

High-Definition CRT Display Video Output Applications

Applications

 \cdot High definition CRT display video output, wide-band amplifier.

Features

- \cdot High f_T : f_T =600MHz.
- · High breakdown voltage : V_{CEO}=70Vmin.
- · Small reverse transfer capacitance and excellent high -frequency characteristic :
- C_{re}=1.9pF/NPN, 2.4pF/PNP.
- · Complementary PNP and NPN types.
- \cdot Adoption of FBET process.
- · Micaless type.

(): 2SA1536

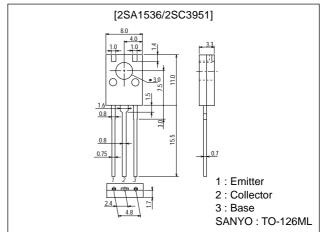
Specifications

Absolute Maximum Ratings at $Ta = 25^{\circ}C$

Package Dimensions

unit:mm

2042B



Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(–)80	V
Collector-to-Emitter Voltage	V _{CEO}		(-)70	V
Emitter-to-Base Voltage	V _{EBO}		(-)3	V
Collector Current	Ic		(-)300	mA
Peak Collector Current	I _{CP}		(-)600	mA
Collector Dissipation	D-		1.3	W
	PC	Tc=25°C	8	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	Onit
Collector Cutoff Current	ICBO	V _{CB} =(-)60V, I _E =0			(-)0.1	μΑ
Emitter Cutoff Current	I _{EBO}	$V_{EB}=(-)2V, I_{C}=0$			(-)1.0	μΑ
DC Current Gain	h _{FE} 1	V _{CE} =(-)10V, I _C =(-)50mA	40*		320*	
	h _{FE} 2	V _{CE} =(-)10V, I _C =(-)200mA	20			
Gain-Bandwidth Product	fT	V _{CE} =(-)10V, I _C =(-)100mA		600		MHz

*h_FE1 : The 2SA1536/2SC3951 are classified by 50mA h_FE as follows :

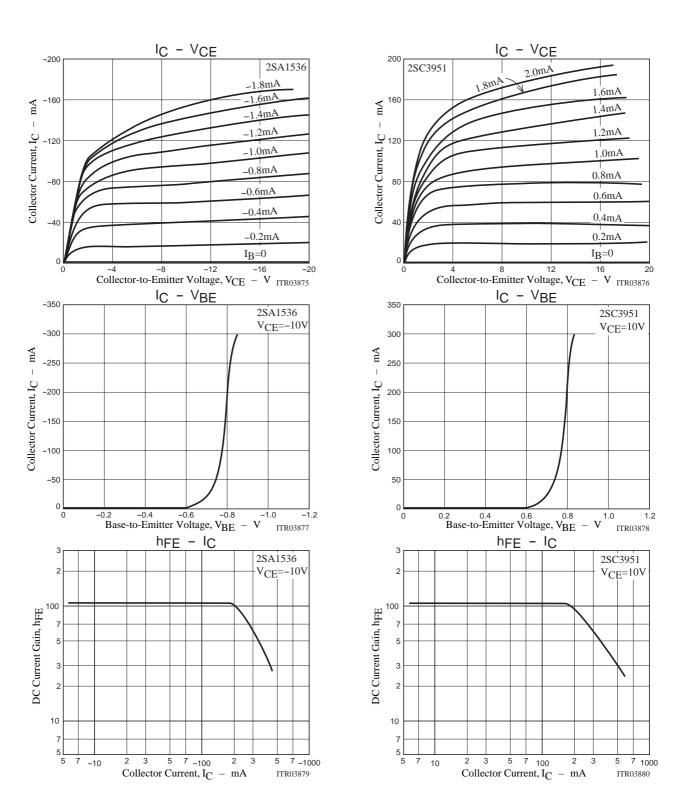
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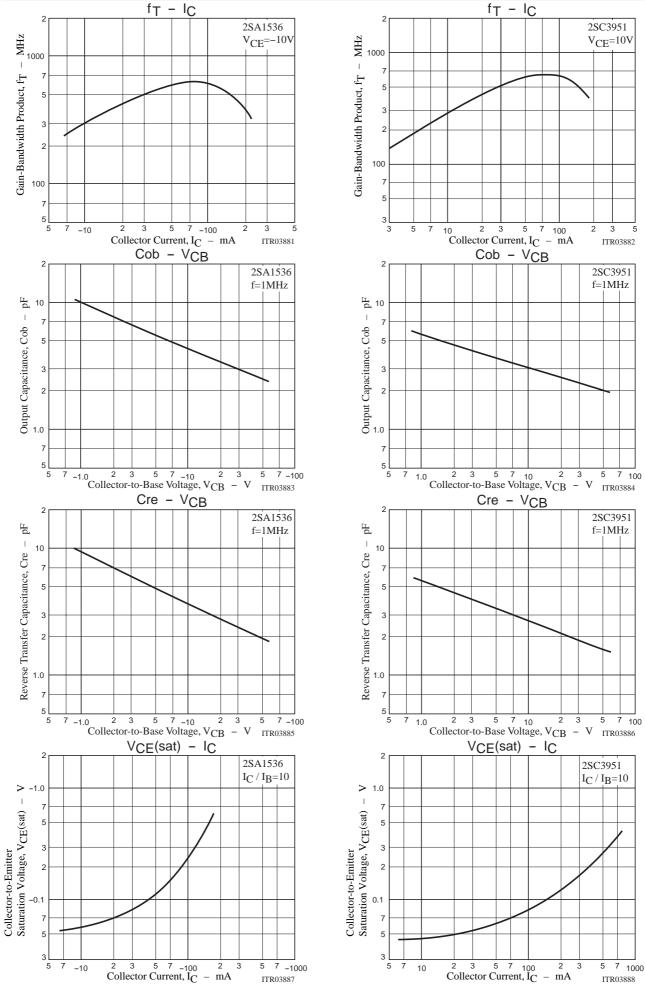
Rank	С	D	Е	F
hFE	40 to 80	60 to 120	100 to 200	160 to 320

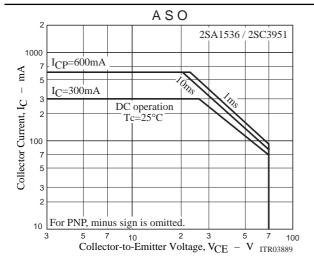
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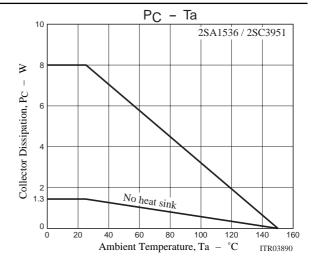
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Output Capacitance	C _{ob}	V _{CB} =(-)30V, f=1MHz		2.4		pF
				(3.1)		pF
Reverse Transfer Capacitance	C _{re}	V _{CB} =(-)30V, f=1MHz		1.9		pF
Reverse Transfer Capacitance				(2.4)		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =(-)50mA, I _B =(-)5mA			(-)1.0	V
Emitter-to-Base Saturation Voltage	V _{BE(sat)}	I _C =(-)50mA, I _B =(-)5mA			(–)1.0	V









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