

SANYO

No.2160A

2SA1519/2SC3913

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: ($R_1=4.7k\Omega$, $R_2=4.7k\Omega$)
- Small-sized package: CP
- Large current capacity: $I_C=500mA$

(): 2SA1519

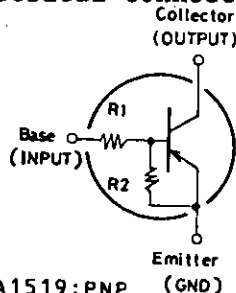
Absolute Maximum Ratings at $T_a=25^\circ C$

			unit
Collector to Base Voltage	V_{CB0}	(-)50	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)500	mA
Collector Current(Pulse)	I_{CP}	(-)800	mA
Collector Dissipation	P_C	200	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

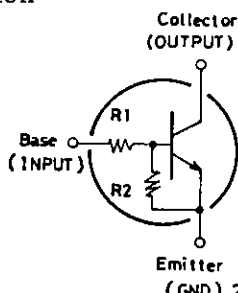
Electrical Characteristics at $T_a=25^\circ C$

		min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=(-)40V, I_E=0$		(-)0.1	μA
	I_{CEO}	$V_{CE}=(-)40V, I_B=0$		(-)0.5	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)5V, I_C=0$	(-)410	(-)532	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)5V, I_C=(-)20mA$	50		
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	$V_{CE(sat)}$	$I_C=(-)40mA, I_B=(-)2mA$	(-)0.1	(-)0.3	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)50		V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)100\mu A, R_{BE}=\infty$	(-)50		V

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Electrical Connection

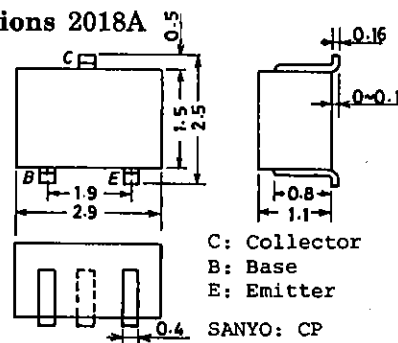
2SA1519:PNP



2SC3913:NPN

Package Dimensions 2018A

(unit:mm)

C: Collector
B: Base
E: Emitter

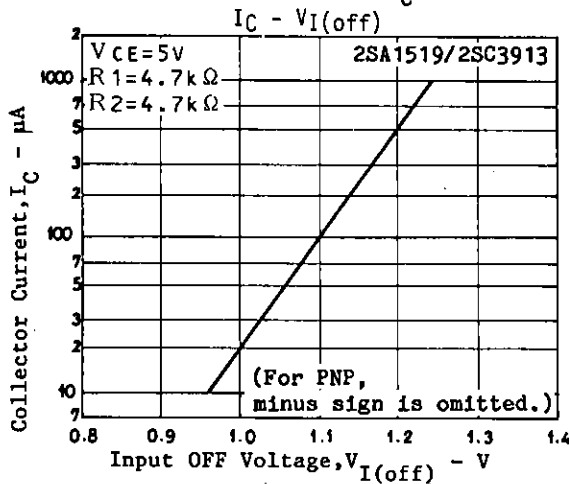
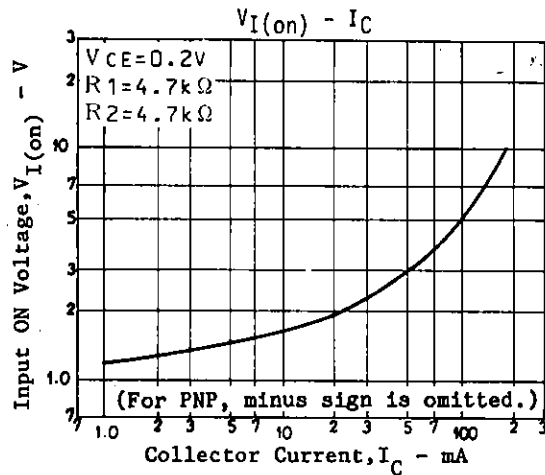
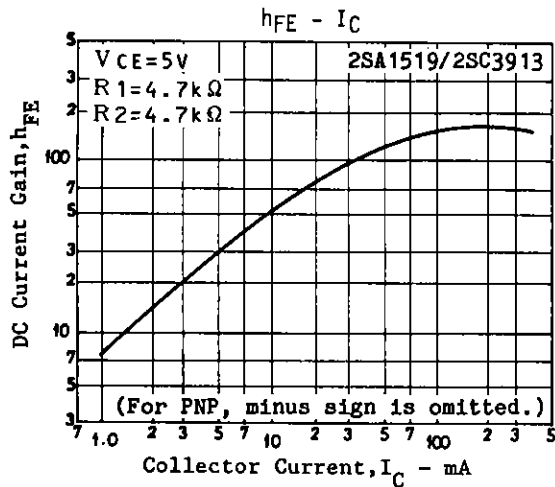
SANYO: CP

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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	R_1		3.3	4.7	6.1	k Ω
Resistance Ratio	R_1/R_2		0.9	1.0	1.1	



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