



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	$^\circ\text{C}$

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)	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-2\text{V}, I_C=0$			(-1.0)	μA
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

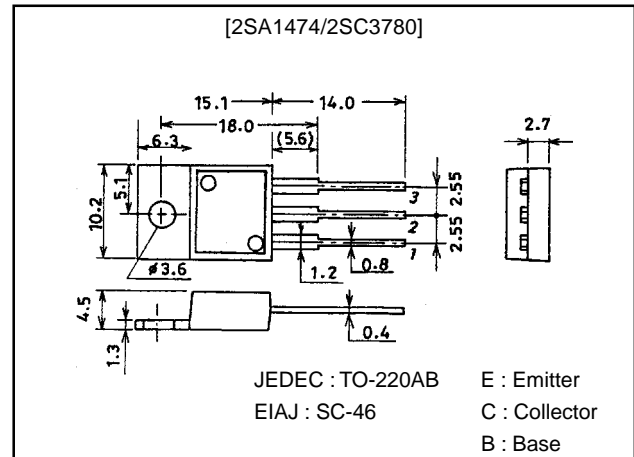
*: The 2SA1474/2SC3780 are classified by 50mA h_{FE} as follows :

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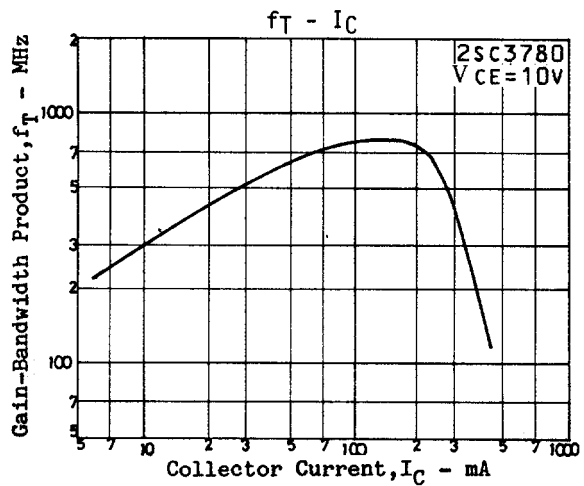
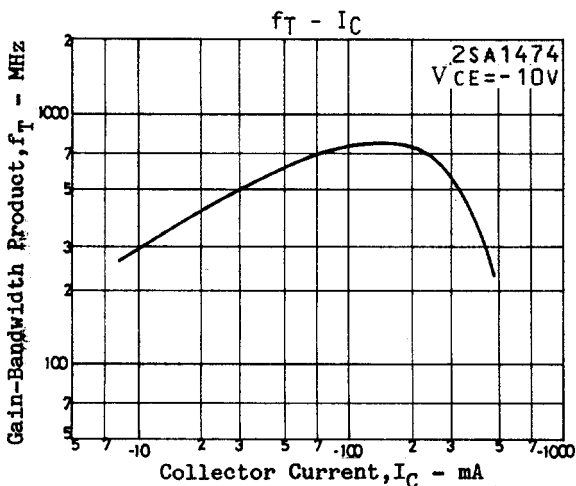
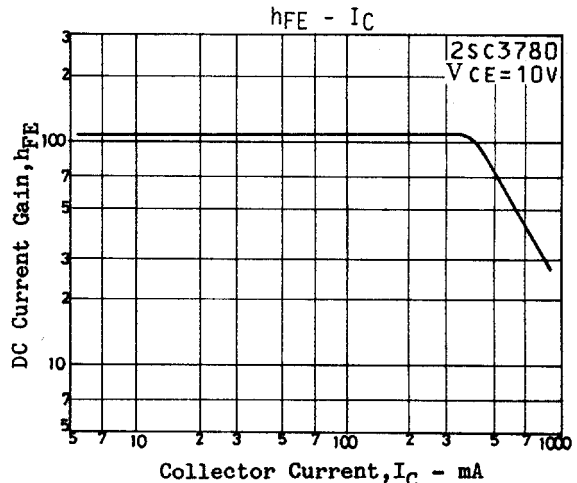
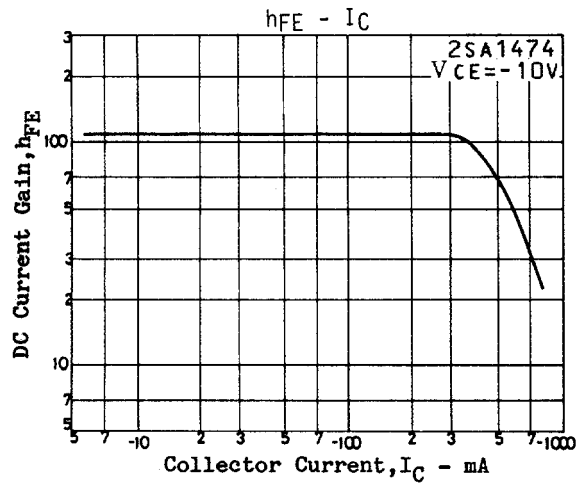
