

**SANYO**

No.1288C

**2SA1346/2SC3400**

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

**Applications**

Switching circuit, inverter, interface circuit, driver

**Features**

- Built-in bias resistor ( $R_1=22k\Omega$ ,  $R_2=22k\Omega$ ).
- Small-sized package (SPA).

( ): 2SA1346

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

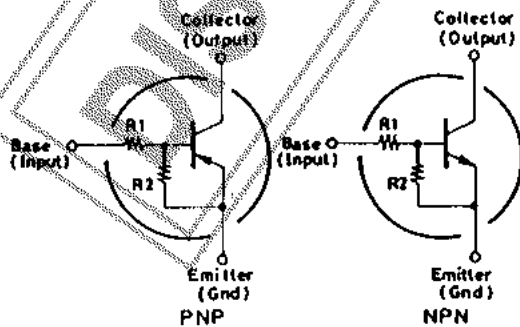
		unit
Collector to Base Voltage	$V_{CB0}$	(-)50 V
Collector to Emitter Voltage	$V_{CE0}$	(-)50 V
Emitter to Base Voltage	$V_{EB0}$	(-)10 V
Collector Current	$I_C$	(-)100 mA
Collector Current(Pulse)	$I_{CP}$	(-)200 mA
Collector Dissipation	$P_C$	300 mW
Junction Temperature	$T_j$	150 $^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150 $^\circ\text{C}$

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

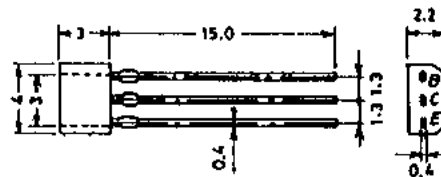
		min	typ	max	unit
Collector Cutoff Current	$I_{CB0}$			(-)0.1	$\mu\text{A}$
Collector Cutoff Current	$I_{CE0}$			(-)0.5	$\mu\text{A}$
Emitter Cutoff Current	$I_{EB0}$	(-)70	(-)113	(-)150	$\mu\text{A}$
DC Current Gain	$h_{FE}$	50			
Gain-bandwidth product	$f_T$		250 (200)		MHz
Output Capacitance	$c_{ob}$		3.7 (5.5)		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$		(-)0.1	(-)0.3	V

Continued on next page.

**Electrical Connection**



**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

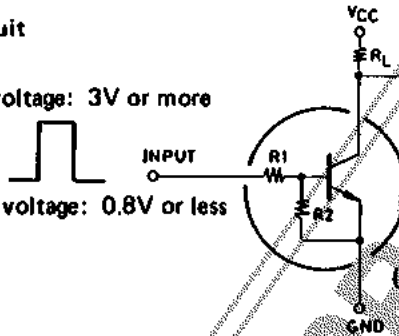
Continued from preceding page.

			min	typ	max	unit
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
Input Off Voltage	$V_{I(off)}$	$V_{CE} = (-)5V, I_C = (-)100\mu A$	(-)0.8	(-)1.1	(-)1.5	V
Input On Voltage	$V_{I(on)}$	$V_{CE} = (-)0.2V, I_C = (-)5mA$	(-)1.0	(-)1.9	(-)3.0	V
Input Resistance	$R_1$		15	22	29	k $\Omega$
Input Resistance Ratio	$R_1/R_2$		0.9	1.0	1.1	-

■ Sample Application Circuit

Input ON-state voltage: 3V or more

Input OFF-state voltage: 0.8V or less



(For PNP, the polarity is reversed.)

