

SANYO

No. 2505

2SA1582/2SC4113

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 ($R_1 = 2.2\text{k}\Omega$, $R_2 = \infty$)
- Small-sized package (SPA)

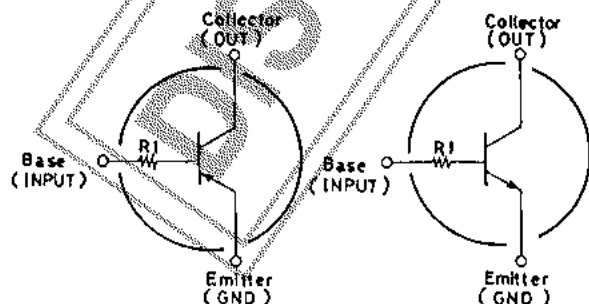
(): 2SA1582

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

			unit
Collector to Base Voltage	V_{CBO}	(-) 50	V
Collector to Emitter Voltage	V_{CEO}	(-) 50	V
Emitter to Base Voltage	V_{EBO}	(-) 5	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} $V_{CB} = (-)40\text{V}, I_E = 0$		(-) 0.1		μA
Emitter Cutoff Current	I_{EBO} $V_{EB} = (-)5\text{V}, I_C = 0$		(-) 0.1		μA
DC Current Gain	h_{FE} $V_{CE} = (-)5\text{V}, I_C = (-)10\text{mA}$	100			
Gain-Bandwidth Product	f_T $V_{CE} = (-)10\text{V}, I_C = (-)5\text{mA}$		250 (200)		MHz
Output Capacitance	c_{ob} $V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		3.7 (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	$V_{I(off)}$ $V_{CE} = (-)5\text{V}, I_C = (-)100\mu\text{A}$	(-) 0.4	(-) 0.55	(-) 0.8	V
Input ON-State Voltage	$V_{I(on)}$ $V_{CE} = (-)0.2\text{V}, I_C = 10\text{mA}$	(-) 0.6	(-) 0.8	(-) 1.5	V
Input Resistance	R_1	1.5	2.2	2.9	$\text{k}\Omega$

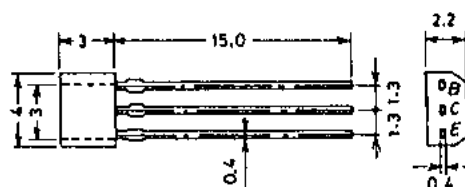
Electrical Connection

2SA1582(PNP)

2SC4113(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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