

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 $T_a=25^\circ C$

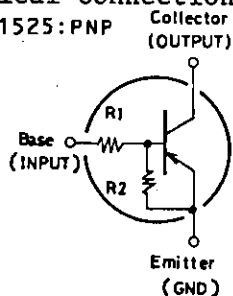
			unit
Collector to Base Voltage	V	(-)50	V
Collector to Emitter Voltage	V_{CBO}	(-)50	V
Emitter to Base Voltage	V_{CEO}	(-)6	V
Collector Current	I_C	(-)500	mA
Collector Current (Pulse)	I_{CP}	(-)800	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{Jstg}	-55 to +150	$^\circ C$

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

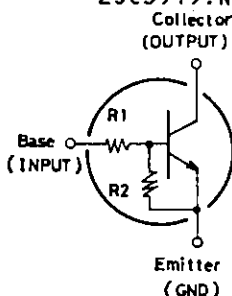
		min	typ	max	unit	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)40V, I_E=0$		(-)0.1	μA	
	I_{CEO}	$V_{CE}=(-)40V, I_B=0$		(-)0.5	μA	
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)5V, I_C=0$	(-)860	(-)1140	(-)1670	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)5V, I_C=(-)50mA$	50			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)5mA$	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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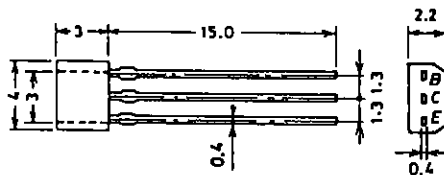
Electrical Connection
2SA1525: PNP



2SC3919: NPN



Package Dimensions
(unit: mm) 2033

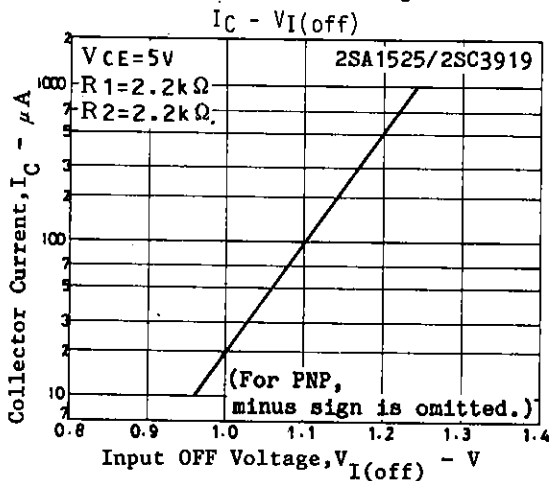
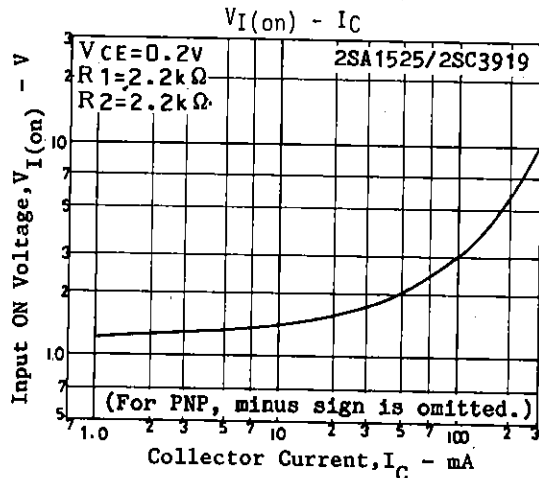
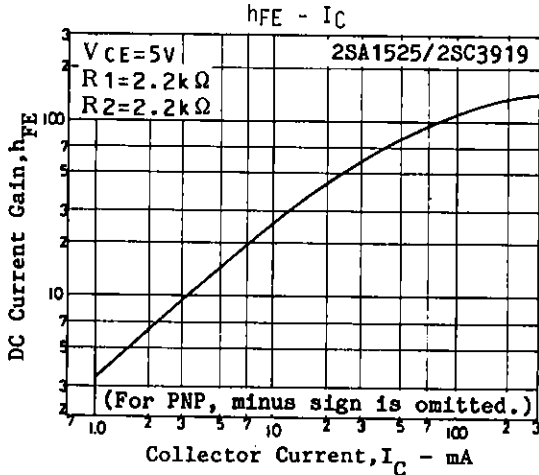


B: Base
C: Collector
E: Emitter
SANYO: SPA

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



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