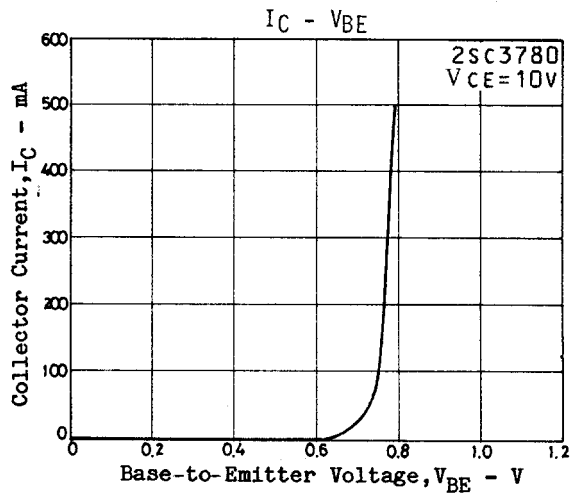
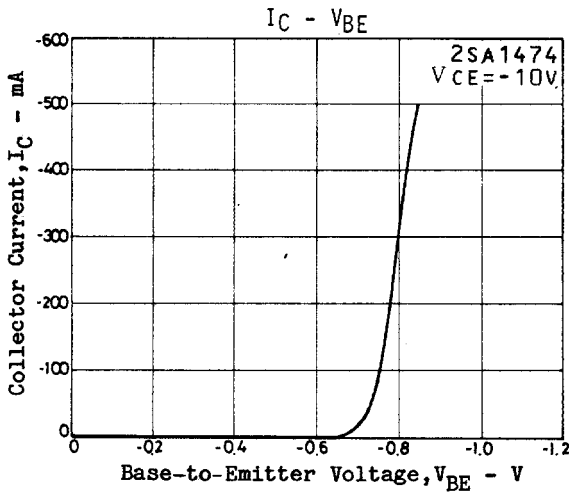
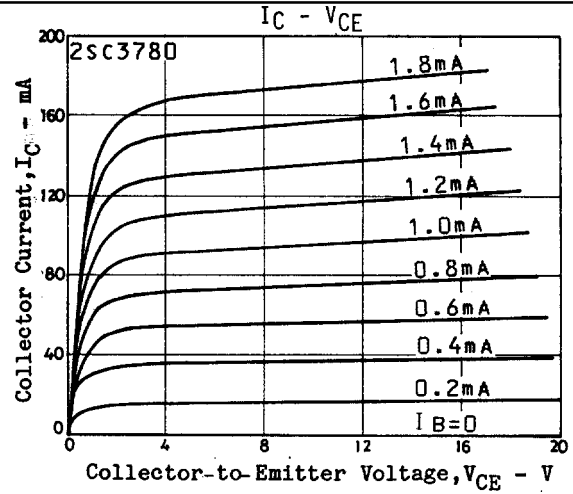
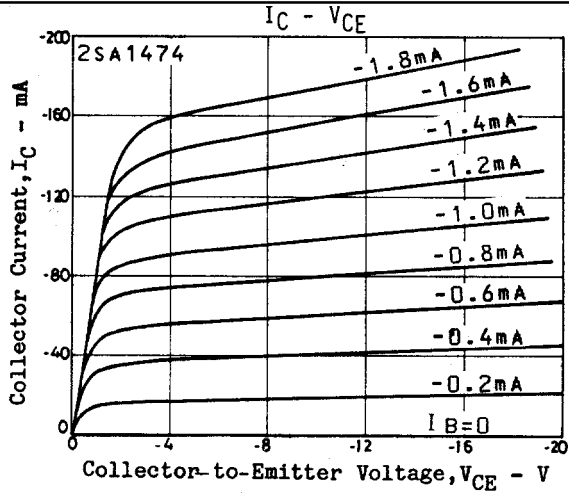
Package Dimensions

unit:mm

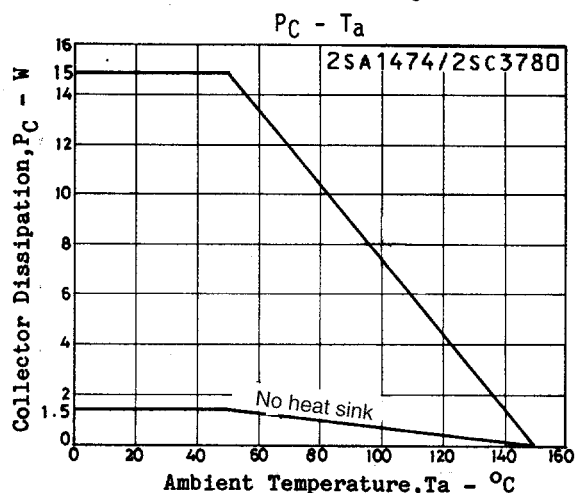
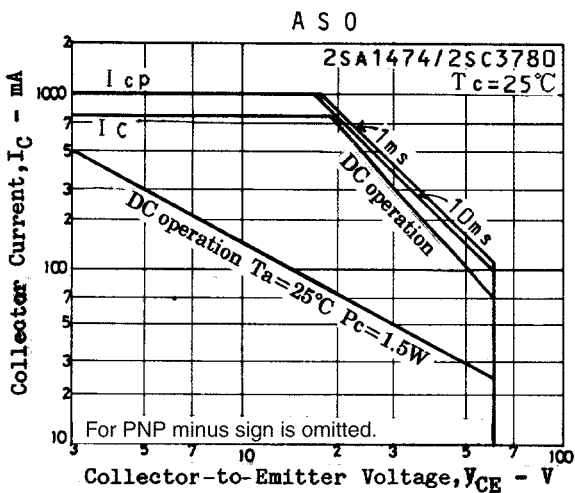
