



2SA1511/2SC3901

PNP/NPN Epitaxial Planar Silicon Transistors

Switching Applications (with Bias Resistance)

Applications

- Switching circuits, inverter circuits, interface circuits, driver circuits

Features

- On-chip bias resistance: $R1=4.7k\Omega$
- Small-sized package: SPA

() : 2SA1511

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

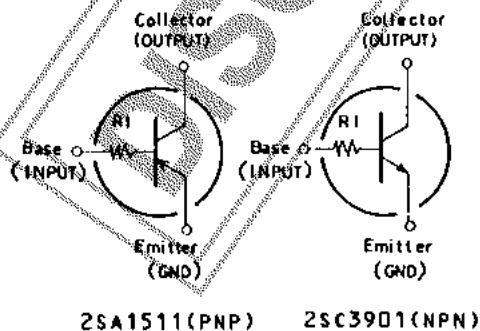
		unit
Collector to Base Voltage	V_{CBO}	(-) 50 V
Collector to Emitter Voltage	V_{CEO}	(-) 50 V
Emitter to Base Voltage	V_{EBO}	(-) 5 V
Collector Current	I_C	(-) 100 mA
Collector Current (Pulse)	I_{CP}	(-) 200 mA
Collector Dissipation	P_C	300 mW
Junction Temperature	T_J	150 $^\circ C$
Storage Temperature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

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

		min	typ	max	unit
Collector Cutoff Voltage	I_{CBO} $V_{CB} = (-) 40V, I_E = 0$			(-) 0.1	μA
Emitter Cutoff Voltage	I_{EBO} $V_{EB} = (-) 5V, I_C = 0$			(-) 0.1	μA
DC Current Gain	h_{FE} $V_{CE} = (-) 5V, I_C = (-) 10mA$	100			
Gain-Bandwidth Product	f_T $V_{CE} = (-) 10V, I_C = (-) 5mA$		250		MHz
			(200)		MHz
Output Capacitance	c_{ob} $V_{CB} = (-) 10V, f = 1MHz$		3.7		pF
			(5.5)		pF
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

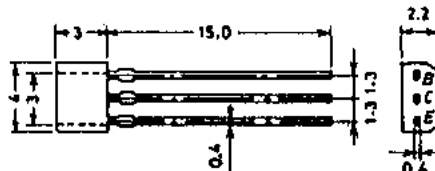
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Electrical Connection



Case Outline 2033

(unit:mm)



B: Base
C: Collector
E: Emitter

SANYO: SPA

Specifications and information herein are subject to change without notice.

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			min	typ	max	unit
Input OFF Voltage	$V_{I(off)}$	$V_{CE} = (-)5V,$ $I_{CE} = (-)100\mu A$	$(-)0.4$	$(-)0.55$	$(-)0.8$	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE} = (-)0.2V,$ $I_{CE} = (-)10mA$	$(-)0.6$	$(-)1.0$	$(-)2.0$	V
Input OFF-State Voltage	R_1		3.3	4.7	6.1	k Ω

