Ordering number : EN 2807

SANYO No.2807

2SA1654/2SC4361

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 = 4.7kΩ, R2 = 10kΩ)

( ) : 2SA1654

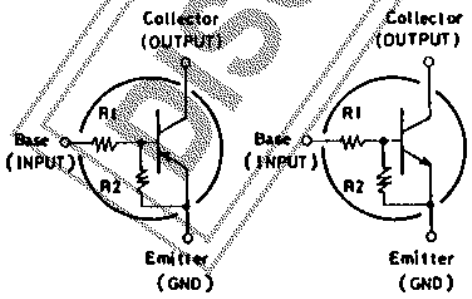
Absolute Maximum Ratings at Ta = 25°C

			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	(−)100	mA
Collector Current (Pulse)	I_{CP}	(−)200	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55 to +150	°C

Electrical Characteristics at Ta = 25°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	(−)262	(−)340	(−)485	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 = (−)10mA, I_B = (−)0.5mA		(−)0.1	(−)0.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C = (−)10μA, I_E = 0	(−)50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C = (−)100μA, R_{BE} = ∞	(−)50			V
Input OFF-State Voltage	$V_{I(off)}$	V_{CE} = (−)5V, I_C = (−)100μA	(−)0.7	(−)0.85	(−)0.95	V
Input ON-State Voltage	$V_{I(on)}$	V_{CE} = (−)0.2V, I_C = (−)10mA	(−)0.95	(−)1.3	(−)2.0	V
Input Resistance	R1		3.3	4.7	6.1	kΩ
Resistance Ratio	R1/R2			0.47		

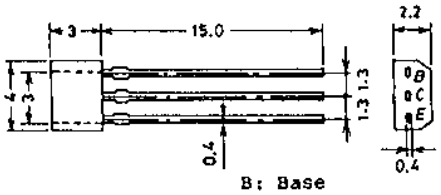
Electrical Connection



2SA1654(PNP) 2SC4361(NPN)

Case Outline 2033

(unit : mm)



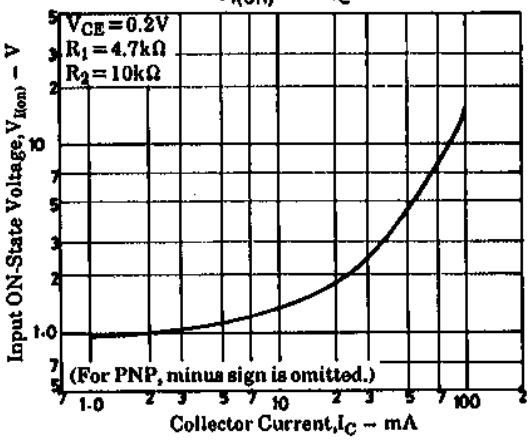
B: Base
C: Collector
E: Emitter

SANYO: SPA

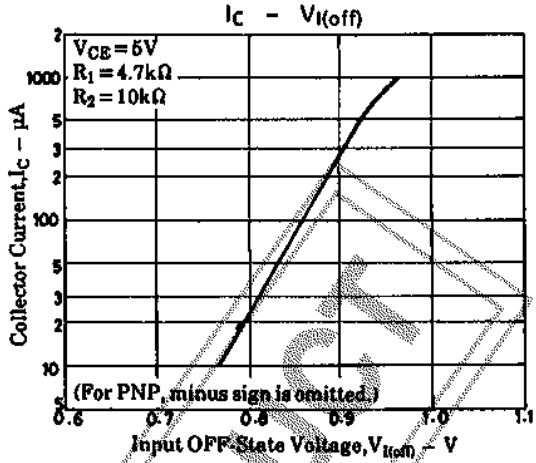
Specifications and information herein are subject to change without notice.

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

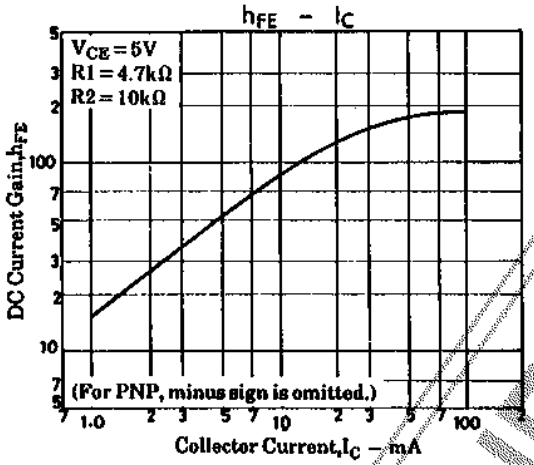
$V_{I(on)}$ – I_C



I_C – $V_{I(off)}$



h_{FE} – I_C



P_C – Ta