

SANYO	No.2163A	2SA1523/2SC3917
		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 (SPA)
- Large current capacity ($I_C=500mA$)

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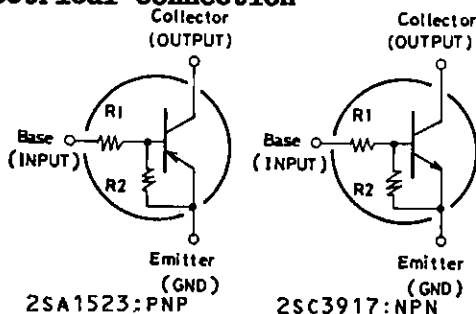
Absolute Maximum Ratings at $T_a=25^\circ C$

			unit
Collector to Base Voltage	V_{CB0}	(-)50	V
Collector to Emitter Voltage	V_{CE0}	(-)50	V
Emitter to Base Voltage	V_{EB0}	(-)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_{stg}	-55 to +150	$^\circ C$

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

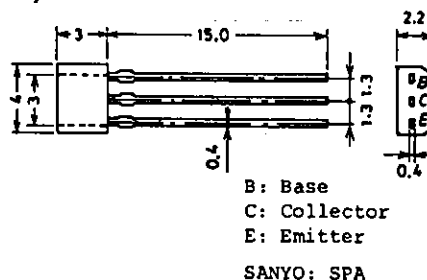
		min	typ	max	unit
Collector Cutoff Current	I_{CB0} $V_{CB}=(-)40V, I_E=0$			(-)0.1	μA
	I_{CE0} $V_{CE}=(-)40V, I_B=0$			(-)0.5	μA
Emitter Cutoff Current	I_{EB0} $V_{EB}=(-)5V, I_C=0$	(-)410	(-)532	(-)760	μA
DC Current Gain	h_{FE} $V_{CE}=(-)5V, I_C=(-)20mA$	50			
Gain-Bandwidth Product	f_T $V_{CE}=(-)10V, I_C=(-)5mA$		250		MHz
			(200)		MHz
Output Capacitance	c_{ob} $V_{CB}=(-)10V, f=1MHz$		3.7		pF
			(5.5)		pF
C-E Saturation Voltage	$V_{CE(sat)}$ $I_C=(-)40mA, I_B=(-)2mA$	(-)0.1	(-)0.3		V
C-B Breakdown Voltage	$V_{(BR)CB0}$ $I_C=(-)10\mu A, I_E=0$	(-)50			V
C-E Breakdown Voltage	$V_{(BR)CE0}$ $I_C=(-)100\mu A, R_{BE}=\infty$	(-)50			V
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	

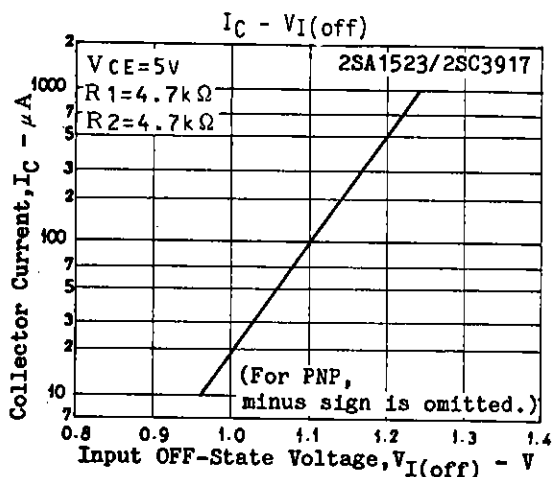
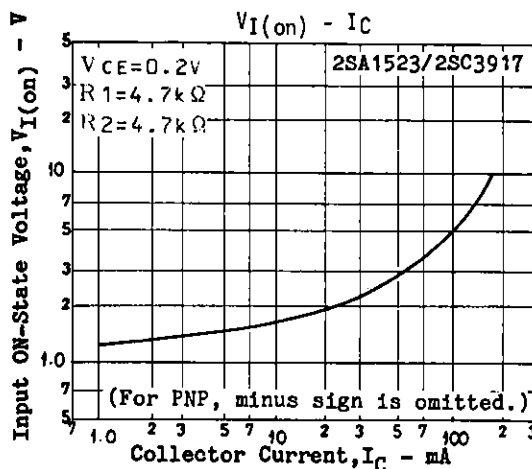
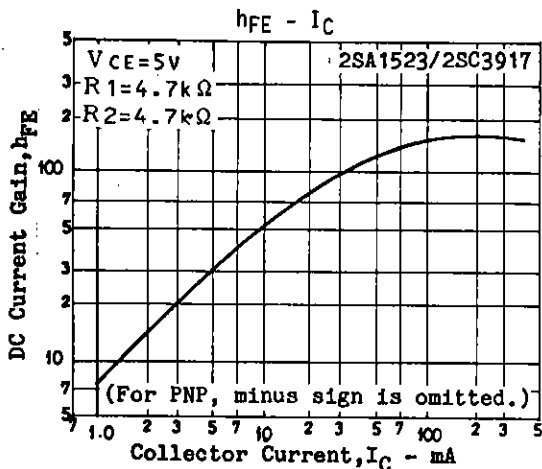
Electrical Connection



Package Dimensions 2033

(unit: mm)





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