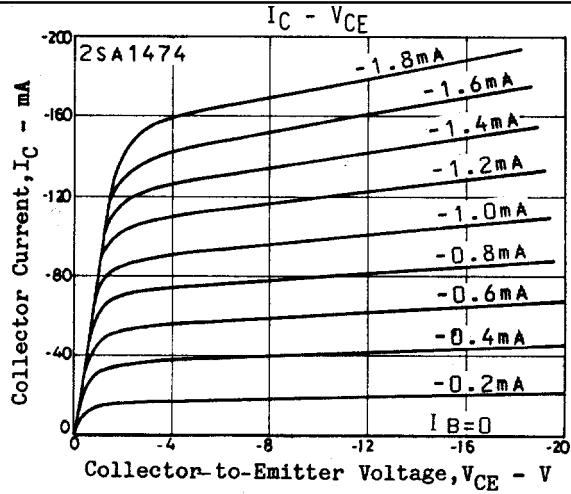
\*: The 2SA1474/2SC3780 are classified by 50mA  $h_{FE}$  as follows :

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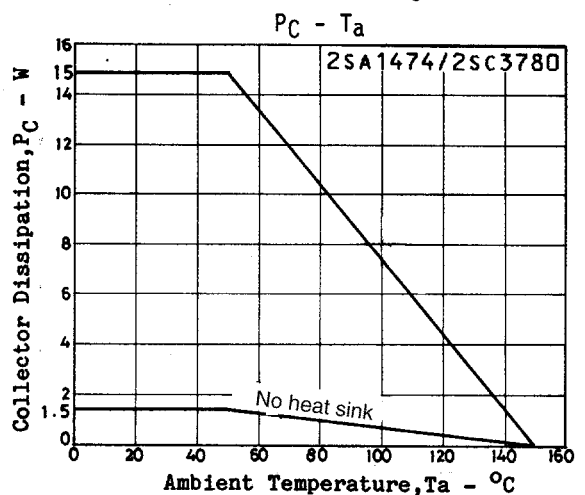
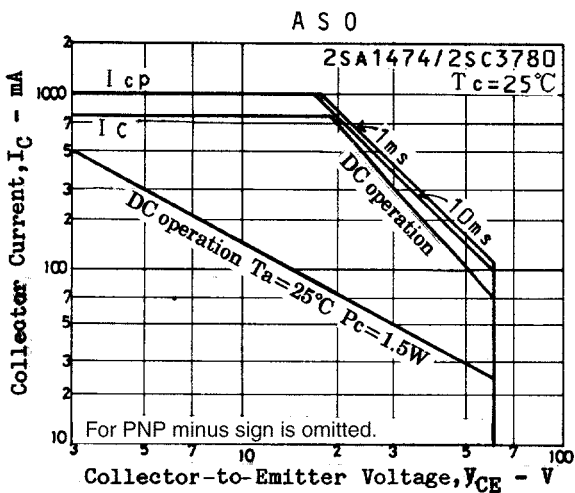
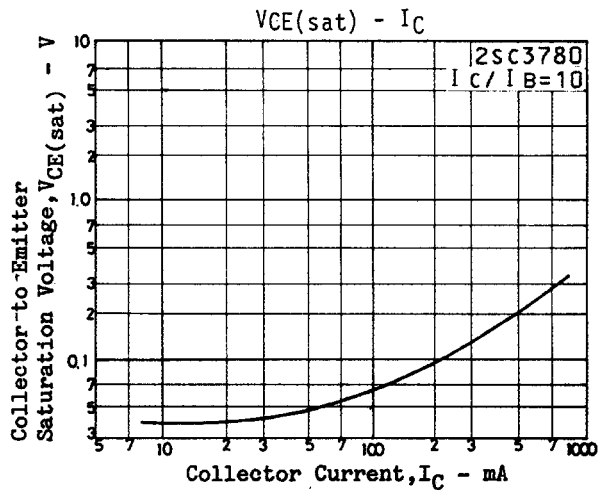
