

<b>SANYO</b>	No.2159A	<b>2SA1518/2SC3912</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=10kΩ, R2=10kΩ)
- Small-sized package: CP
- Large current capacity: I<sub>C</sub>=500mA

( ) : 2SA1518

Absolute Maximum Ratings at Ta=25°C

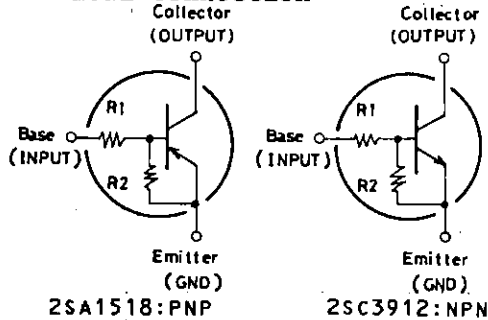
			unit
Collector to Base Voltage	V <sub>CB0</sub>	(-)50	V
Collector to Emitter Voltage	V <sub>CEO</sub>	(-)50	V
Emitter to Base Voltage	V <sub>EBO</sub>	(-)10	V
Collector Current	I <sub>C</sub>	(-)500	mA
Collector Current(Pulse)	I <sub>CP</sub>	(-)800	mA
Collector Dissipation	P <sub>C</sub>	200	mW
Junction 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>CBO</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	(-)195	(-)250	(-)360	μA
	h <sub>FE</sub>	V <sub>CE</sub> = (-)5V, I <sub>C</sub> = (-)10mA	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	(200)			MHz
Output Capacitance			3.7			pF
			(5.5)			pF
Collector to Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = (-)20mA, I <sub>B</sub> = (-)1mA	(-)0.1	(-)0.3		V
	V <sub>(BR)CBO</sub>	I <sub>B</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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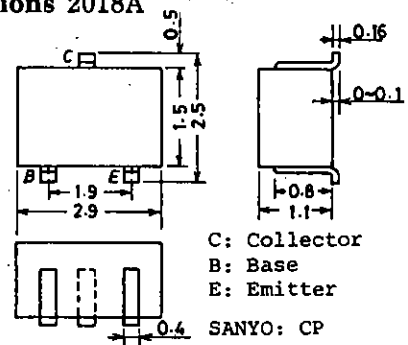
**Electrical Connection**



**Package Dimensions 2018A**

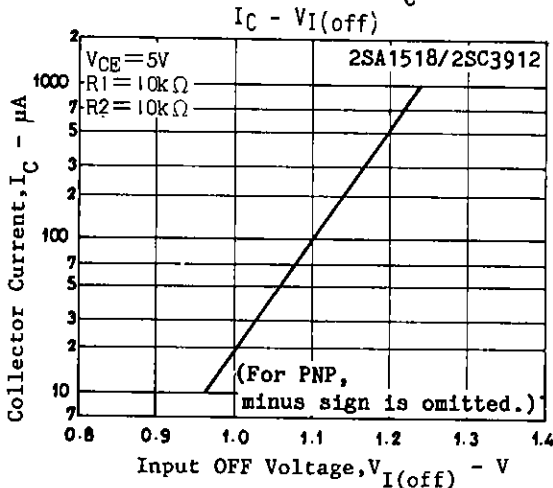
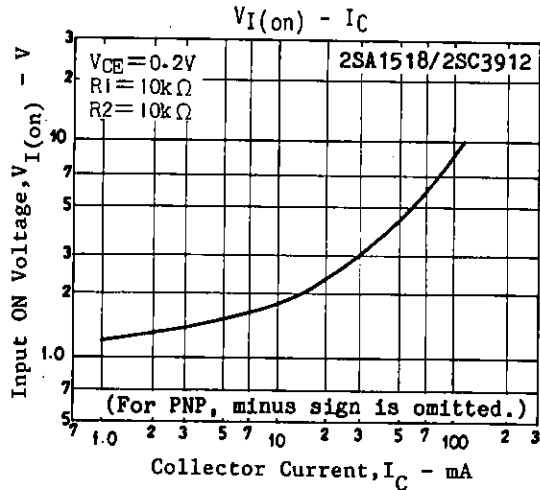
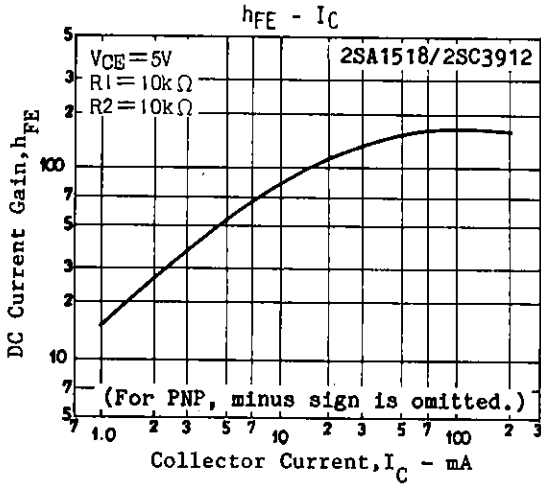
(unit: mm)

Marking  
2SA1518: LL  
2SC3912: TY



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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	$V_{I(on)}$	$V_{CE} = (-)0.2V,$ $I_C = (-)10mA$	(-)1.0	(-)2.0	(-)4.0	V
Input Resistance	$R_1$		7	10	13	$k\Omega$
Resistance Ratio	$R_1/R_2$		0.9	1.0	1.1	



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