Ordering number: EN 2166

SANYO

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=2.2kΩ, R2=2.2kΩ)
- Small-sized package (CP)
- Large current capacity (I_C=500mA)

( ): 2SA1521

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CBO}	(-)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	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

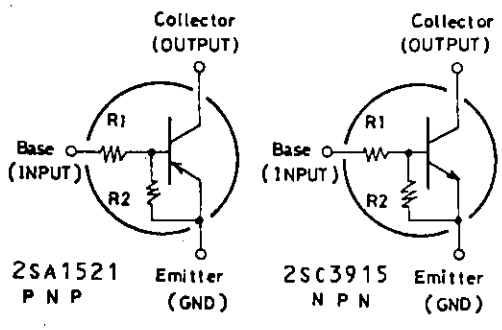
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=(-)40V, I_E=0			(-)0.1	μA
Collector Cutoff Current	I_{CEO}	V_{CE}=(-)40V, I_B=0			(-)0.5	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)5V, I_C=0	(-)860	(-)1140	(-)1670	μA
DC Current Gain	h_{FE}	V_{CE}=(-)5V, I_C=(-)50mA	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
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(-)50mA, I_B=(-)2.5mA		(-)0.1	(-)0.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=(-)10μA, I_E=0	(-)50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(-)100μA, R_{BE}=∞	(-)50			V

Continued on next page.

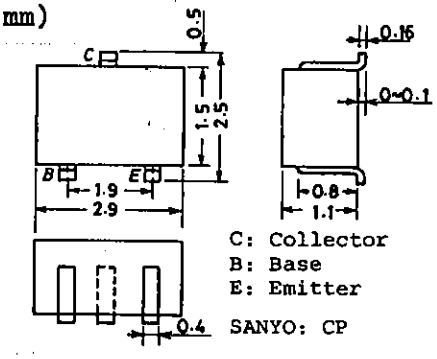
Marking 2SA1521:OL, 2SC3915:WY

Electrical Connection



Package Dimensions 2018A

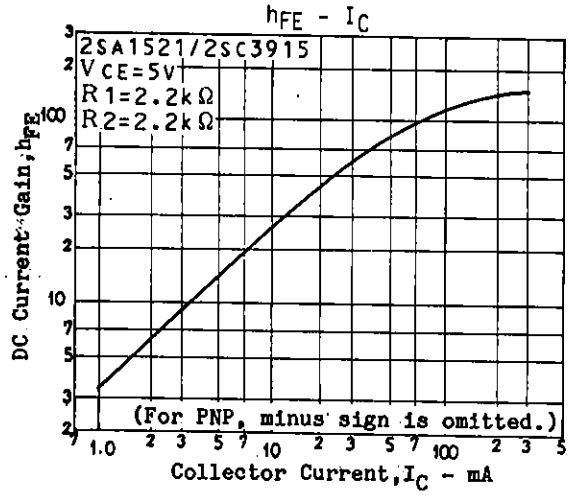
(unit: mm)

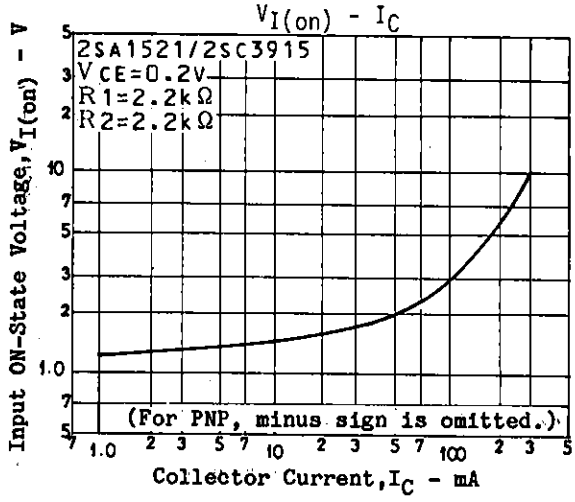


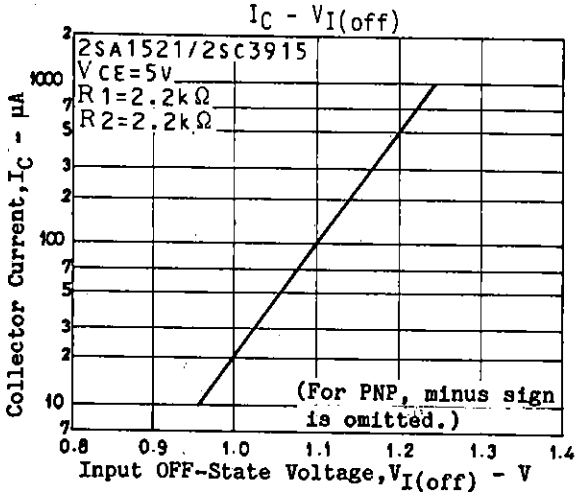
SANYO Electric Co.,Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

Continued from preceding page.

			min	typ	max	unit
Input OFF-State Voltage	$V_{I(off)}$	V_{CE}=(-)5V, I_C=(-)100μA	(-)0.8	(-)1.1	(-)1.5	V
Input ON-State Voltage	$V_{I(on)}$	V_{CE}=(-)0.2V, I_C(-)50mA	(-)1.0	(-)1.9	(-)4.0	V
Input Resistance	R1		1.5	2.2	(-)2.9	kΩ
Resistance Ratio	R1/R2		0.9	1.0	(-)1.1	







- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
  ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.