

	No. 2440A	<h1 style="margin: 0;">2SA1541/2SC3956</h1> <p style="margin: 0;">PNP/NPN Epitaxial Planar Type Silicon Transistors</p> <p style="margin: 0;">High-Definition CRT Display Video Output Applications</p>
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Applications

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

Features

- . High gain-bandwidth product ($f_T=300\text{MHz}$)
- . High breakdown voltage ($V_{CEO}=200\text{Vmin}$)
- . Small reverse transfer capacitance and excellent high frequency characteristics ($c_{re}=2.2\text{pF/NPN}$, 2.7pF/PNP)
- . Complementary PNP and NPN types
- . Adoption of FBET process
- . Micaless type (TO126 plastic package)

(): PNP

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

			unit
Collector-to-Base Voltage	V_{CBO}	(-)200	V
Collector-to-Emitter Voltage	V_{CEO}	(-)200	V
Emitter-to-Base Voltage	V_{EBO}	(-)3	V
Collector Current	I_C	(-)200	mA
Peak Collector Current	i_{cp}	(-)300	mA
Collector Dissipation	P_C	1.3	W
		$T_c=25^\circ\text{C}$	7
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

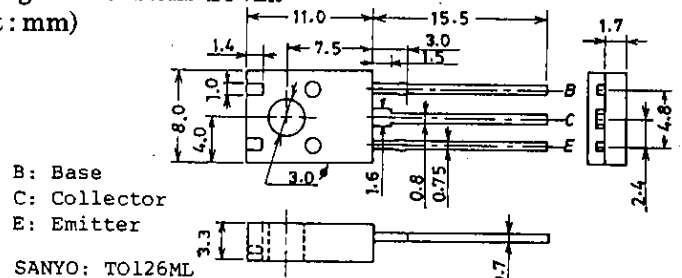
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)150\text{V}, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)2\text{V}, I_C=0$			(-)1.0	μA
DC Current Gain	h_{FE1}	$V_{CE}=(-)10\text{V}, I_C=(-)10\text{mA}$	40*		320*	
		$V_{CE}=(-)10\text{V}, I_C=(-)100\text{mA}$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)30\text{V}, I_C=(-)50\text{mA}$		300		MHz
Output Capacitance	c_{ob}	$V_{CB}=(-)30\text{V}, f=1\text{MHz}$		2.7		pF
				(3.2)		pF
Reverse Transfer Capacitance	c_{re}	$V_{CB}=(-)30\text{V}, f=1\text{MHz}$		2.2		pF
				(2.7)		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)30\text{mA}, I_B=(-)3\text{mA}$			(-)1.0	V
E-B Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)30\text{mA}, I_B=(-)3\text{mA}$			(-)1.0	V

* h_{FE1} : The 2SA1541/2SC3956 are classified by 10mA h_{FE} as follows:

