

SANYO

No.2809

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 ($R1 = 4.7k\Omega$, $R2 = 4.7k\Omega$)

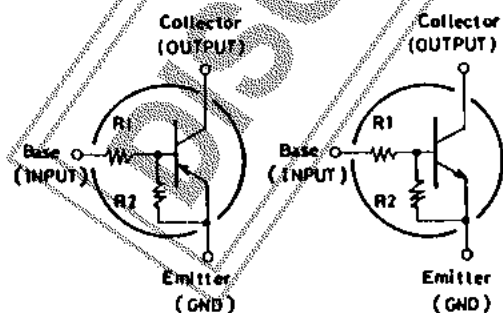
(): 2SA1656

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

			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	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

			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}	$V_{CE} = (-)5V, I_C = (-)10\text{mA}$	30			
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10V, I_C = (-)5\text{mA}$		250		MHz
				(200)		MHz
Output Capacitance	c_{ob}	$V_{CB} = (-)10V, f = 1\text{MHz}$		3.7		pF
				(5.5)		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)10\text{mA}, I_B = (-)0.5\text{mA}$	(-)0.1	(-)0.3		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-)50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)100\mu\text{A}, R_{BE} = \infty$	(-)50			V
Input OFF-State Voltage	$V_{I(off)}$	$V_{CE} = (-)5V, I_C = (-)100\mu\text{A}$	(-)0.9	(-)1.15	(-)1.4	V
Input ON-State Voltage	$V_{I(on)}$	$V_{CE} = (-)0.2V, I_C = (-)10\text{mA}$	(-)1.2	(-)1.7	(-)2.5	V
Input Resistance	$R1$		3.3	4.7	6.1	$k\Omega$
Resistance Ratio	$R1/R2$			1.0		

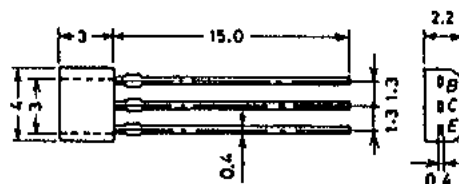
Electrical Connection

2SA1656(PNP)

2SC4363(NPN)

Case Outline 2033

(unit: mm)



B: Base
C: Collector
E: Emitter
SANYO: SPA

Specifications and information herein are subject to change without notice.

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