Ordering number: EN 2105A

SANYO

No.2105A

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=4.7kΩ
- Small-sized package: SPA

( ):2SA1511

Absolute Maximum Ratings at Ta=25°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	Tj	150	°C
Storage Temperature	Tstg	−55 to +150	°C

Electrical Characteristics at Ta=25°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=(−)10μA, I_E=0	(−)50			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(−)100μA, R_{BE}=∞	(−)50			V

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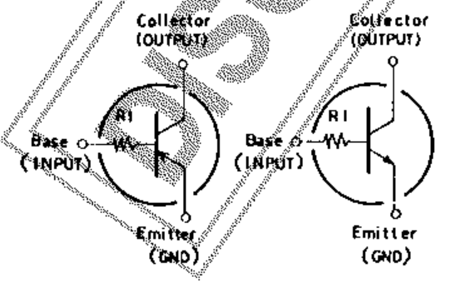
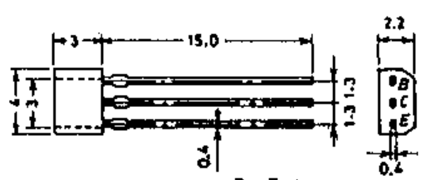
Electrical Connection



2SA1511(PNP) 2SC3901(NPN)

Case Outline 2033
(unit:mm)



B: Base
C: Collector
E: Emitter

SANYO: SPA

Specifications and information herein are subject to change without notice.

Continued from preceding page.

			min	typ	max	unit
Input OFF Voltage	$V_{I(off)}$	V_{CE}=(−)5V, I_C=(−)100μA	(−)0.4	(−)0.55	(−)0.8	V
Input ON-State Voltage	$V_{I(on)}$	V_{CE}=(−)0.2V, I_C=(−)10mA	(−)0.6	(−)1.0	(−)2.0	V
Input OFF-State Voltage	R1		3.3	4.7	6.1	kΩ