

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 ($I_C=500mA$)

(): 2SA1524

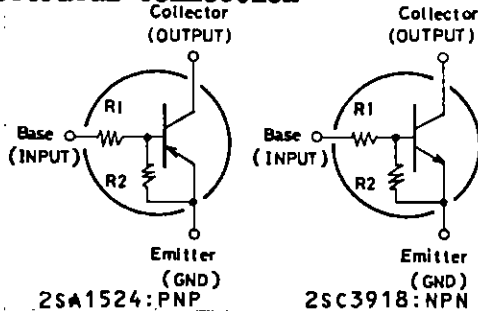
Absolute Maximum Ratings at $T_a=25^\circ C$

			unit
Collector to Base Voltage	V_{CB0}	(-)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	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

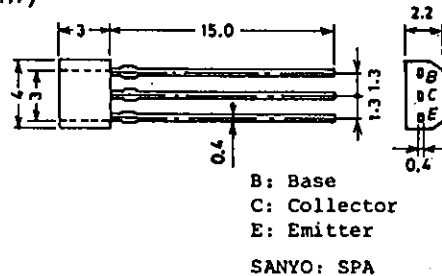
Electrical Characteristics at $T_a=25^\circ C$

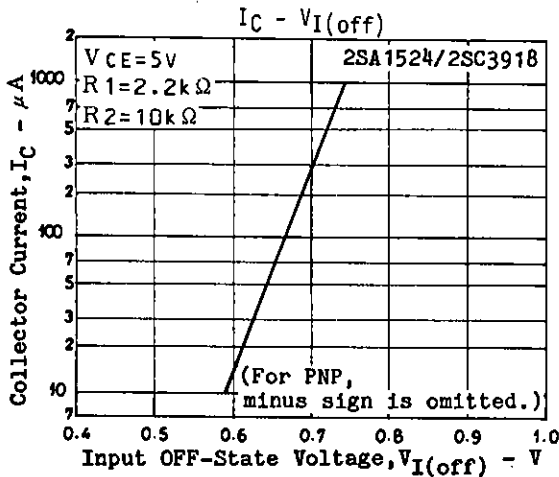
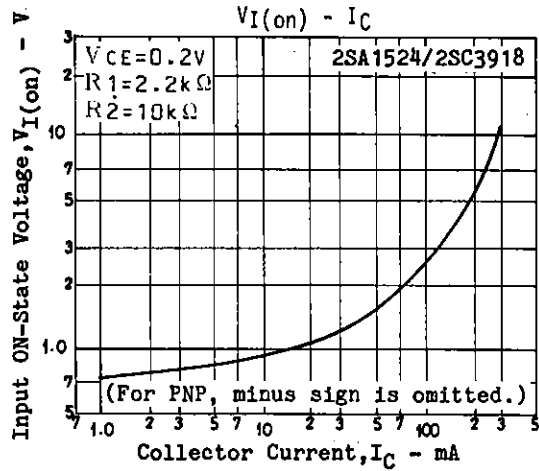
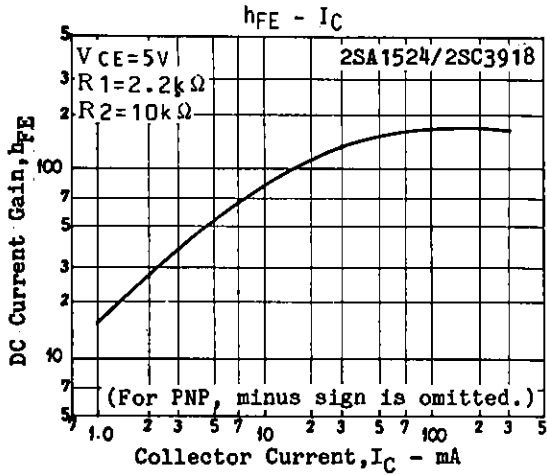
		min	typ	max	unit
Collector Cutoff Current	I_{CBO} $V_{CB}=(-)40V, I_E=0$			(-)0.1	μA
	I_{CEO} $V_{CE}=(-)40V, I_B=0$			(-)0.5	μA
Emitter Cutoff Current	I_{EBO} $V_{EB}=(-)5V, I_C=0$	(-)315	(-)410	(-)590	μA
DC Current Gain	h_{FE} $V_{CE}=(-)5V, I_C=(-)10mA$	50			
Gain-Bandwidth Product	f_T $V_{CE}=(-)10V, I_C=(-)5mA$		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)





■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.