



2SA1352/2SC3416

Ultrahigh-Definition CRT Display Video Output Applications

Applications

- Color TV chroma output, high-voltage driver applicatons.

Features

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

() : 2SA1352

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_{CE0}		(-)200	V
Emitter-to-Base Voltage	V_{EB0}		(-)5	V
Collector Current	I_C		(-)100	mA
Collector Current (Pulse)	I_{CP}		(-)200	mA
Collector Dissipation	P_C		1.2	W
		$T_c = 25^\circ C$	5	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_{CB0}	$V_{CB} = (-)200V, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)10V, I_C = (-)10mA$	40		320	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)30V, I_C = (-)10mA$		70		MHz

* : 2SA1352/2SC3416 are classified by 10mA h_{FE} as follows :

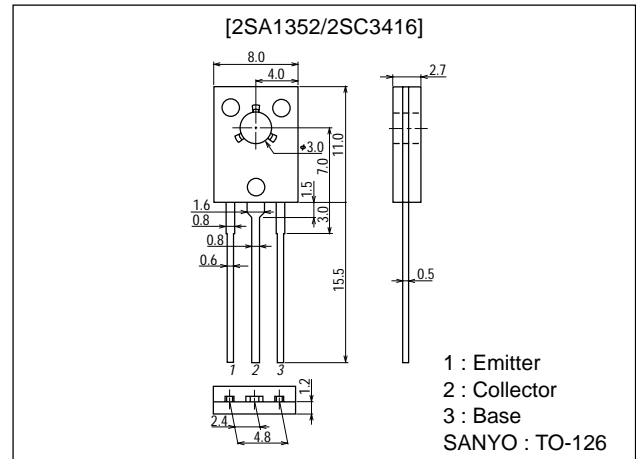
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Rank	C	D	E	F
h_{FE}	40 to 80	60 to 120	100 to 200	160 to 320

