

<b>SANYO</b>	No.2161A	<b>2SA1520/2SC3914</b>
		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=2.2kΩ, R2=10kΩ)
- Small-sized package (CP)
- Large current capacity (IC=500mA)

( ): 2SA1520

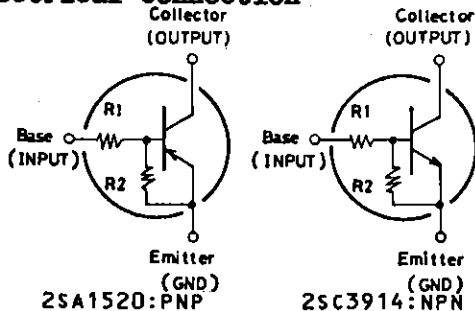
**Absolute Maximum Ratings at Ta=25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	(-)50	V
Collector to Emitter Voltage	V <sub>CE0</sub>	(-)50	V
Emitter to Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)500	mA
Collector Current(Pulse)	I <sub>CP</sub>	(-)800	mA
Collector Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics at Ta=25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =(-)40V, I <sub>E</sub> =0			(-)0.1	μA
	I <sub>CE0</sub>	V <sub>CE</sub> =(-)40V, I <sub>B</sub> =0			(-)0.5	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =(-)5V, I <sub>C</sub> =0	(-)315	(-)410	(-)590	μA
	DC Current Gain	h <sub>FE</sub>	50			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =(-)10V, I <sub>C</sub> =(-)5mA		250		MHz
	Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> =(-)10V, f=1MHz	(200)		MHz
				3.7		pF
				(5.5)		pF
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =(-)50mA, I <sub>B</sub> =(-)2.5mA		(-)0.1	(-)0.3	V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =(-)10μA, I <sub>E</sub> =0	(-)50			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =(-)100μA, R <sub>BE</sub> =∞	(-)50			V
Input OFF-State Voltage	V <sub>I(off)</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)100μA	(-)0.5	(-)0.67	(-)0.9	V
Input ON-State Voltage	V <sub>I(on)</sub>	V <sub>CE</sub> =(-)0.2V, I <sub>C</sub> =(-)50mA	(-)0.7	(-)1.6	(-)3.0	V
Input Resistance	R <sub>1</sub>		1.5	2.2	2.9	kΩ
Resistance Ratio	R <sub>1</sub> /R <sub>2</sub>		0.198	0.22	0.242	

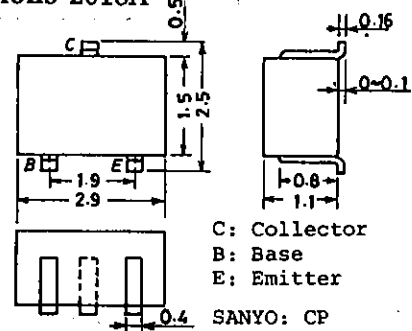
**Electrical Connection**



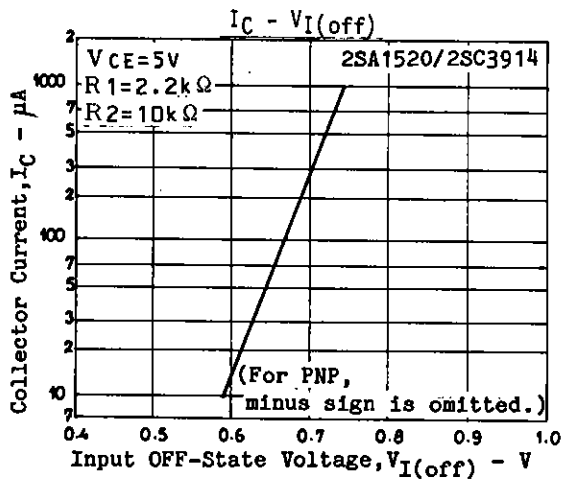
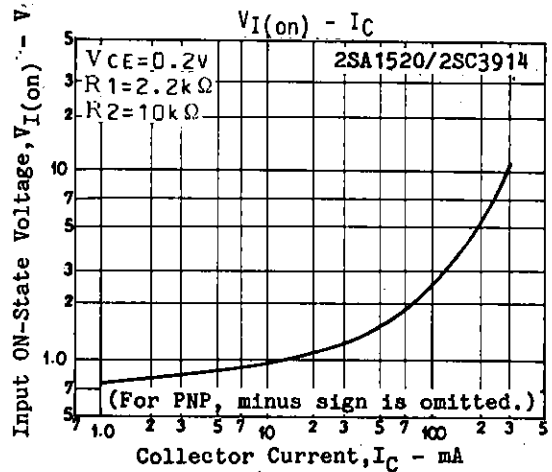
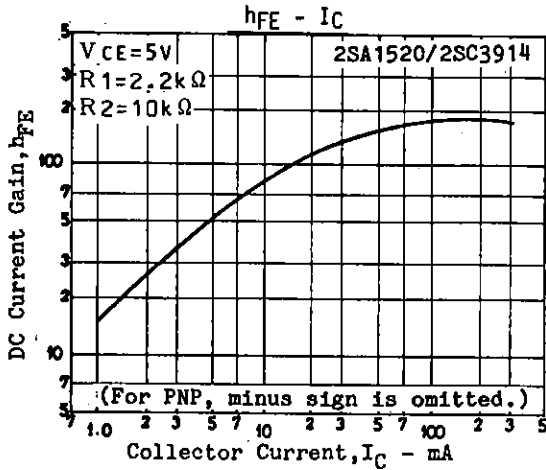
**Package Dimensions 2018A**

(unit:mm)

**Marking**  
2SA1520: NL  
2SC3914: VY



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