

2SA1538/2SC3953

High-Definition CRT Display Video Output Applications

Applications

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

Features

- \cdot 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

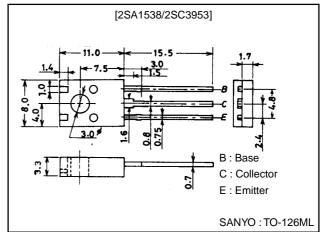
Specifications

Absolute Maximum Ratings at Ta = 25°C

Package Dimensions

unit:mm

2042A



Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(-)120	V
Collector-to-Emitter Voltage	VCEO		(–)120	V
Emitter-to-Base Voltage	V _{EBO}		(–)3	V
Collector Current	Ic		(-)200	mA
Peak Collector Current	I _{CP}		(-)400	mA
Collector Dissipation	PC		1.3	W
		Tc=25°C	8	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

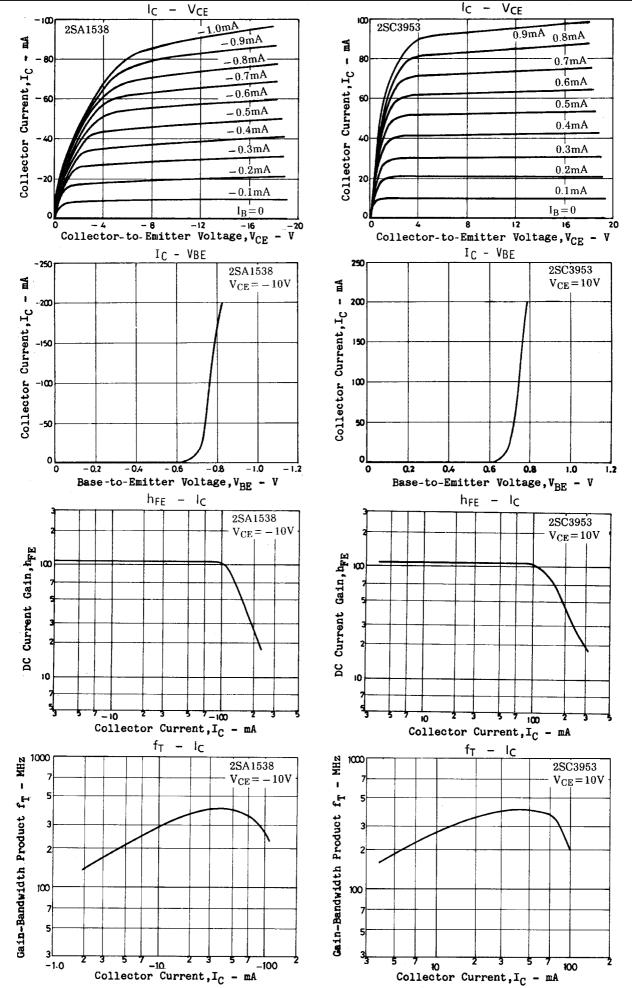
Electrical Characteristics at Ta = 25°C

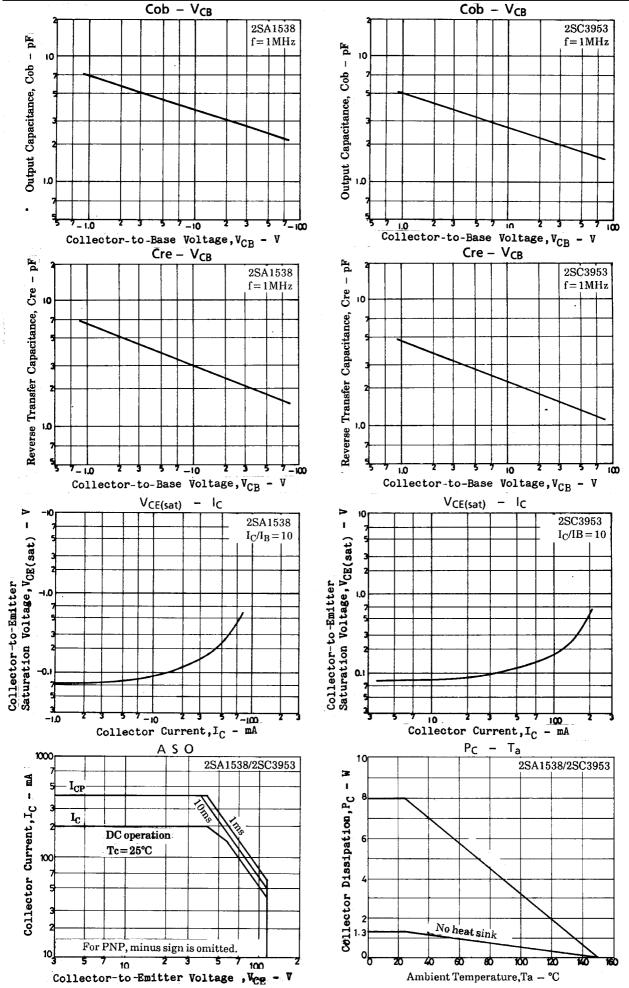
Parameter	Cymbol	Conditions		Ratings			
Parameter	Symbol	Conditions	min	typ	max	Unit	
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)80V, I _E =0			(–)0.1	μΑ	
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)2V, I _C =0			(–)1.0	μΑ	
DC Current Gain	h _{FE} 1	V _{CE} =(-)10V, I _C =(-)10mA	40*		320*		
	h _{FE} 2	V _{CE} =(-)10V, I _C =(-)100mA	20				
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA		400		MHz	
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	
				(2.2)		pF	
Collector-to-Emitter Saturation Voltage	V _{CE(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	

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

40	$\overline{}$	-00			400	400		000	400		
40	C	80	60	D	120	100	E	200	160	-	320

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