



2SA1353/2SC3417

Ultrahigh-Definition CRT Display Video Output Applications

Applications

- Ultrahigh-definition CRT display.
- Color TV chroma output, high-voltage driver applications.

Features

- High breakdown voltage : $V_{CEO} \leq 300V$.
- Excellent high frequency characteristics :
 $C_{re} = 1.8pF$ (typ).
- Adoption of MBIT process.

() : 2SA1353

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)300	V
Collector-to-Emitter Voltage	V_{CEO}		(-)300	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		1.2	W
		$T_c = 25^\circ C$	7	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}	$V_{CB} = (-)200V, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)10V, I_C = (-)10mA$	40		320	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)30V, I_C = (-)10mA$		70		MHz

* : 2SA1353/2SC3417 are classified by 10mA h_{FE} as follows :

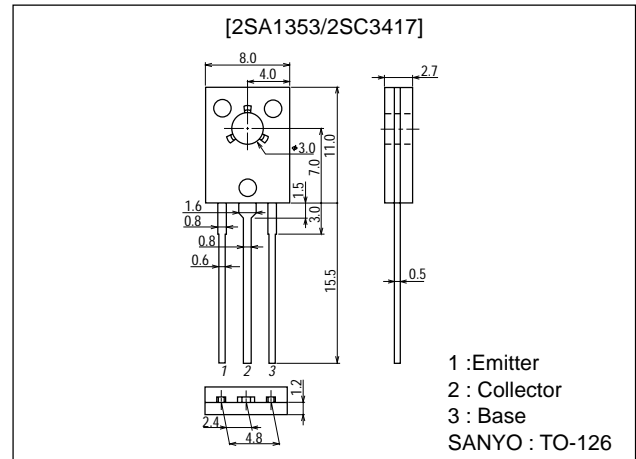
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Rank	C	D	E	F
h_{FE}	40 to 80	60 to 120	100 to 200	160 to 320