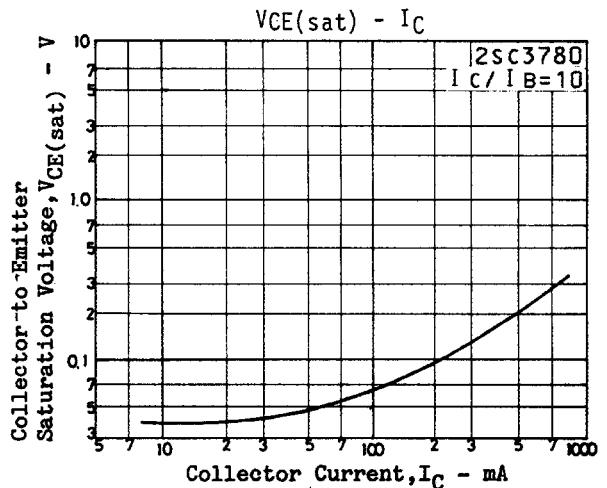
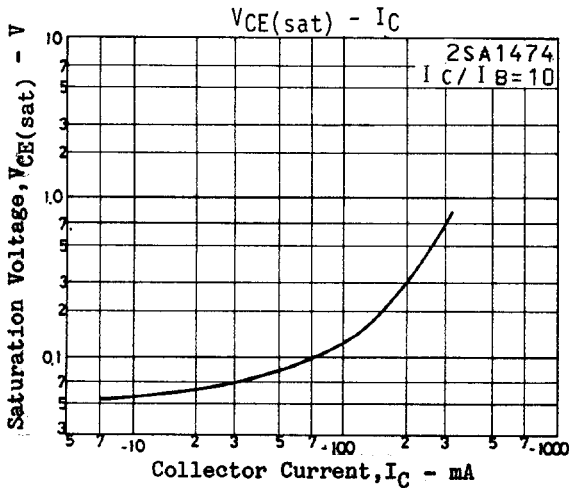
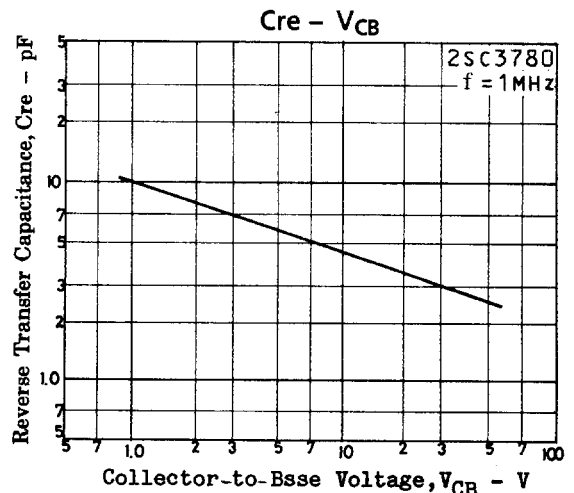
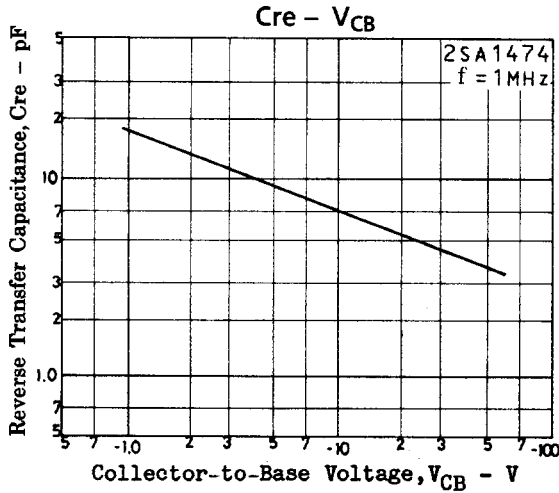
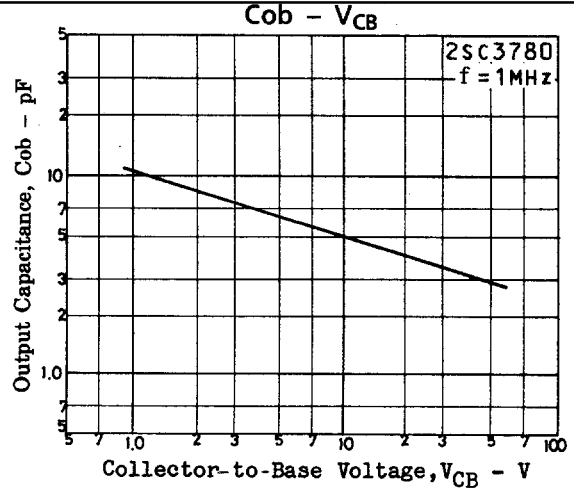
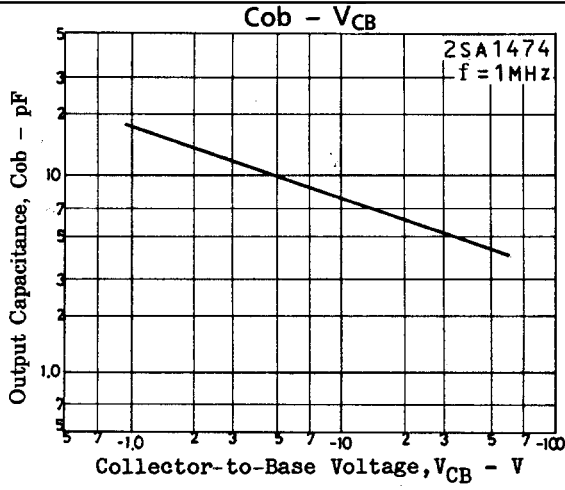
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