

No.2436B

2SA1537/2SC3952

PNP/NPN Epitaxial Planar Silicon Transistor

High-Definition CRT Display Video Output Applications

Applications

- High-definition CRT display video output, wide-band amp

Features

- High f_T : $f_T = 700\text{MHz}$
- High breakdown voltage: $V_{CEO} = 70\text{Vmin}$
- Small reverse transfer capacitance and excellent high-frequency characteristic: $C_{re} = 3.1\text{pF/NPN}$, 4.8pF/PNP .
- Complementary PNP and NPN types
- Adoption of FBET process
- Micaless type

() : PNP

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

Parameter	Symbol	Value	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	I_C	(-)500	mA
Collector Current (Pulse)	I_{CP}	(-)1000	mA
Collector Dissipation	P_C	1.3	W
		10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

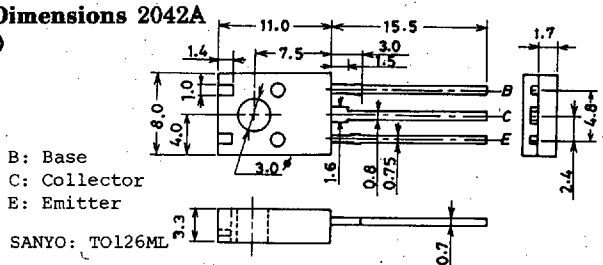
Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)60\text{V}, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)2\text{V}, I_C = 0$			(-)1.0	μA
DC Current Gain	h_{FE1}	$V_{CE} = (-)10\text{V}, I_C = (-)50\text{mA}$	40*		320*	
	h_{FE2}	$V_{CE} = (-)10\text{V}, I_C = (-)300\text{mA}$	60			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)100\text{mA}$		700		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		3.6		pF
				(5.4)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB} = (-)30\text{V}, f = 1\text{MHz}$		3.1		pF
				(4.8)		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)70\text{mA}, I_B = (-)7\text{mA}$			(-)1.0	V
E-B Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)70\text{mA}, I_B = (-)7\text{mA}$			(-)1.0	V

* h_{FE1} : The 2SA1537/2SC3952 are classified by 50mA h_{FE} as follows:

40	C	80	60	D	120	100	E	200	160	F	320
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Package Dimensions 2042A
(unit: mm)



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