Package Dimensions

unit:mm

2009B



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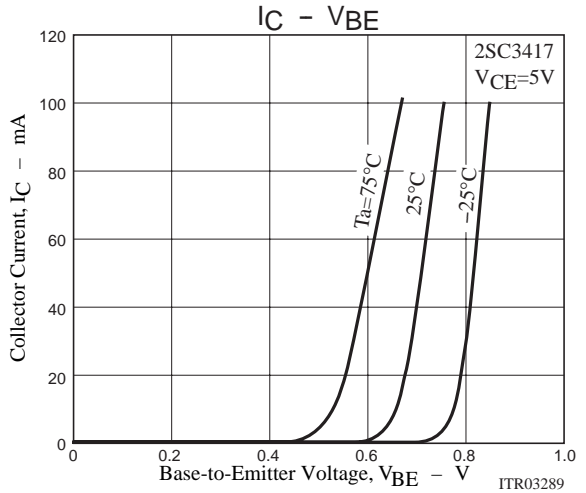
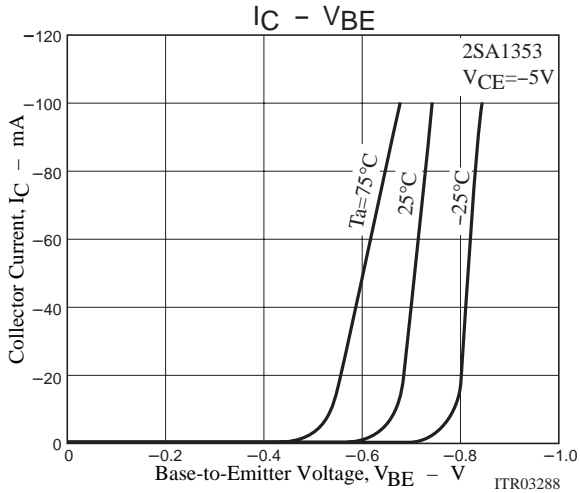
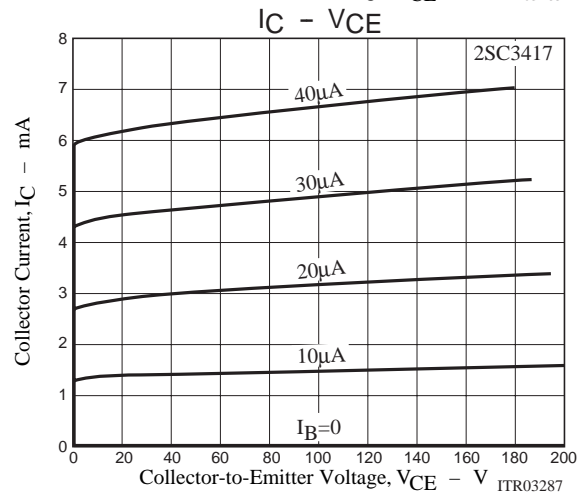
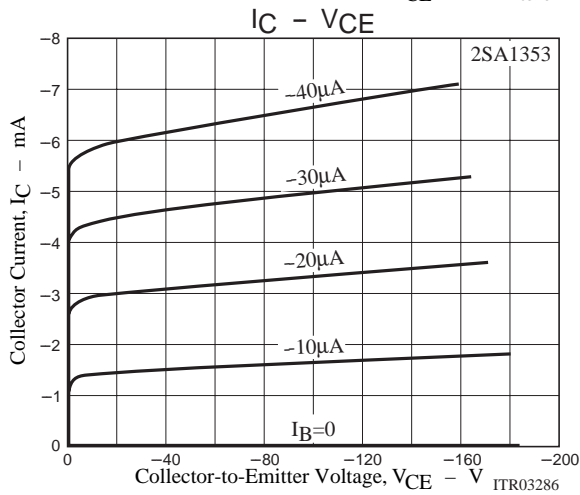
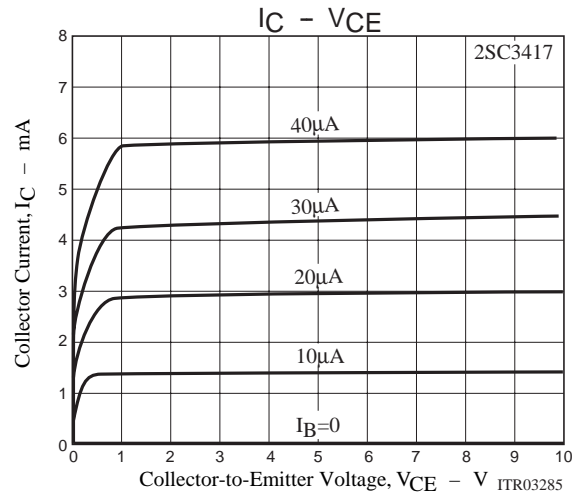
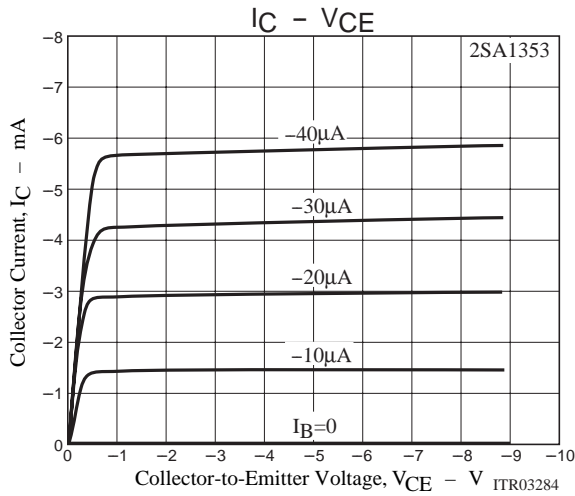
