



SANYO Semiconductors

DATA SHEET

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

( ): 2SA1582

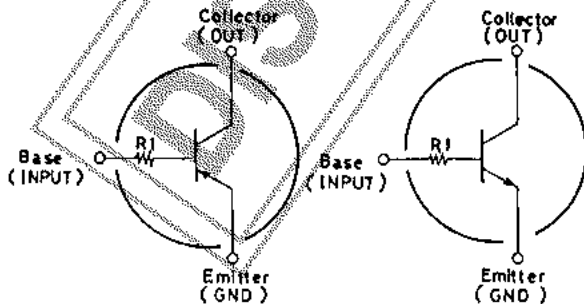
Absolute Maximum Ratings at  $T_a=25^\circ C$

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

Electrical Characteristics at  $T_a=25^\circ C$

		min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$			(-)0.1	$\mu A$
Emitter Cutoff Current	$I_{EBO}$			(-)0.1	$\mu A$
DC Current Gain	$h_{FE}$		100		
Gain-Bandwidth Product	$f_T$		250		MHz
			(200)		
Output Capacitance	$c_{ob}$		3.7		pF
			(5.5)		
C-E Saturation Voltage	$V_{CE(sat)}$			(-)0.1(-)0.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$		(-)50		V
C-E Breakdown Voltage	$V_{(BR)CEO}$		(-)50		V
Input OFF-State Voltage	$V_{I(off)}$		(-)0.4(-)0.55(-)0.8		V
Input ON-State Voltage	$V_{I(on)}$		(-)0.6(-)0.8(-)1.5		V
Input Resistance	$R_1$	1.5	2.2	2.9	k $\Omega$

Electrical Connection

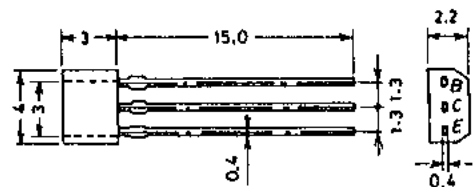


2SA1582(PNP)

2SC4113(NPN)

Case Outline 2033

(unit:mm)



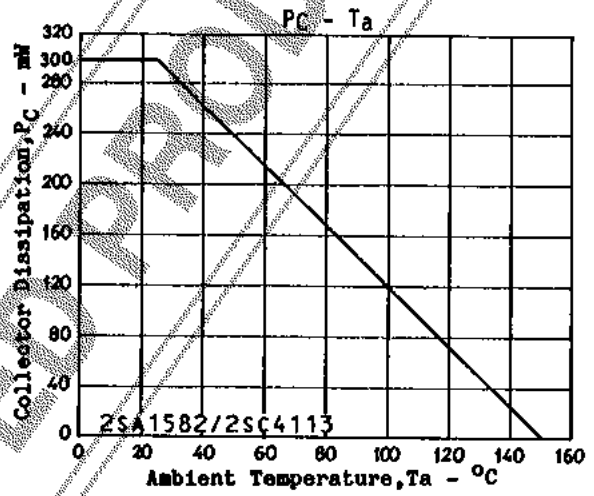
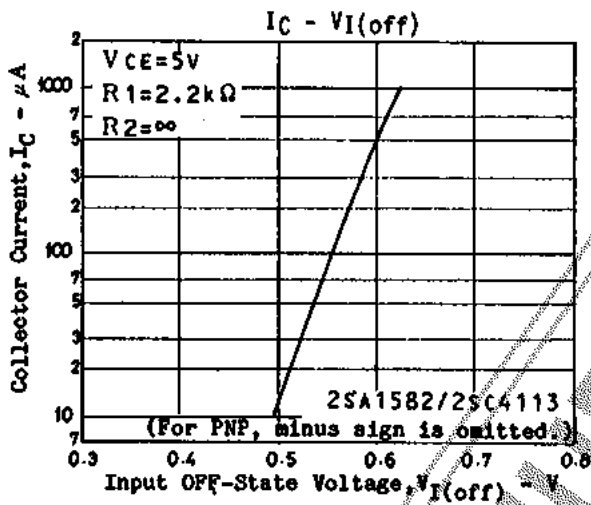
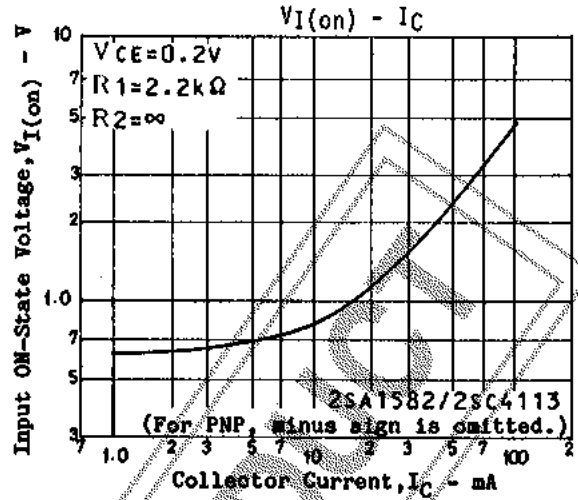
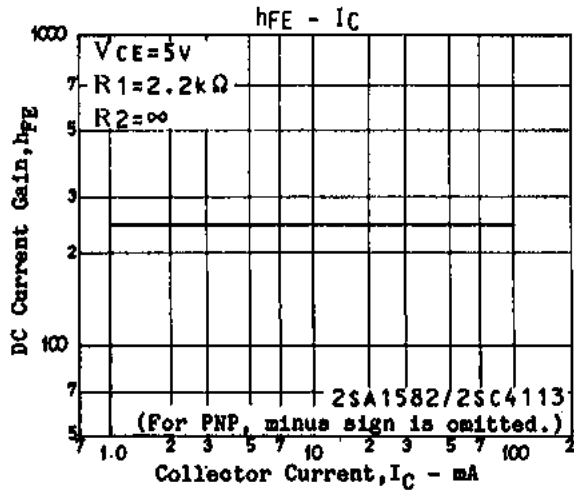
B: Base  
C: Collector  
E: Emitter

SANYO: SPA

Specifications and information herein are subject to change without notice.

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