



No.2514

2SA1590/2SC4121

PNP/NPN Epitaxial Planar Silicon Transistors

Switching Applications
(with Bias Resistance)

Applications

- Switching circuit, inverter circuit, interface circuit, driver circuit.

Features

- On-chip bias resistance ($R_1=22k\Omega, R_2=\infty$)
- Small-sized package (SPA)

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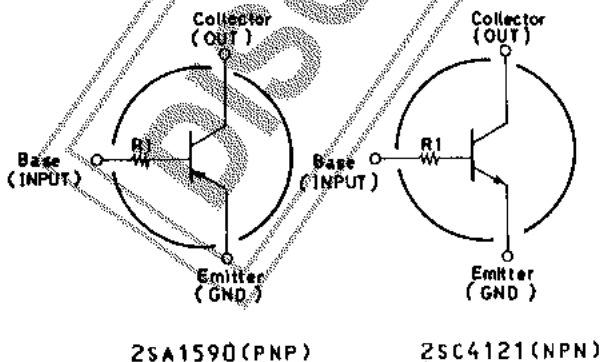
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

			unit
Collector to Base Voltage	V_{CB0}	(-)50	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)100	mA
Collector Current (Pulse)	I_{CP}	(-)200	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

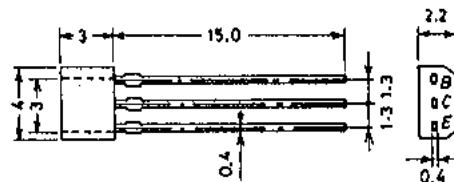
			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=(-)40\text{V}, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)5\text{V}, I_C=0$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)5\text{V}, I_C=(-)10\text{mA}$	140			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10\text{V}, I_C=(-)5\text{mA}$		250 (200)		MHz
Output Capacitance	c_{ob}	$V_{CB}=(-)10\text{V}, f=1\text{MHz}$		3.7 (5.5)		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)10\text{mA}, I_B=(-)0.5\text{mA}$		(-)0.1	(-)0.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu\text{A}, I_E=0$	(-)50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)100\mu\text{A}, R_{BE}=\infty$	(-)50			V
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE}=(-)5\text{V}, I_C=(-)100\mu\text{A}$	(-)0.4	0.55	(-)0.8	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE}=(-)0.2\text{V}, I_C=10\text{mA}$	(-)0.8	(-)2.0	(-)0.4	V
Input Resistance	R_1		15	22	29	$k\Omega$

Electrical Connection



Case Outline 2033

(unit:mm)

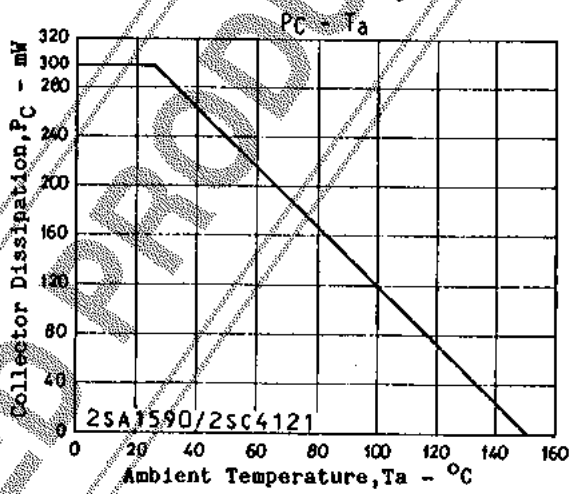
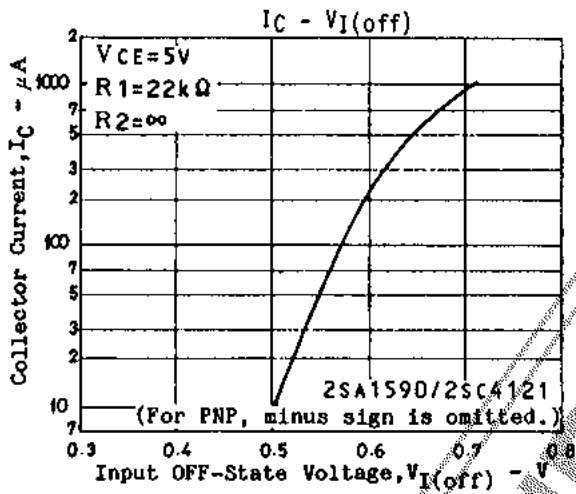
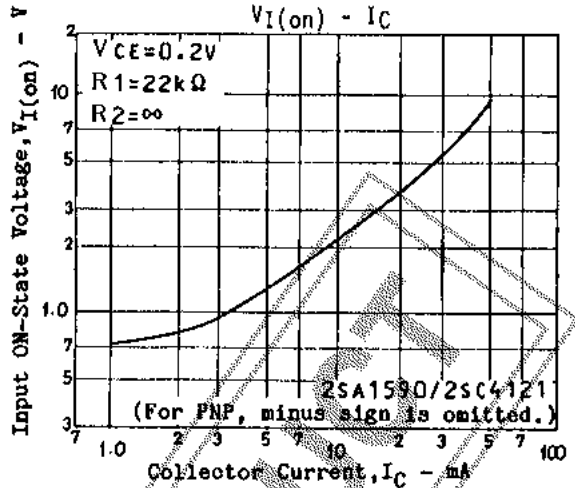
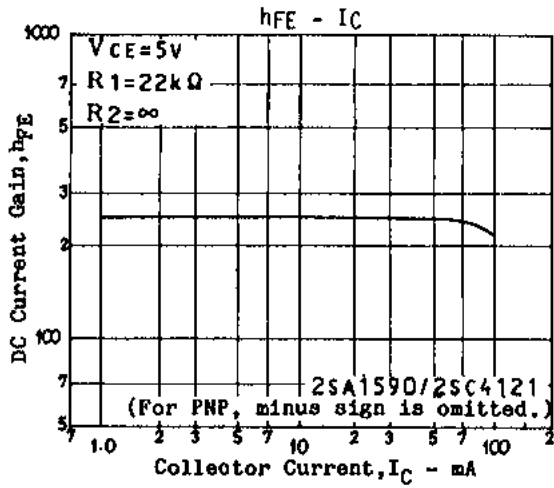


B: Base
C: Collector
E: Emitter
SANYO: SPA

Specifications and information herein are subject to change without notice.

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