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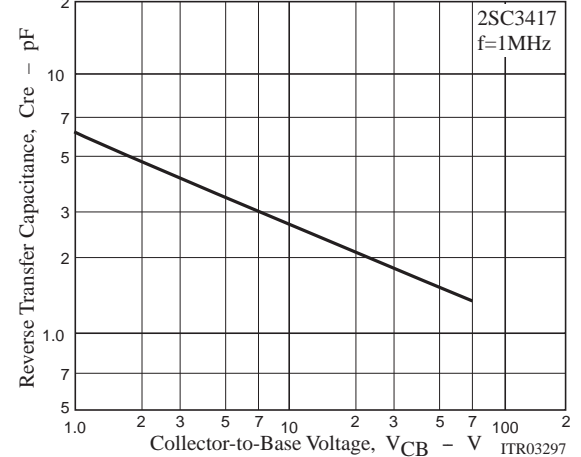
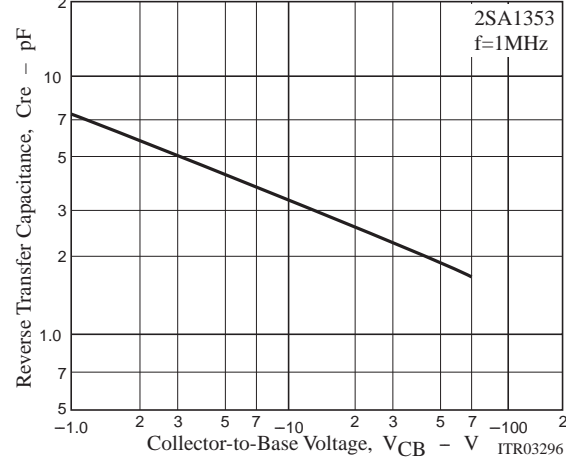
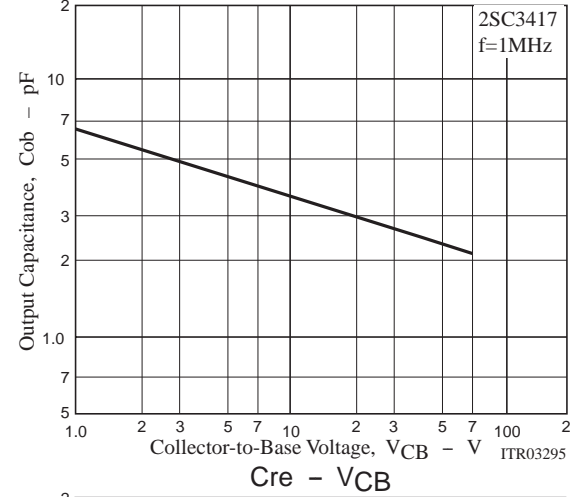
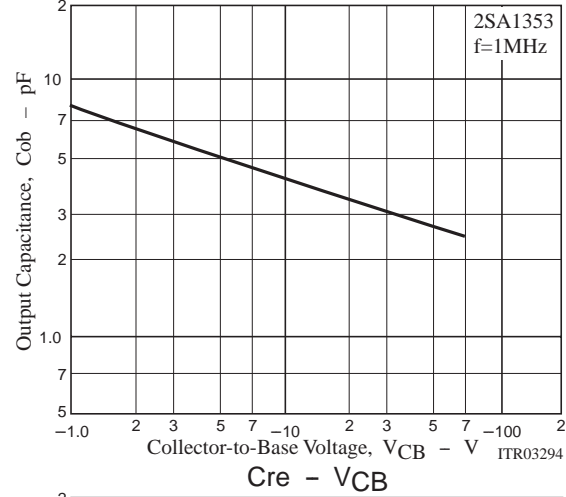
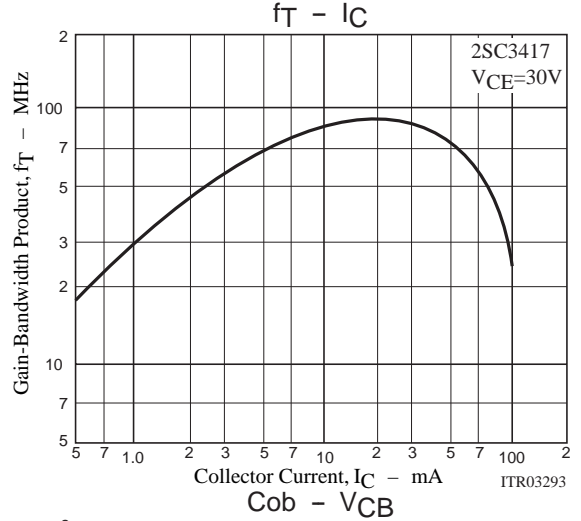
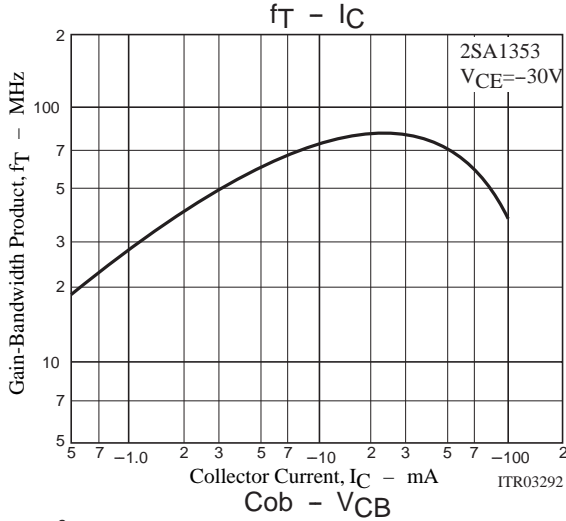
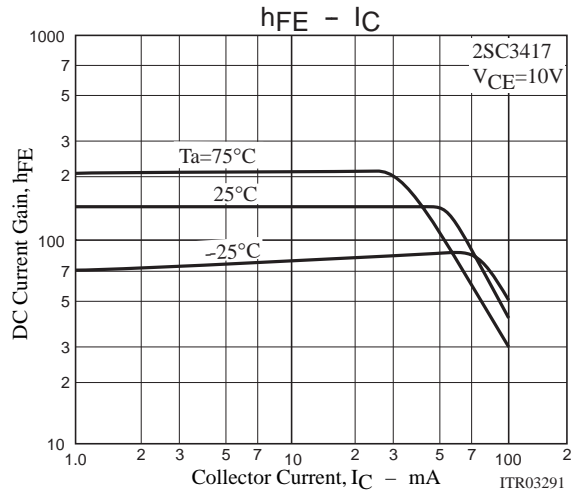
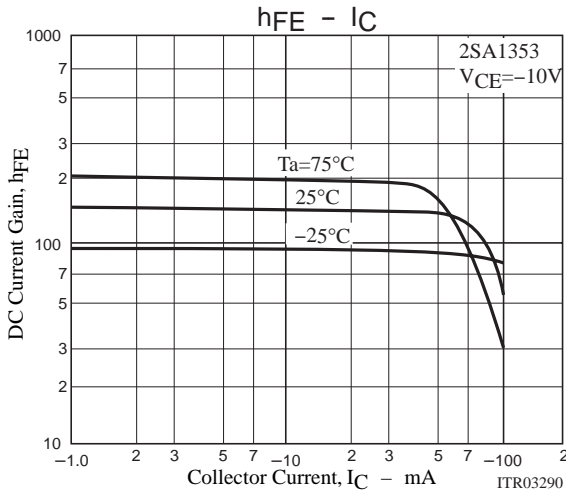
