



2SA1656/2SC4363

PNP/NPN Epitaxial Planar Silicon Transistors
Switching Applications
(with Bias Resistance)

Applications

- Switching circuit, inverter circuit, interface circuit, driver circuit

Features

- On-chip bias resistance ($R1 = 4.7k\Omega$, $R2 = 4.7k\Omega$)

() : 2SA1656

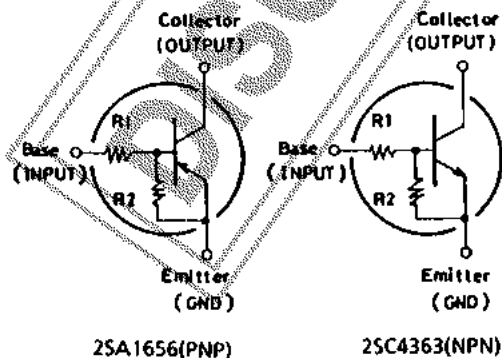
Absolute Maximum Ratings at $T_a = 25^\circ C$

			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	(-) 100	mA
Collector Current (Pulse)	I_{CP}	(-) 200	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 $T_a = 25^\circ C$

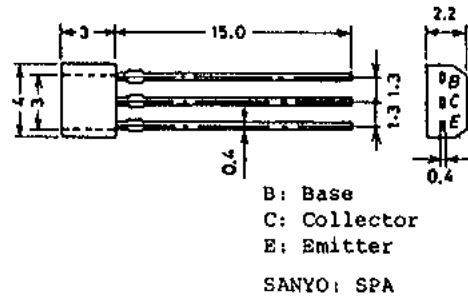
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-) 0.1	μA
Collector Cutoff Current	I_{CEO}	$V_{CE} = (-)40V, I_B = 0$			(-) 0.5	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)5V, I_C = 0$	(-) 409	(-) 532	(-) 758	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)5V, I_C = (-)10mA$	30			
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	$V_{CE(sat)}$	$I_C = (-)10mA, I_B = (-)0.5mA$		(-) 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	$V_{I(off)}$	$V_{EE} = (-)5V, I_C = (-)100\mu A$	(-) 0.9	(-) 1.15	(-) 1.4	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE} = (-)0.2V, I_C = (-)10mA$	(-) 1.2	(-) 1.7	(-) 2.5	V
Input Resistance	$R1$		3.3	4.7	6.1	$k\Omega$
Resistance Ratio	$R1/R2$			1.0		

Electrical Connection



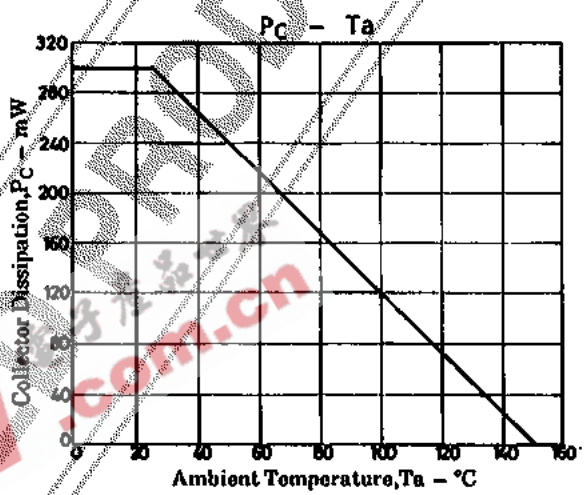
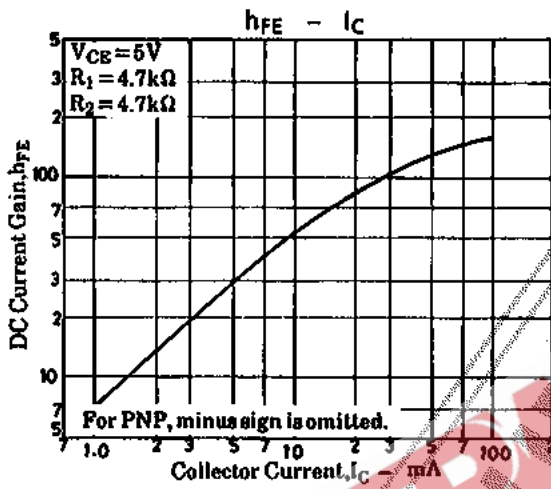
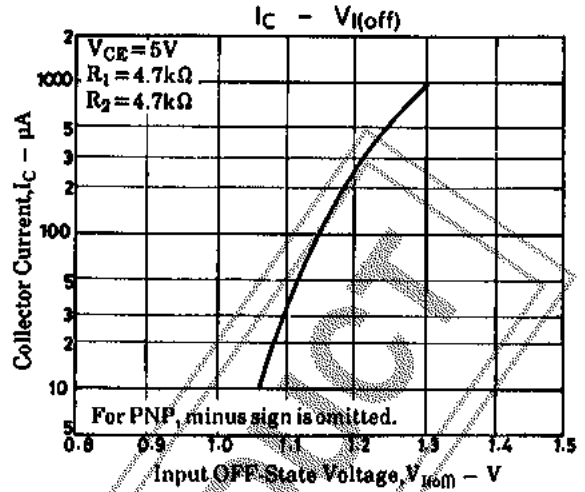
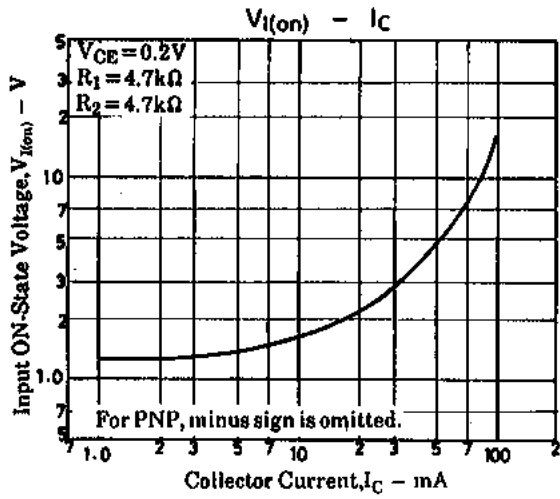
Case Outline 2033

(unit: mm)



Specifications and information herein are subject to change without notice.

SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN



DISCONTINUED