

<b>SANYO</b>	No.2160A	<b>2SA1519/2SC3913</b>
		PNP/NPN Epitaxial Planar Silicon Transistors <b>Switching Applications</b> (with Bias Resistance)

**Applications**

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

**Features**

- On-chip bias resistance: (R1=4.7kΩ, R2=4.7kΩ)
- Small-sized package: CP
- Large current capacity: I<sub>C</sub>=500mA

( ): 2SA1519

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

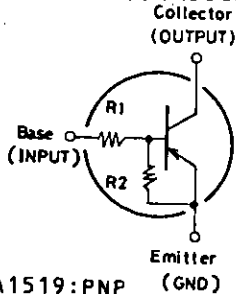
			unit
Collector to Base Voltage	V <sub>CB0</sub>	(-)50	V
Collector to Emitter Voltage	V <sub>CEO</sub>	(-)50	V
Emitter to Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)500	mA
Collector Current(Pulse)	I <sub>CP</sub>	(-)800	mA
Collector Dissipation	P <sub>C</sub>	200	mW
Junction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

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

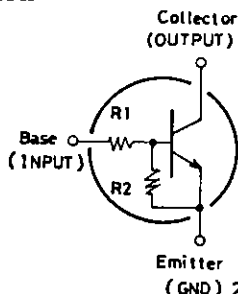
		min	typ	max	unit	
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =(-)40V, I <sub>E</sub> =0		(-)0.1	μA	
	I <sub>CEO</sub>	V <sub>CE</sub> =(-)40V, I <sub>B</sub> =0		(-)0.5	μA	
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =(-)5V, I <sub>C</sub> =0	(-)410	(-)532	(-)760	μA
	h <sub>FE</sub>	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)20mA	50			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =(-)10V, I <sub>C</sub> =(-)5mA		250		MHz
	c <sub>ob</sub>	V <sub>CB</sub> =(-)10V, f=1MHz		3.7		pF
Collector to Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =(-)40mA, I <sub>B</sub> =(-)2mA	(-)0.1	(-)0.3		V
	V <sub>(BR)CBO</sub>	I <sub>C</sub> =(-)10μA, I <sub>E</sub> =0	(-)50			V
Collector to Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =(-)100μA, R <sub>BE</sub> =∞	(-)50			V

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**Electrical Connection**



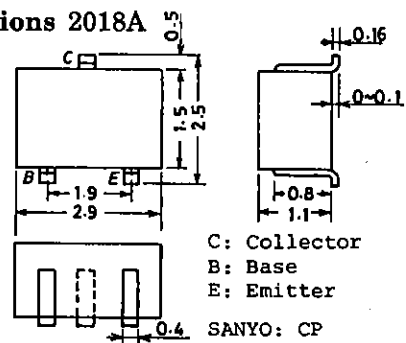
2SA1519:PNP



2SC3913:NPN

**Package Dimensions 2018A**

(unit:mm)

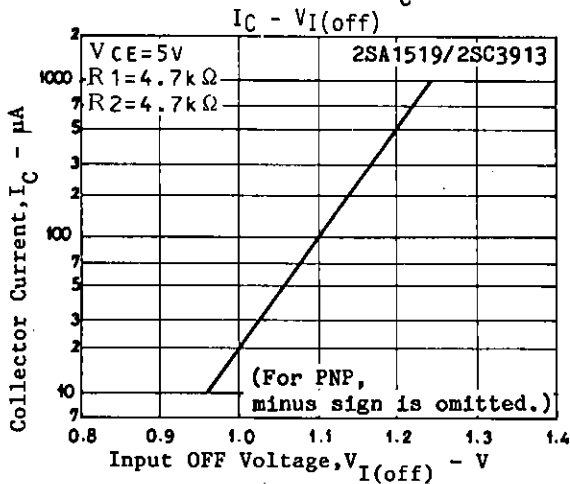
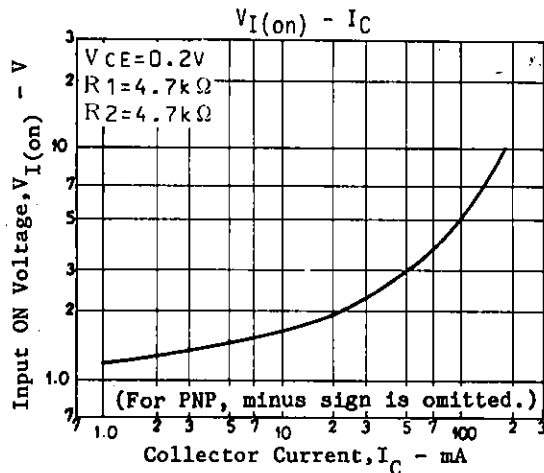
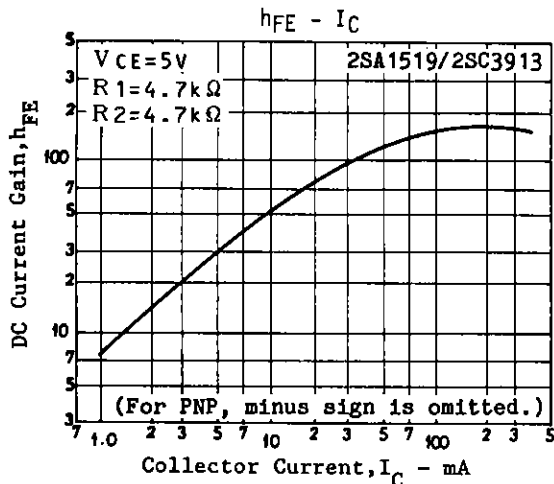


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			min	typ	max	unit
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE} = (-)5V,$ $I_{C} = (-)100\mu A$	(-)0.8	(-)1.1	(-)1.5	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE} = (-)0.2V,$ $I_{C} = (-)20mA$	(-)1.0	(-)1.9	(-)4.0	V
Input Resistance	R1		3.3	4.7	6.1	k $\Omega$
Resistance Ratio	R1/R2		0.9	1.0	1.1	



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