

SANYO	No.2153A	2SA1529/2SC3923
		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: $R_1=2.2k\Omega, R_2=2.2k\Omega$
- Large current capacity: $I_C=500mA$

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

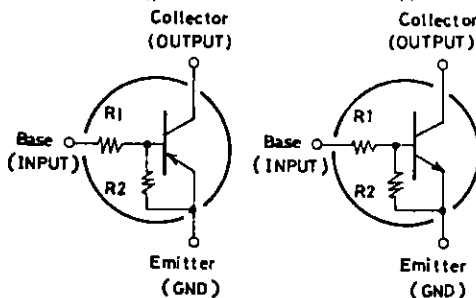
			unit
Collector to Base Voltage	V_{CB0}	(-) 50	V
Collector to Emitter Voltage	V_{CEO}	(-) 50	V
Emitter to Base Voltage	V_{EBO}	(-) 6	V
Collector Current	I_C	(-) 500	mA
Collector Current(Pulse)	I_{CP}	(-) 800	mA
Collector Dissipation	P_C	600	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	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}	$V_{EB} = (-) 5V, I_C = 0$	(-) 860	(-) 1140	(-) 1670	μA
	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	
	Output Capacitance	c_{ob}	$V_{CB} = (-) 10V, f = 1MHz$	3.7	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	

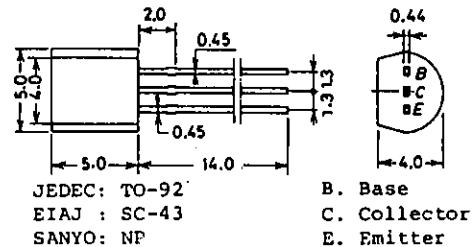
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Electrical Connection



Package Dimensions 2003A

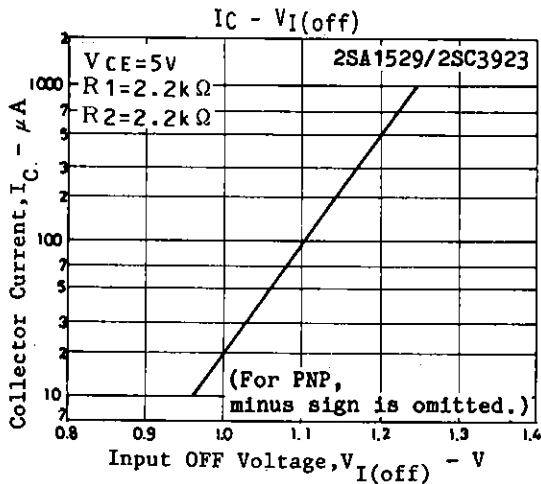
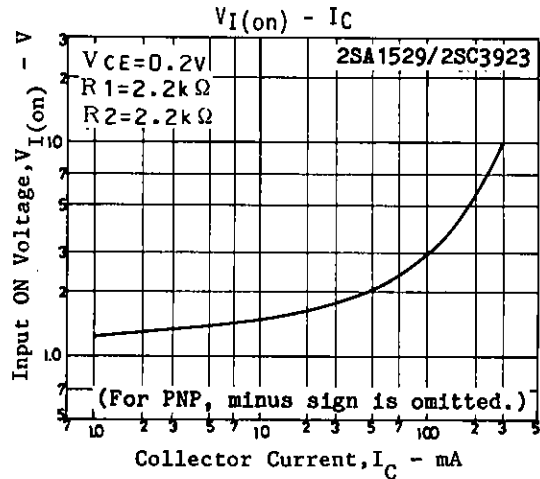
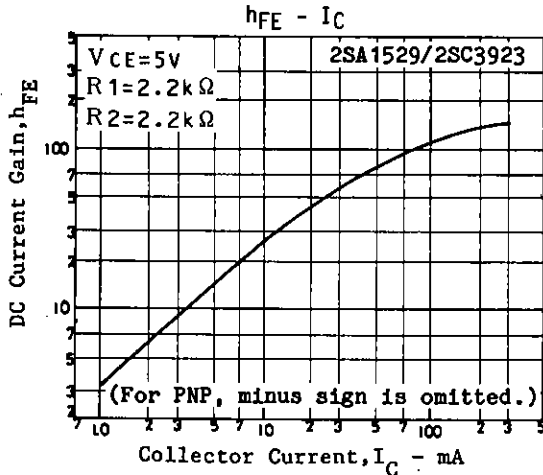
(unit: mm)



2SA1529/2SC3923

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			min	typ	max	unit
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	$V_{I(on)}$	$V_{CE} = (-)0.2V,$ $I_C = (-)50mA$	(-)1.0	(-)1.9	(-)4.0	V
Input Resistance	R_1		1.5	2.2	2.9	$k\Omega$
Resistance Ratio	R_1/R_2		0.9	1.0	1.1	



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