

High-Definition CRT Display Video Output Applications

Package Dimensions

unit:mm

20420

Applications

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

Features

- · High f_T : f_T =400MHz.
- \cdot High breakdown voltage : VCEO=120Vmin.
- · Small reverse transfer capacitance and excellent HF response : Cre=1.7pF/NPN, 2.2pF/PNP.
- · Complementary PNP and NPN types.
- · Adoption of FBET process.
- · Micaless type: TO-126 plastic package.

(): 2SA1538

Specifications

Absolute Maximum Ratings at Ta = 25°C

2042B		
	[2SA1538/2SC3	3953]
	8.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	1: Emitter 2: Collector 3: Base SANYO: TO-126ML

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(-)120	V
Collector-to-Emitter Voltage	V _{CEO}		(-)120	V
Emitter-to-Base Voltage	V _{EBO}		(–)3	V
Collector Current	IC		(–)200	mA
Peak Collector Current	ICP		(-)400	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
	Symbol		min	typ	max	Offic
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)80V, I _E =0			(-)0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)2V, I _C =0			(-)1.0	μA
DC Current Gain	h _{FE} 1	V _{CE} =(-)10V, I _C =(-)10mA	40*		320*	
	h _{FE} 2	V _{CE} =(-)10V, I _C =(-)100mA	20			
Gain-Bandwidth Product	fT	V _{CE} =(-)10V, I _C =(-)50mA		400		MHz

* $h_{\mbox{\scriptsize FE}}1$: The 2SA1538/2SC3953 are classified by 50mA $h_{\mbox{\scriptsize FE}}$ as follows :

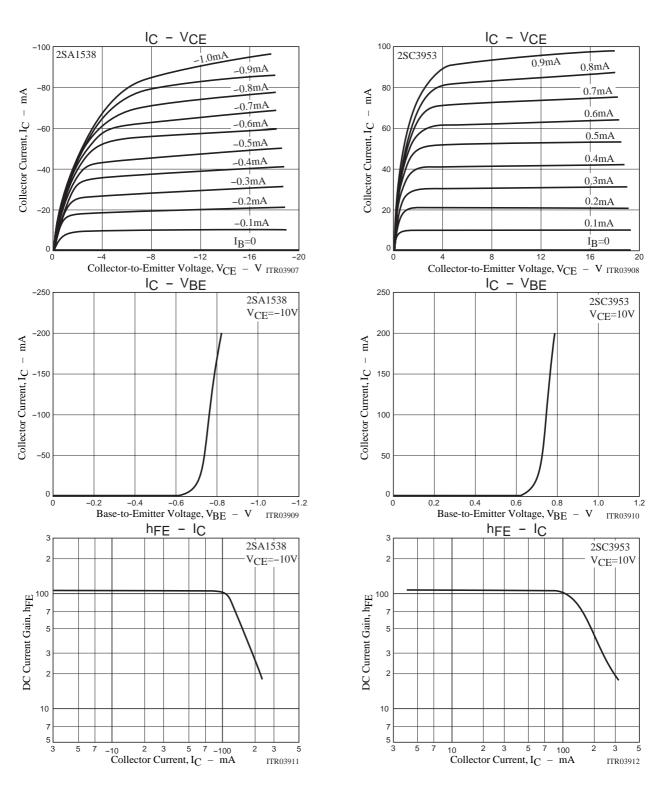
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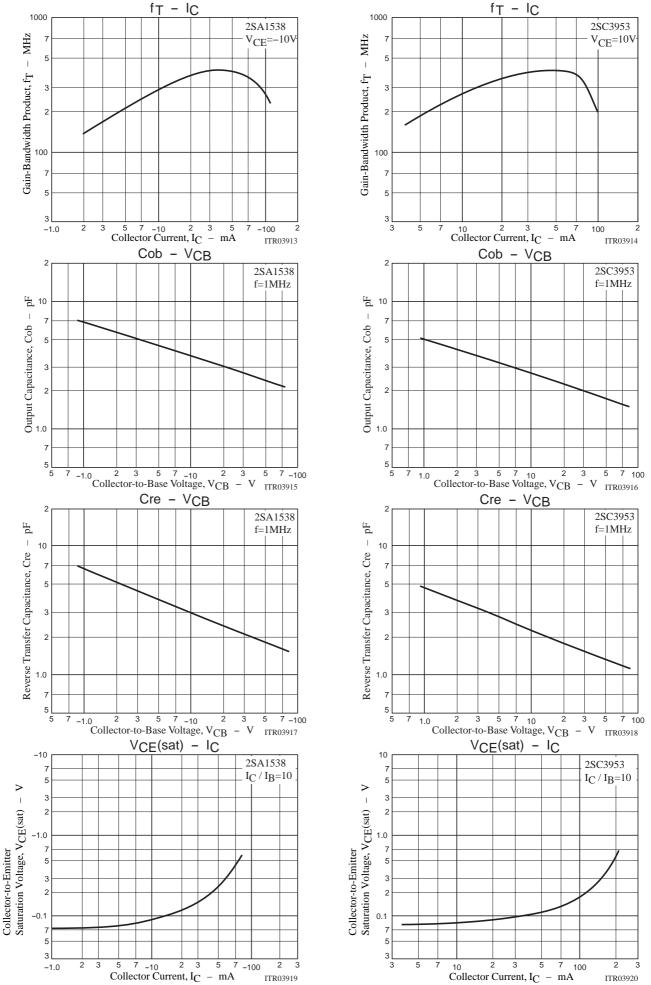
Rank	С	D	E	F
hFE	40 to 80	60 to 120	100 to 200	160 to 320

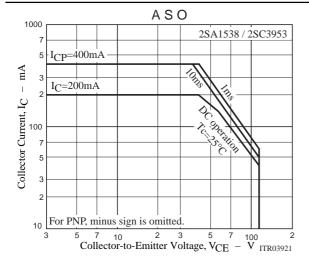
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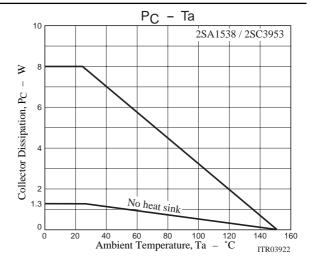
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oille
Output Capacitance	C _{ob}	V _{CB} =(-)30V, f=1MHz		2.1		pF
				(2.8)		pF
Reverse Transfer Capacitance	C _{re}	V _{CB} =(-)30V, f=1MHz		1.7		pF
Reverse Transfer Capacitance				(2.2)		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =(-)30mA, I _B =(-)3mA			(-)1.0	V
Emitter-to-Base Saturation Voltage	V _{BE(sat)}	I _C =(-)30mA, I _B =(-)3mA			(-)1.0	V









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