

SANYO

No.1683A

2SA1421/2SC3654

PNP/NPN Epitaxial Planar Silicon Transistors

Switching Applications
(with Bias Resistor)

Use

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

Features

- With bias resistor ($R1=22k\Omega$, $R2=22k\Omega$).

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

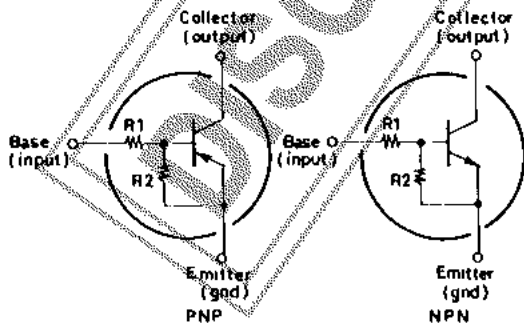
			unit
Collector to Base Voltage	V_{CBO}	(-) 50	V
Collector to Emitter Voltage	V_{CEO}	(-) 50	V
Emitter to Base Voltage	V_{EBO}	(-) 10	V
Collector Current	I_C	(-) 100	mA
Collector Current(Pulse)	I_{CP}	(-) 200	mA
Collector Dissipation	P_C	400	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to $+150$	$^\circ C$

Electrical Characteristics at $T_a=25^\circ C$

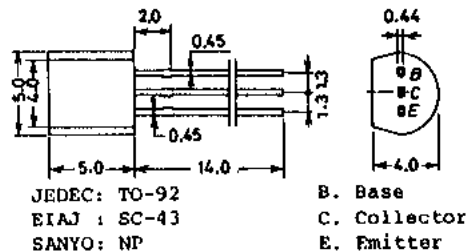
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-) 0.1	μA
Collector Cutoff Current	I_{CEO}	$V_{CE} = (-)40V, I_B = 0$			(-) 0.5	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)5V, I_C = 0$	(-) 70	(-) 113	(-) 150	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)5V, I_C = (-)5mA$	50			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10V, I_C = (-)5mA$		250		MHz
				(200)		
Output Capacitance	c_{ob}	$V_{CB} = (-)10V, f = 1MHz$		3.7		pF
				(5.5)		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)10mA, I_B = (-)0.5mA$	(-) 0.1		(-) 0.3	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-) 50			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)100\mu A, R_{BE} = \infty$	(-) 50			V

Continued on next page.

Electrical Connection



Case Outline 2003A
(unit:mm)



B. Base
C. Collector
E. Emitter

Specifications and information herein are subject to change without notice.

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			min	typ	max	unit
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE}=(-)5V, I_C=(-)100\mu A$	-0.8	-1.1	-1.5	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE}=(-)0.2V, I_C=(-)5mA$	-1.0	-1.9	-3.0	V
Input Resistance	R_1		15	22	29	k Ω
Resistance Ratio	R_1/R_2		0.9	1.0	1.1	-

Sample Application Circuit