Package Dimensions

unit:mm

2009B



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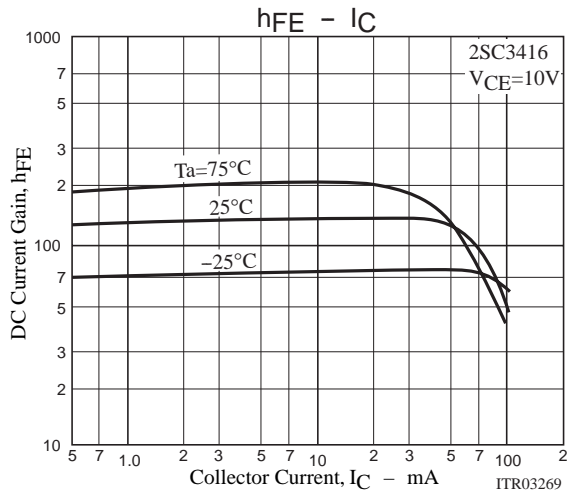
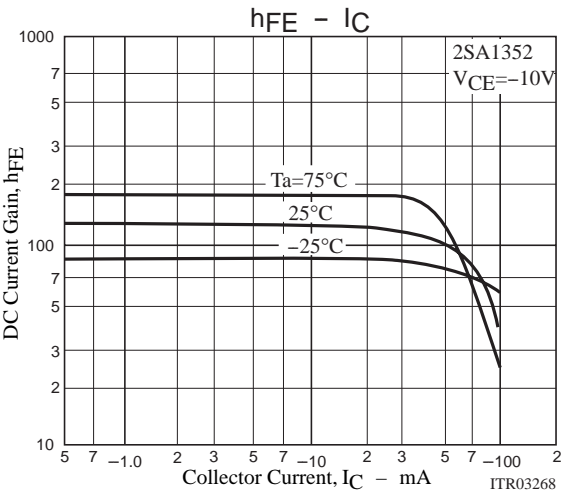
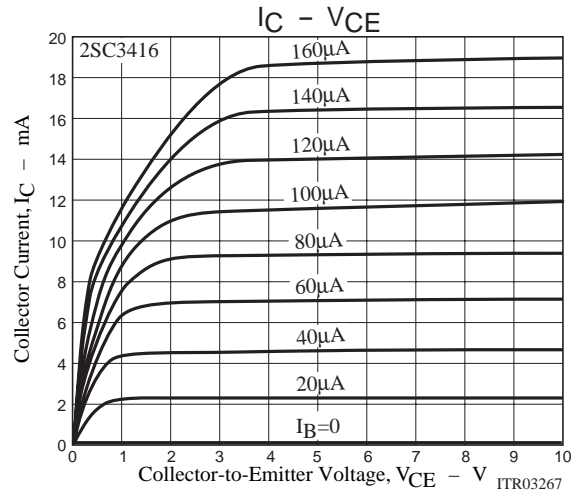
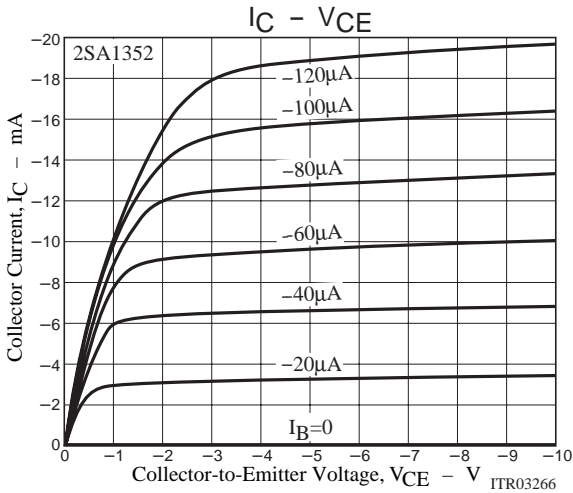
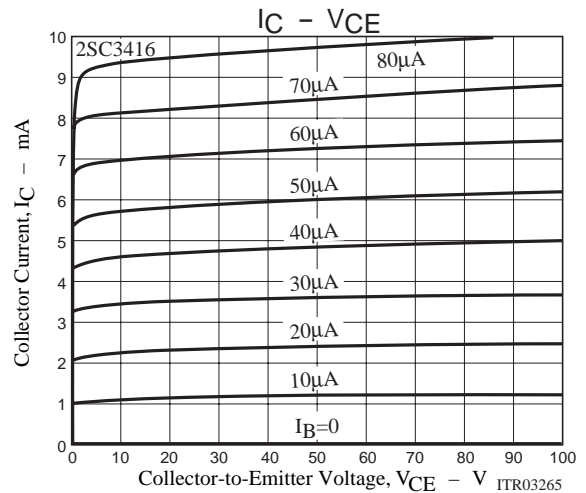
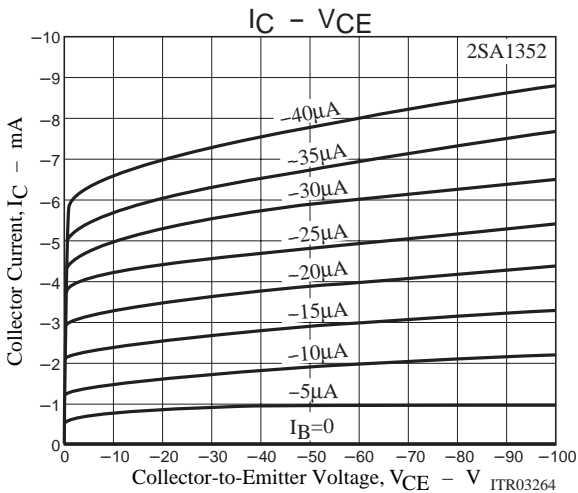
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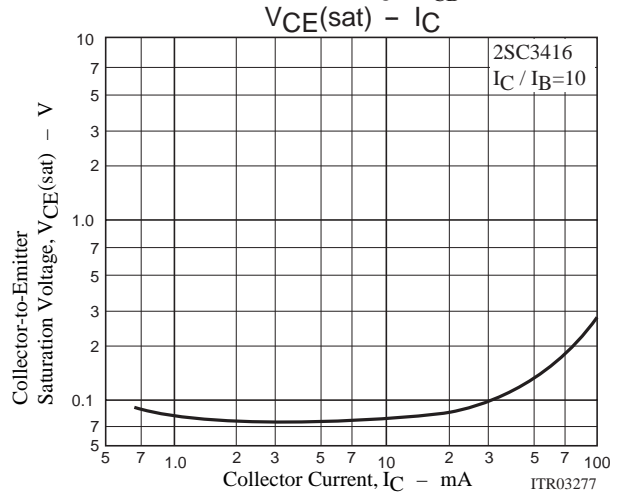