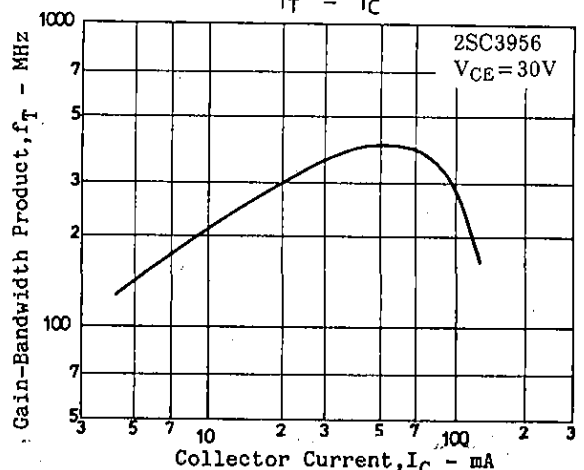
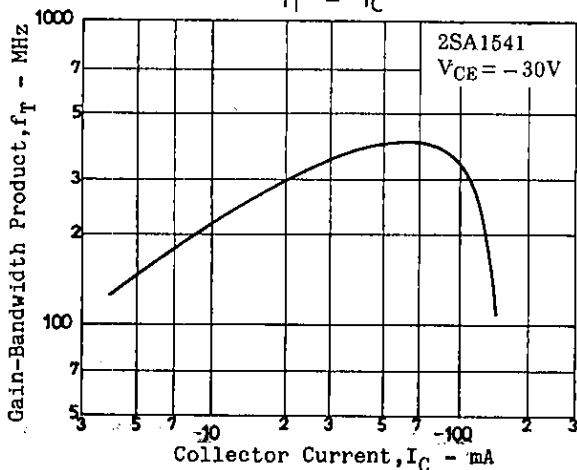
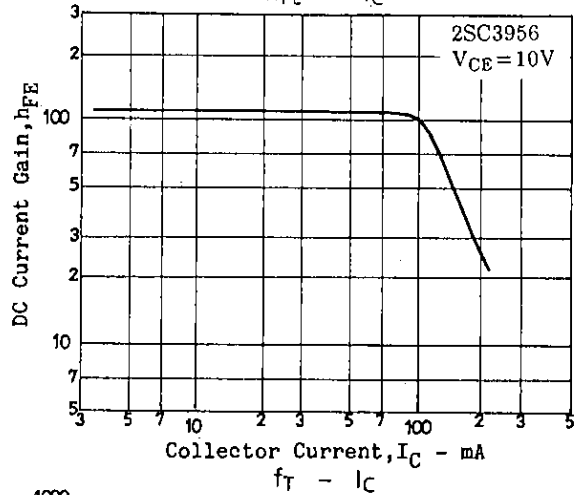
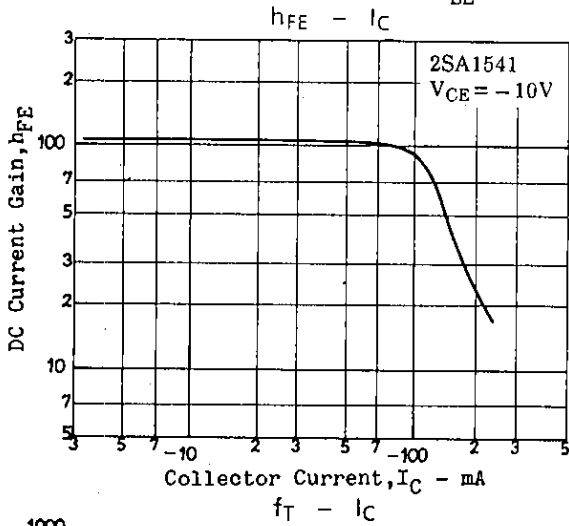
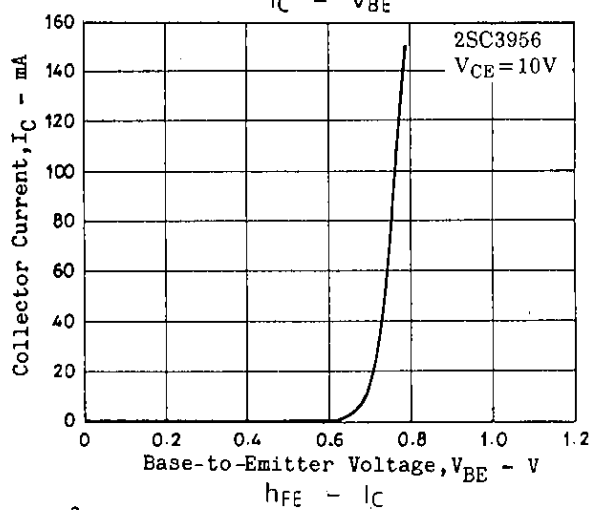
