



SANYO Semiconductors

DATA SHEET

2SA1345/2SC3399

PNP/NPN Epitaxial Planar Silicon Transistors
Switching Applications
 (with Bias Resistance)

Applications

Switching circuit, inverter, interface circuit, driver

Features

- Built-in bias resistor ($R_1=47k\Omega$, $R_2=47k\Omega$).
- Small-sized package (SPA).

() : 2SA1345

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

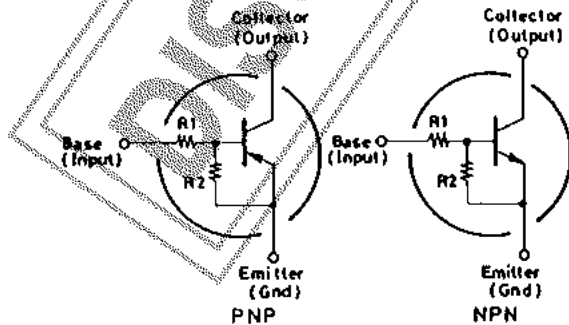
			unit
Collector to Base Voltage	V_{CBO}	(-150)	V
Collector to Emitter Voltage	V_{CEO}	(-150)	V
Emitter to Base Voltage	V_{EBO}	(-10)	V
Collector Current	I_C	(-100)	mA
Collector Current(Pulse)	I_{CP}	(-200)	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

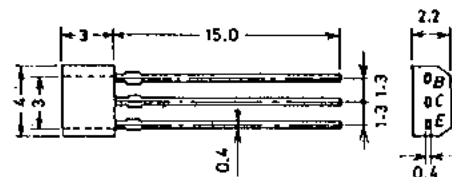
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-140\text{V}, I_E=0$			(-0.1)	μA
Collector Cutoff Current	I_{CEO}	$V_{CE}=(-40\text{V}, I_B=0$			(-0.5)	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-15\text{V}, I_C=0$	(-30)	(-53)	(-80)	μA
DC Current Gain	h_{FE}	$V_{CE}=(-15\text{V}, I_C=(-5\text{mA}$	50			
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
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-5\text{mA}, I_B=(-0.25\text{mA}$	(-0.1)		(-0.3)	V

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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.

SANYO Electric Co.,Ltd. Semiconductor Company

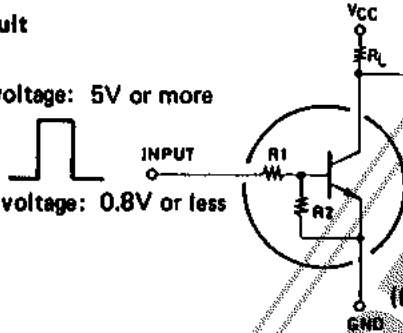
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			min	typ	max	unit
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)50			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)100\mu A, R_{BE}=\infty$	(-)50			V
Input Off Voltage	$V_{I(off)}$	$V_{CE}=(-)5V, I_C=(-)100\mu A$	(-)0.8	(-)1.1	(-)1.5	V
Input On Voltage	$V_{I(on)}$	$V_{CE}=(-)0.2V, I_C=(-)5mA$	(-)1.0	(-)2.5	(-)5.0	V
Input Resistance	R_1		32	47	62	k Ω
Input Resistance Ratio	R_1/R_2		0.9	1.0	1.1	

■ Sample Application Circuit

Input ON-state voltage: 5V or more
 Input OFF-state voltage: 0.8V or less



(For PNP, the polarity is reversed.)