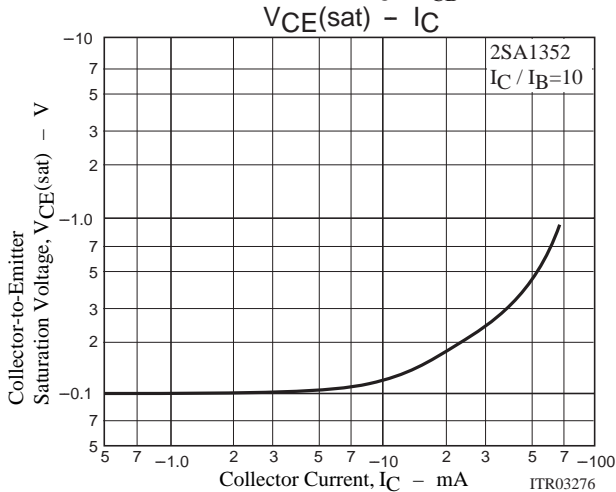
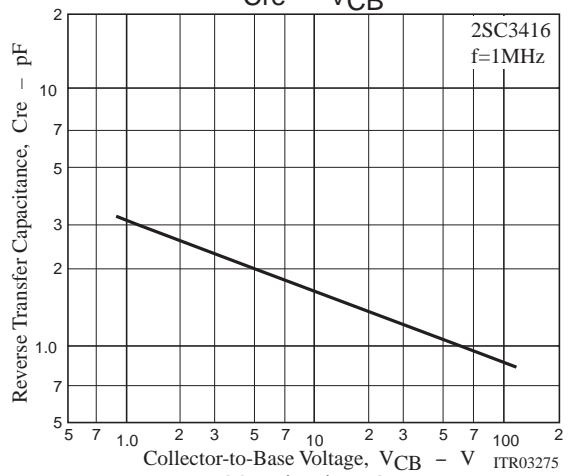
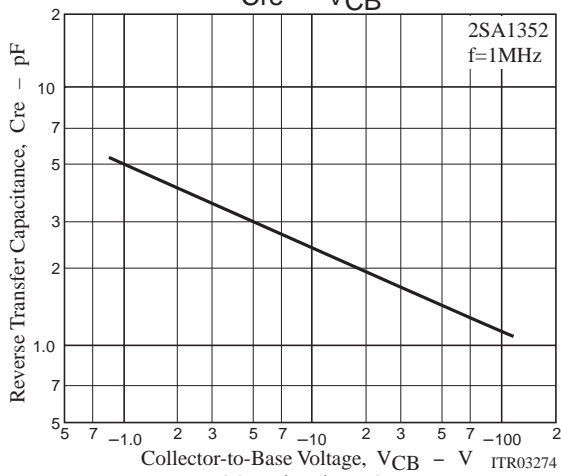
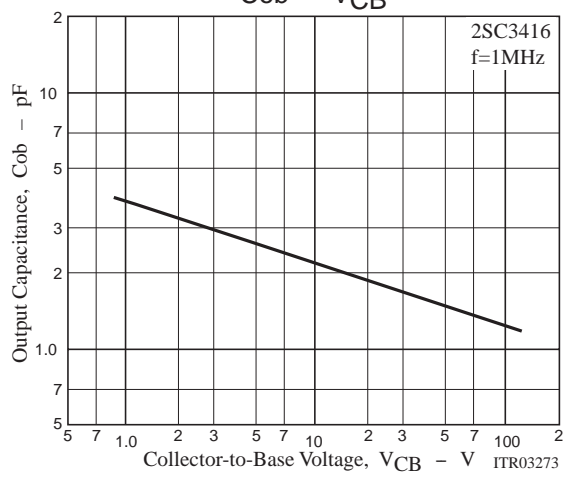
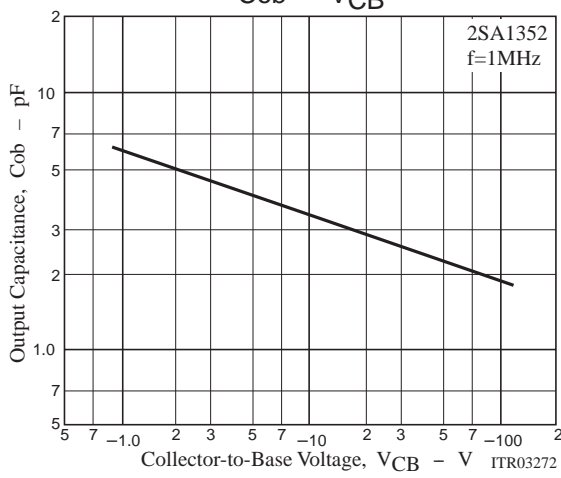
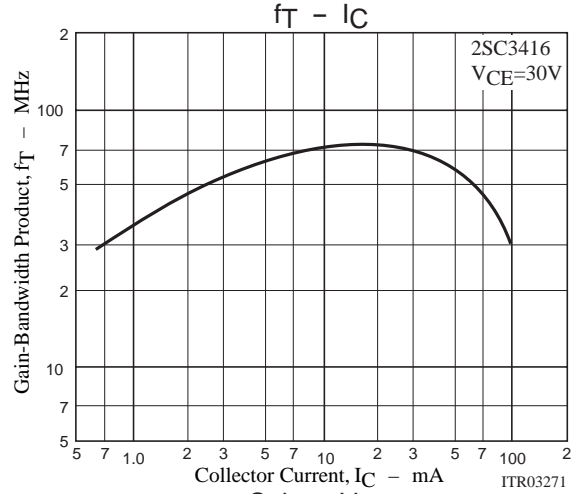
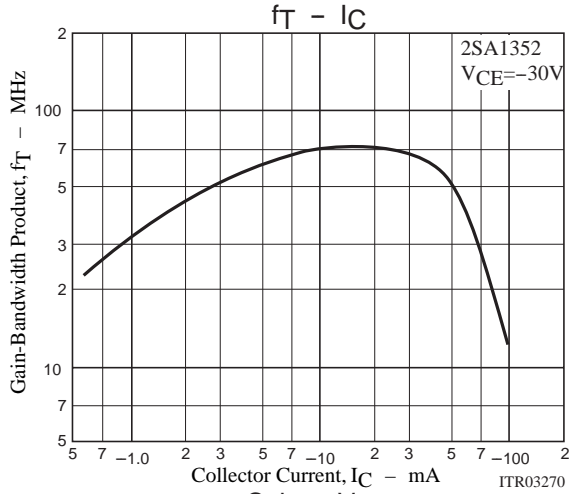
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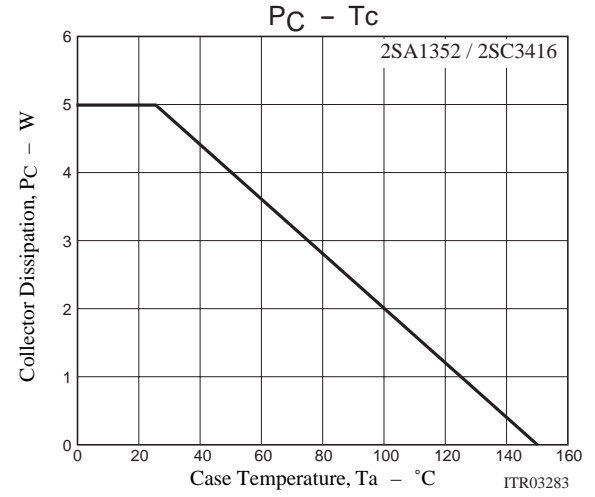
