

SANYO

No.2164A

2SA1524/2SC3918

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 ($R_1=2.2k\Omega$, $R_2=10k\Omega$)
- Small-sized package (SPA)
- Large current capacity ($I_C=500mA$)

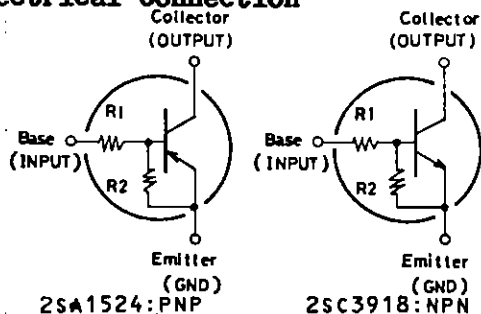
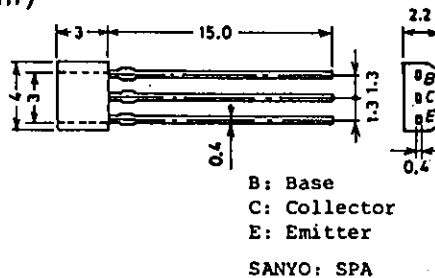
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Absolute Maximum Ratings at $T_a=25^\circ C$

			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	$^\circ C$

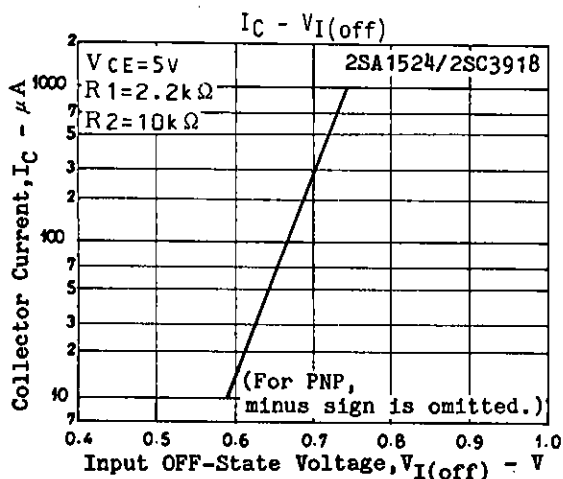
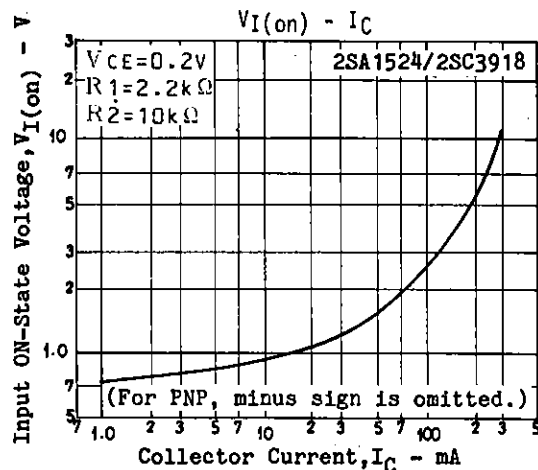
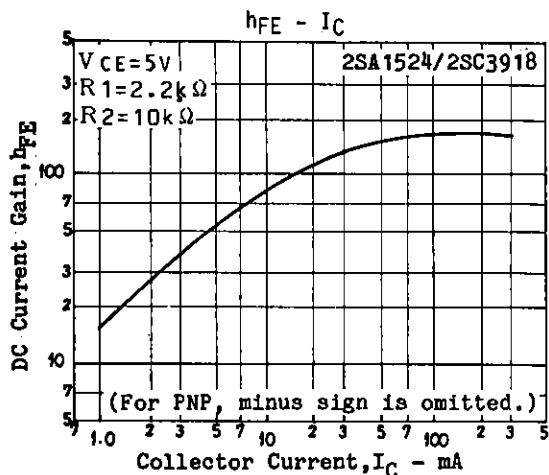
Electrical Characteristics at $T_a=25^\circ C$

		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} $V_{EB}=(-)5V, I_C=0$	(-)315	(-)410	(-)590	μA
DC Current Gain	h_{FE} $V_{CE}=(-)5V, I_C=(-)10mA$	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	$V_{(BR)CBO}$ $I_C=(-)10\mu A, I_E=0$	(-)50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$ $I_C=(-)100\mu A, R_{BE}=\infty$	(-)50			V
Input OFF-State Voltage	$V_{I(off)}$ $V_{CE}=(-)5V, I_C=(-)100\mu A$	(-)0.5	(-)0.67	(-)0.9	V
Input ON-State Voltage	$V_{I(on)}$ $V_{CE}=(-)0.2V, I_C=(-)50mA$	(-)0.7	(-)1.6	(-)3.0	V
Input Resistance	R_1	1.5	2.2	2.9	k Ω
Resistance Ratio	R_1/R_2	0.198	0.22	0.242	

Electrical Connection**Package Dimensions 2033**
(unit: mm)

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