

SANYO	No.2152A	2SA1528/2SC3922
		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: $R_1=2.2k\Omega, R_2=10k\Omega$
- Large current capacity: $I_C=500mA$

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

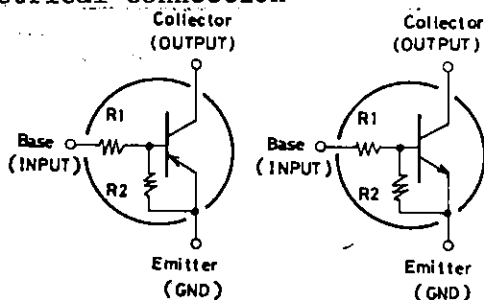
			unit
Collector to Base Voltage	V_{CBO}	(-)50	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)500	mA
Collector Current (Pulse)	I_{CP}	(-)800	mA
Collector Dissipation	P_C	600	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-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	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)50mA, I_B=(-)2.5mA$		(-)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

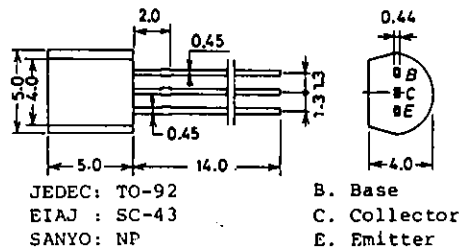


2SA1528:PNP

2SC3922:NPN

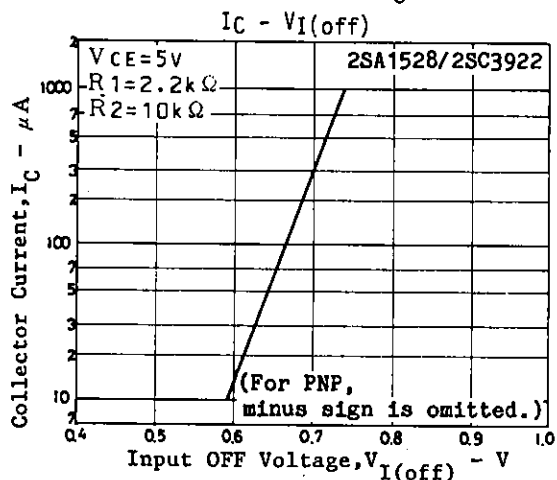
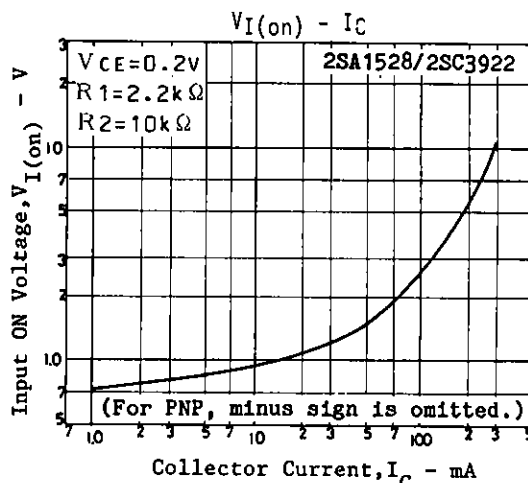
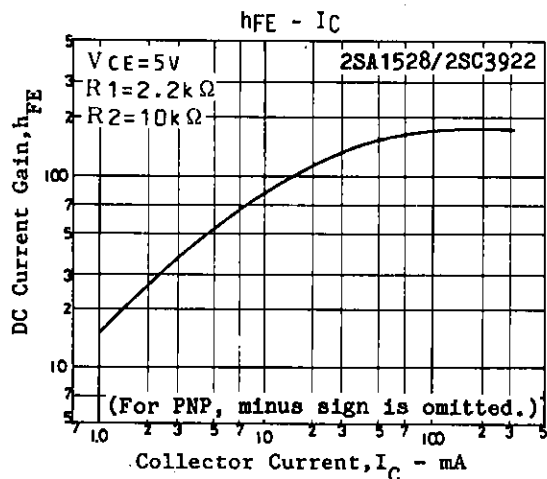
Package Dimensions 2003A

(unit: mm)



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			min	typ	max	unit
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	R1		1.5	2.2	2.9	k Ω
Resistance Ratio	R1/R2		0.198	0.22	0.242	



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