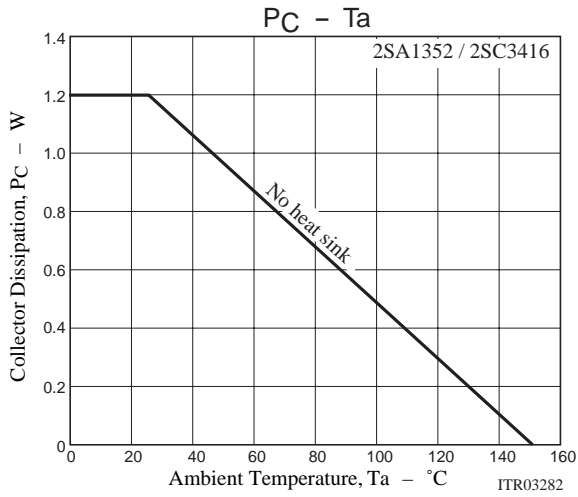
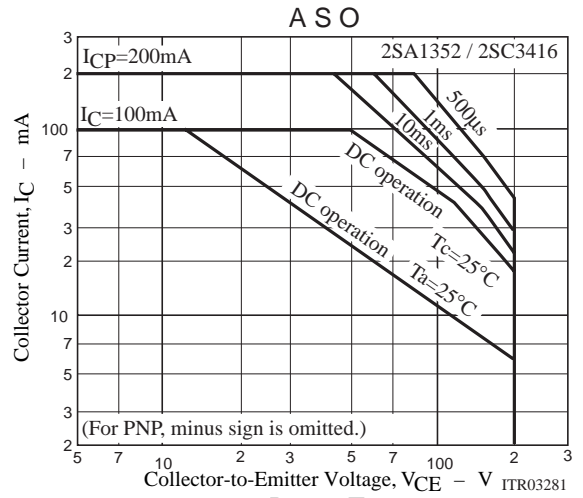
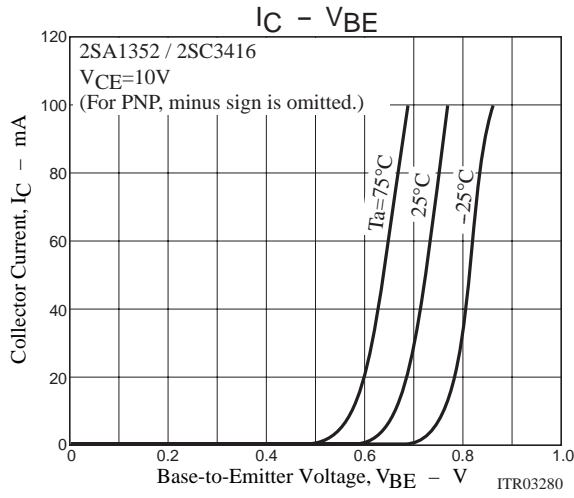
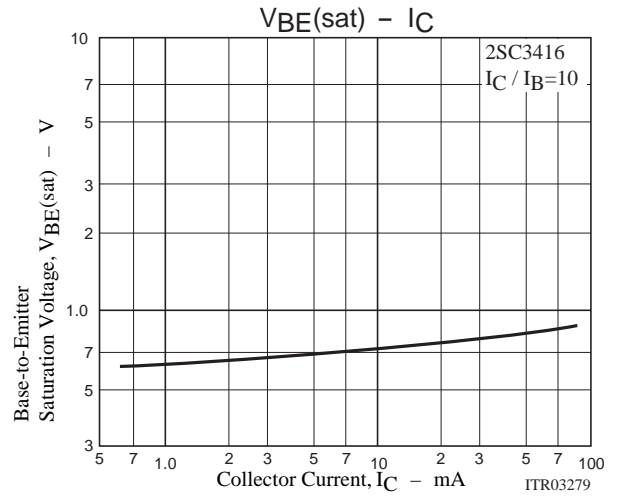
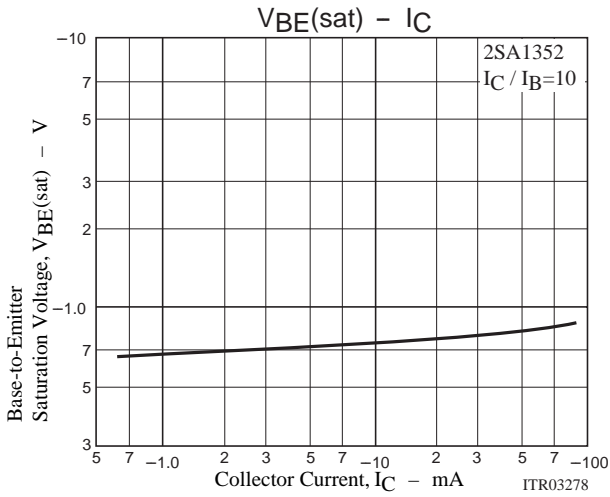
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)20mA, I_B=(-)2mA$			(-)0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)20mA, I_B=(-)2mA$			(-)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)300			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)300			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=\infty$	(-)5			V
Common Base Output Capacitance	C_{ob}	$V_{CB}=(-)30V, f=1MHz$		2.6		pF
				(3.1)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)30V, f=1MHz$		1.8		pF
				(2.3)		pF



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