Ordering number: EN 2149A

SANYO

No.2149A

2SA1525/2SC3919

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: $R_1=2.2k\Omega, R_2=2.2k\Omega$
. Small-sized package: SPA
. Large current capacity: $I_C=500mA$

( ):2SA1525

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	300	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-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
	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
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$V_{CB}=(-)50mA, I_B=(-)2.5mA$		(-)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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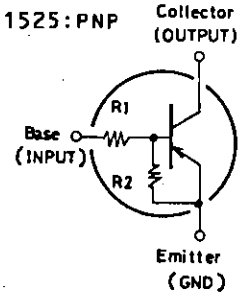
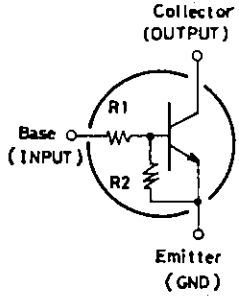
Electrical Connection

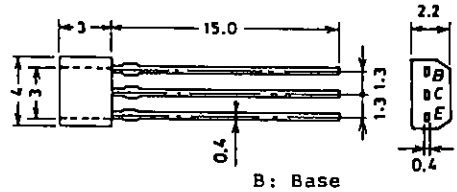
2SA1525: PNP



2SC3919: NPN



Package Dimensions (unit: mm) 2033



B: Base
C: Collector
E: Emitter

SANYO: SPA

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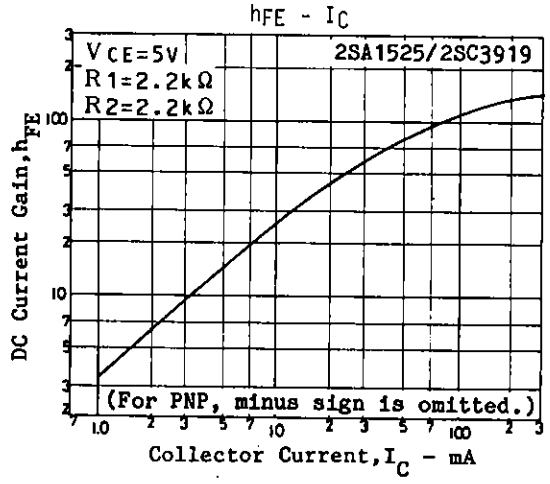
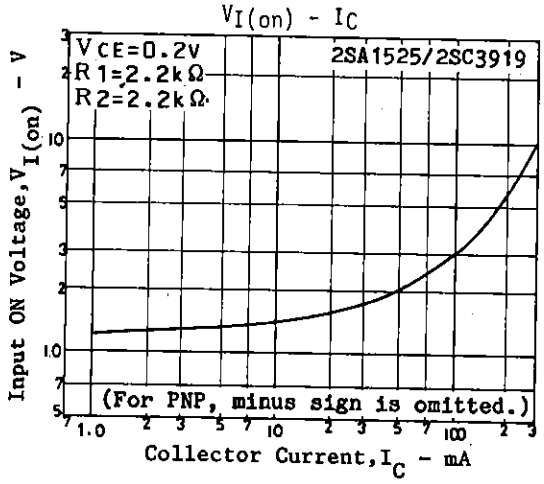
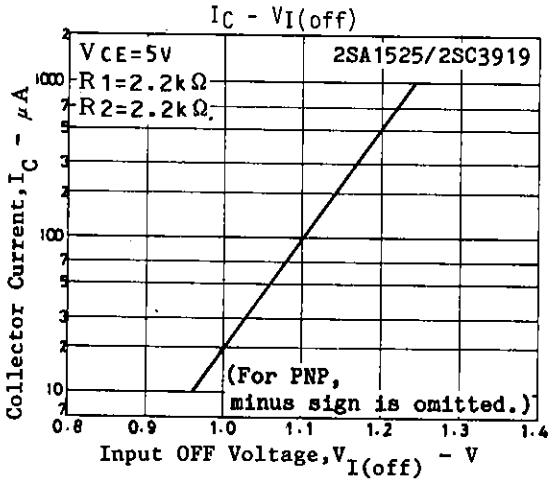
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

Continued from preceding page.

			min	typ	max	unit
Input OFF 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	







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