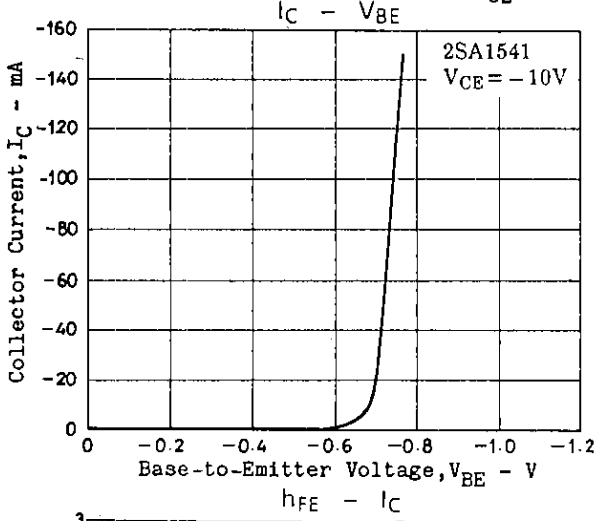
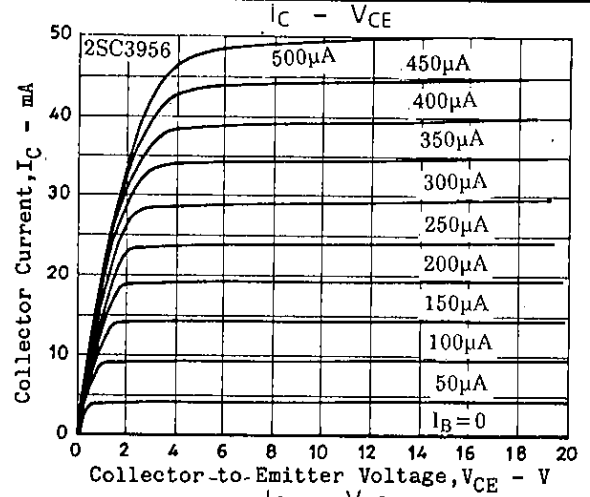
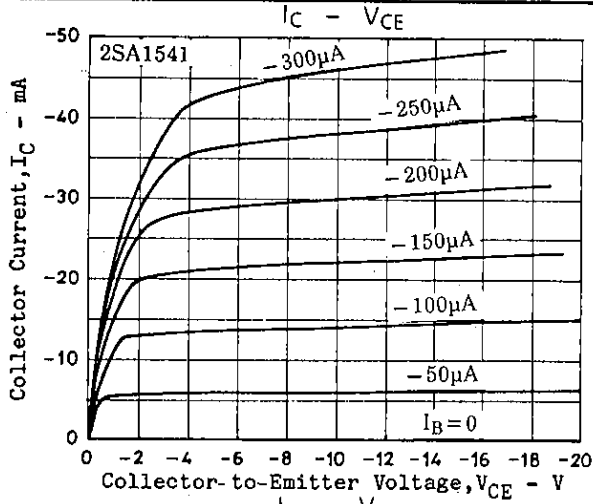
40	C	80	60	D	120	100	E	200	160	F	320
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Package Dimensions 2042A

