

<b>SANYO</b>	No.2149A	<b>2SA1525/2SC3919</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:  $R_1=2.2k\Omega, R_2=2.2k\Omega$
- Small-sized package: SPA
- Large current capacity:  $I_C=500mA$

( ): 2SA1525

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

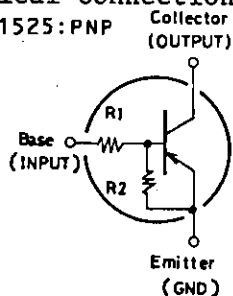
			unit
Collector to Base Voltage	V	(-)50	V
Collector to Emitter Voltage	$V_{CBO}$	(-)50	V
Emitter to Base Voltage	$V_{CEO}$	(-)6	V
Collector Current	$I_C$	(-)500	mA
Collector Current (Pulse)	$I_{CP}$	(-)800	mA
Collector Dissipation	$P_C$	300	mW
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature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

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

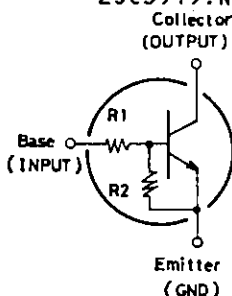
		min	typ	max	unit	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)40V, I_E=0$		(-)0.1	$\mu A$	
	$I_{CEO}$	$V_{CE}=(-)40V, I_B=0$		(-)0.5	$\mu A$	
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)5V, I_C=0$	(-)860	(-)1140	(-)1670	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=(-)5V, I_C=(-)50mA$	50			
Gain-Bandwidth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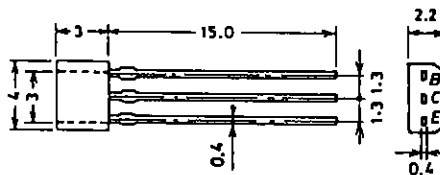
Electrical Connection  
2SA1525: PNP



2SC3919: NPN



Package Dimensions  
(unit: mm) 2033

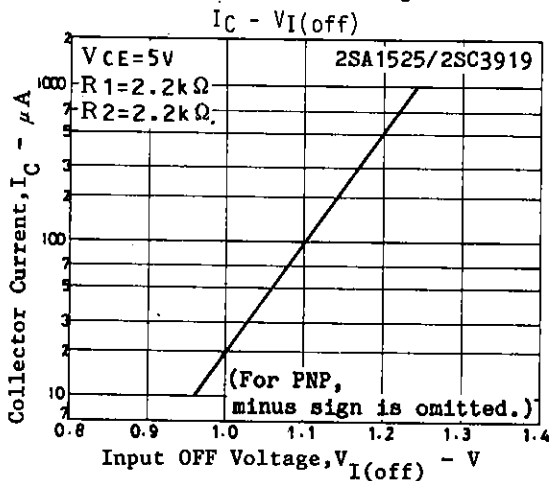
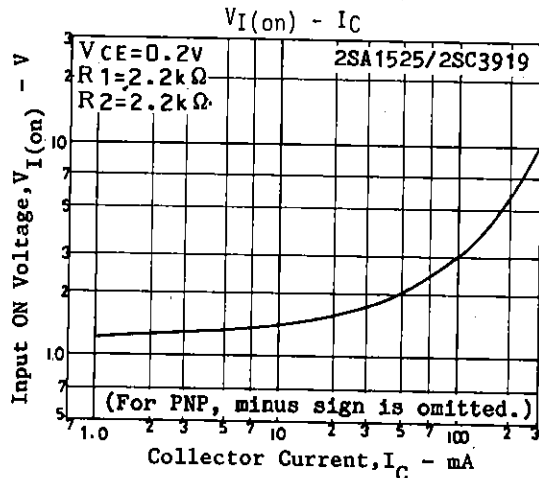
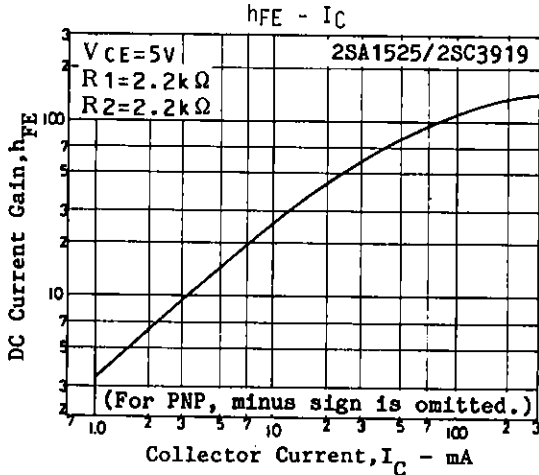


B: Base  
C: Collector  
E: Emitter  
SANYO: SPA

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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 $\Omega$
Resistance Ratio	R1/R2		0.9	1.0	1.1	



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