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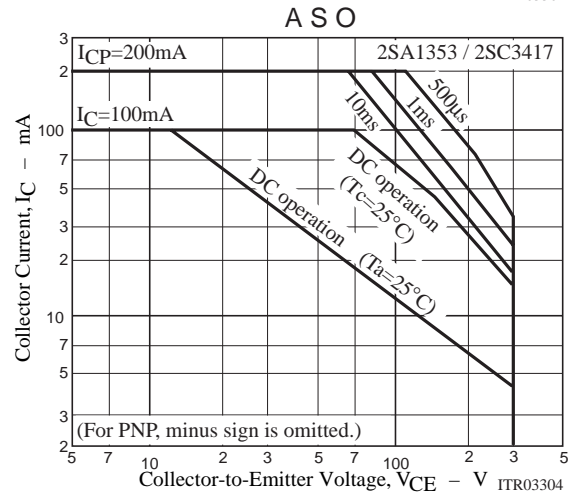
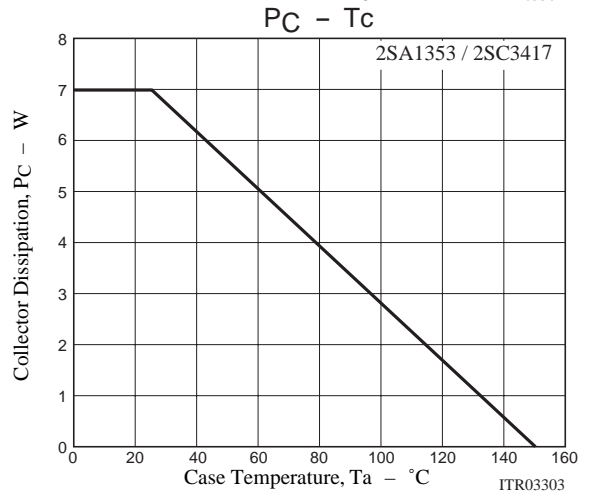
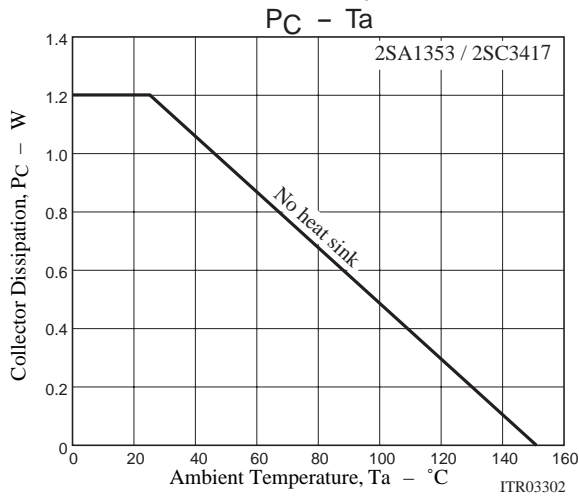
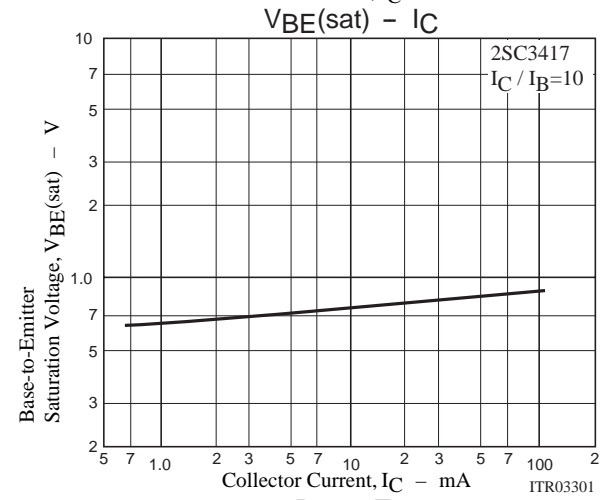
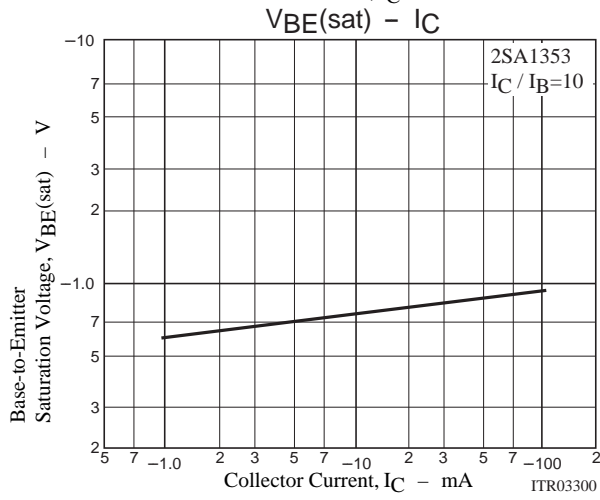
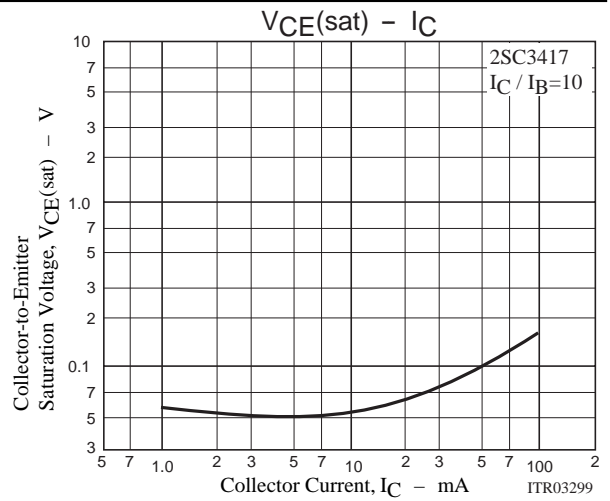
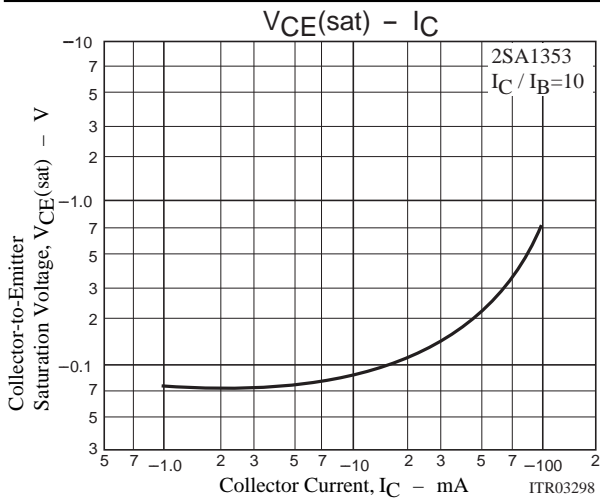
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)20\text{mA}$, $I_B=(-)2\text{mA}$			(-)0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)20\text{mA}$, $I_B=(-)2\text{mA}$			(-)1.0	V
Collector-to-Base Breakdown Voltage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



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