

No.2166

# 2SA1521/2SC3915

PNP/NPN Epitaxial Planar Silicon Transistors

Switching Applications (with Bias Resistance)

### **Applications**

. Switching circuit, inverter circuit, interface circuit, driver circuit

#### **Features**

- . On-chip bias resistance  $(R1\!=\!2.2k\Omega,R2\!=\!2.2k\Omega)$
- . Small-sized package (CP)
- . Large current capacity (I<sub>C</sub>=500mA)

### (·): 2SA1521

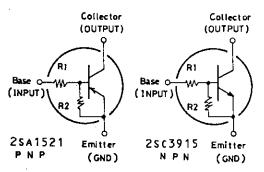
Absolute Maximum Ratings at Ta=	25 <sup>0</sup> C		unit
Collector to Base Voltage	V <sub>CBO</sub>	(-)50	V
Collector to Emitter Voltage	ACEO	(-)50	V
Emitter to Base Voltage	V <sub>EBO</sub>	(-)6	v
Collector Current	IC	(-)500	mA
Collector Current(Pulse)	$I_{CP}$	(-)800	mA
Collector Dissipation	PC	200	mW
Junction Temperature	Τj	150	ос
Storage Temperature	Tstg	-55 to +150	°C

Electrical Characteristics Collector Cutoff Current Collector Cutoff Current Emitter Cutoff Current DC Current Gain Gain-Bandwidth Product Output Capacitance	ICBO ICEO IEBO hFE f <sub>T</sub>	V <sub>CB</sub> =(-)40V,I <sub>E</sub> =0 V <sub>CE</sub> =(-)40V,I <sub>B</sub> =0 V <sub>EB</sub> =(-)5V,I <sub>C</sub> =0 V <sub>CE</sub> =(-)5V,I <sub>C</sub> =(-)50mA V <sub>CE</sub> =(-)10V,I <sub>C</sub> =(-)5mA V <sub>CB</sub> =(-)10V,f=1MHz	50	(-)0.1 (-)0.5 -)1140(-)1670 250 (200) 3.7 (5.5)	μΑ μΑ MHz MHz pF pF
C-E Saturation Voltage C-B Breakdown Voltage C-E Breakdown Voltage	VCE(sat) V(BR)CBO V(BR)CEO	$I_{C}=(-)50\text{mA}, I_{B}=(-)2.5\text{mA}$ $I_{C}=(-)10\mu\text{A}, I_{E}=0$ $I_{C}=(-)100\mu\text{A}, R_{BE}=\infty$	(-)50 (-)50	(-)0.1 (-)0.3	

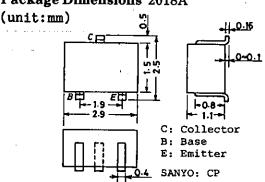
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# Marking 2SA1521:0L, 2SC3915:WY

#### Electrical Connection

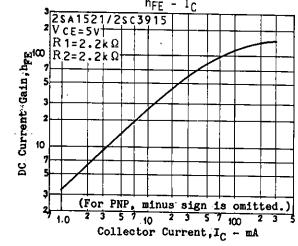


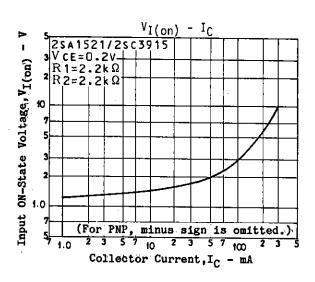
### Package Dimensions 2018A

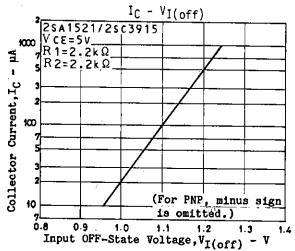


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Input OFF-State Voltage Input ON-State Voltage Input ON-State Voltage Input Resistance Ratio V_{I(off)} V_{CE}=(-)5V, I_{C}=(-)100\mu A (-)0.8 (-)1.1 (-)1.5 V_{CE}=(-)0.2V, I_{C}=(-)0.2V, I_{
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