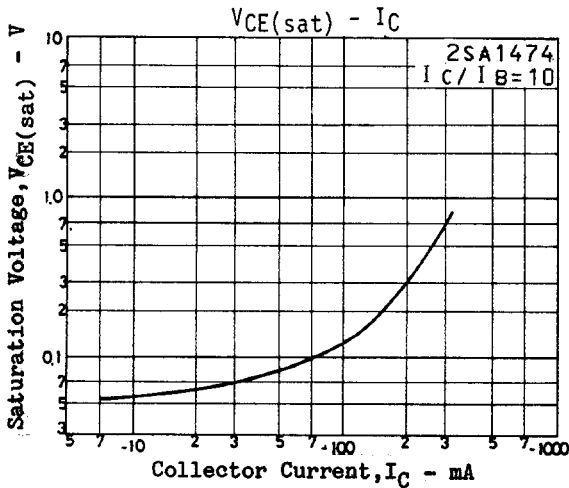
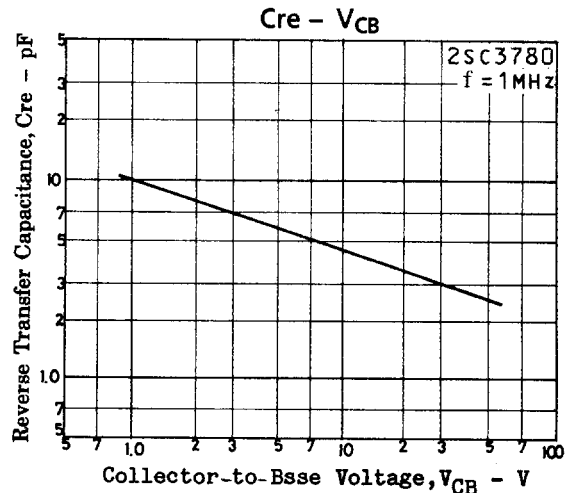
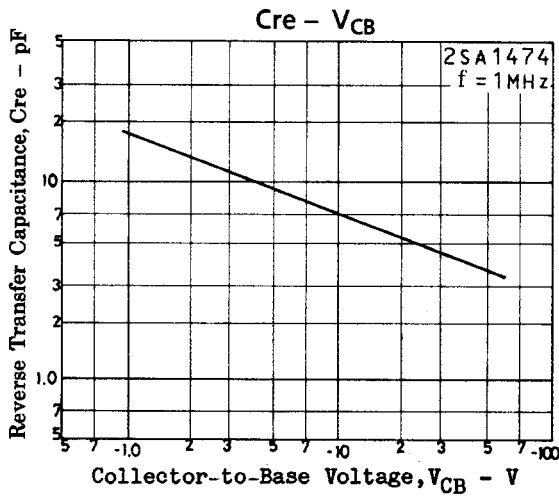
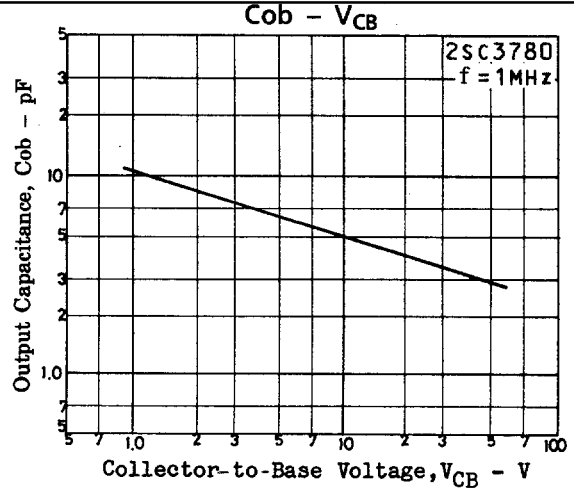
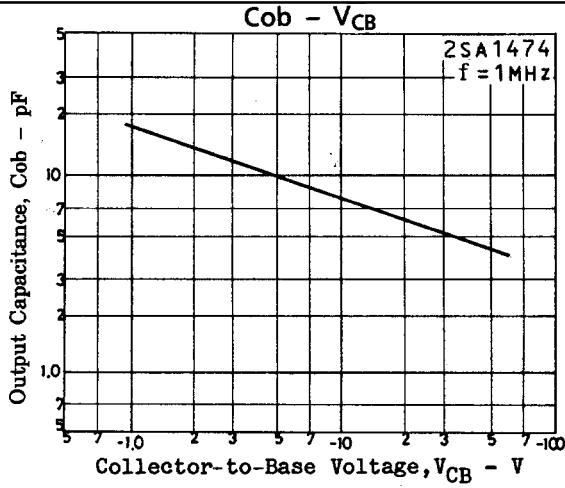
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