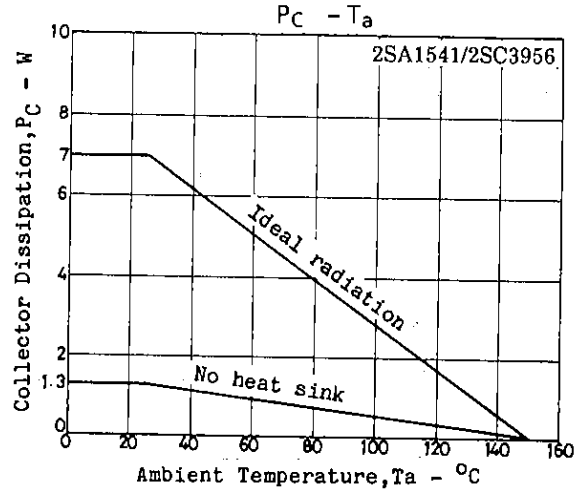
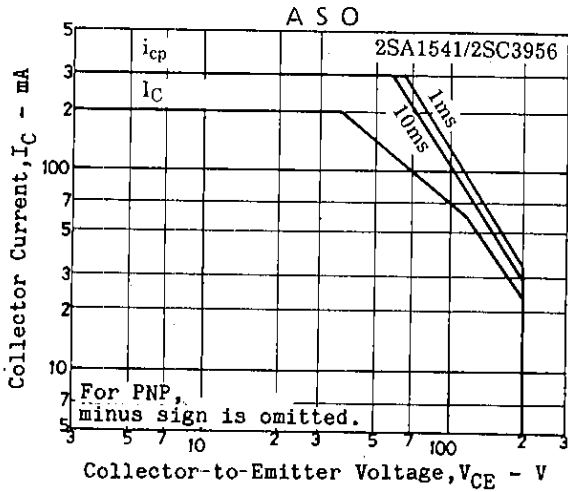
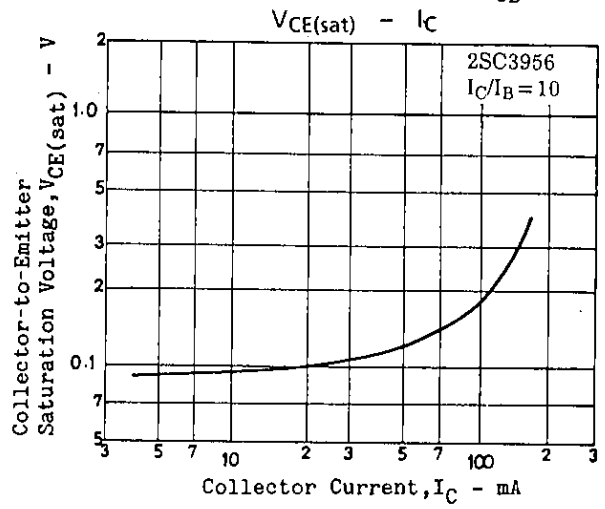
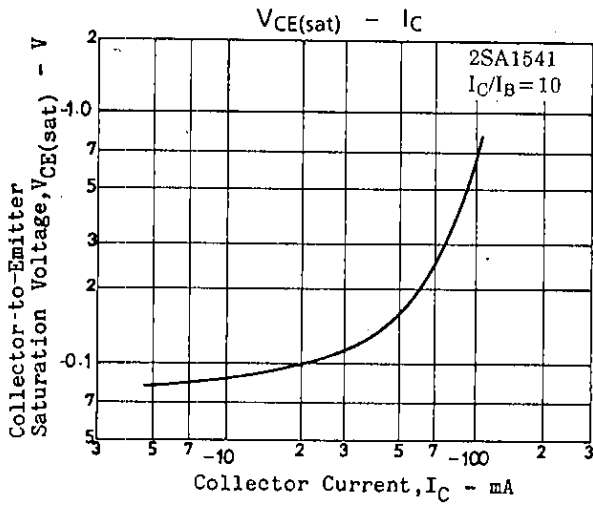
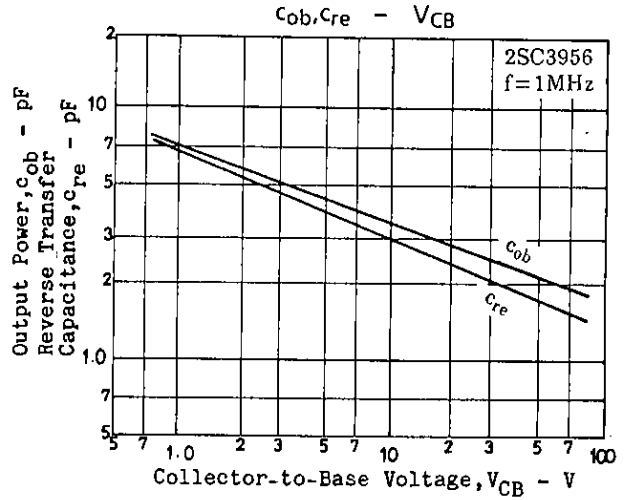
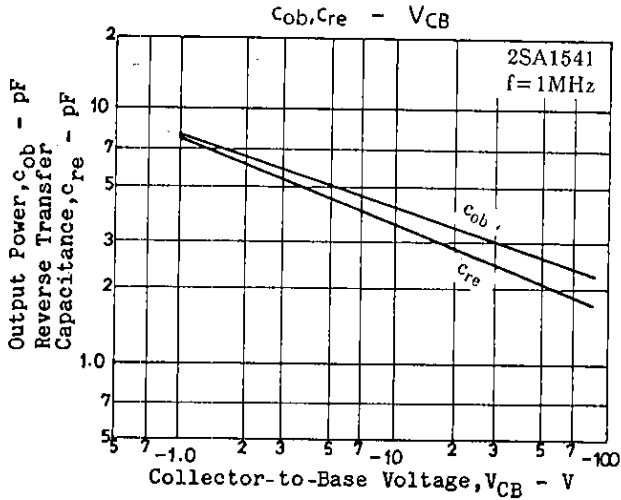
(unit: mm)



2SA1541/2SC3956



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