

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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PNP SILICON TRANSISTOR  
2SA1626

**DESCRIPTION** The 2SA1626 is designed for general purpose amplifier and high speed switching applications.

- FEATURES**
- High Voltage.
  - High Speed Switching.
  - Low Collector Saturation Voltage.

**ABSOLUTE MAXIMUM RATINGS**

Maximum Temperatures

Storage Temperature . . . . . -55 to +150 °C

Junction Temperature . . . . . 150 °C Maximum

Maximum Power Dissipation (T<sub>a</sub> = 25 °C)

Total Power Dissipation . . . . . 1.0 W

Maximum Voltages and Currents (T<sub>a</sub> = 25 °C)

V<sub>CBO</sub> Collector to Base Voltage . . . . . -400 V

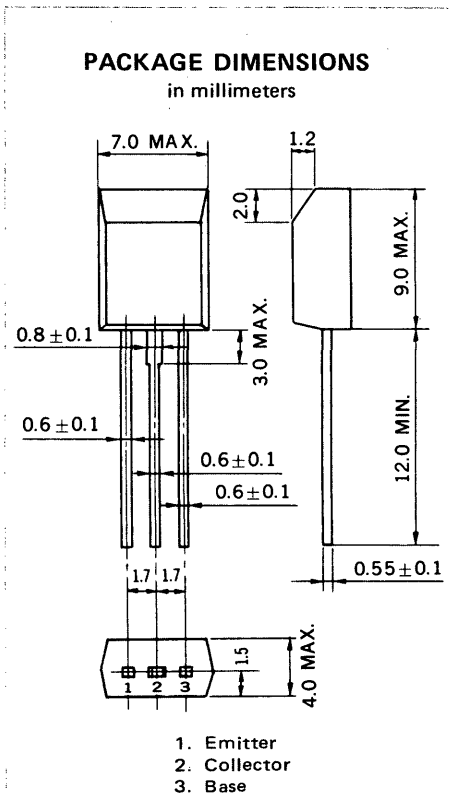
V<sub>CEO</sub> Collector to Emitter Voltage . . . . . -400 V

V<sub>EBO</sub> Emitter to Base Voltage . . . . . -7.0 V

I<sub>C</sub> Collector Current (DC) . . . . . -2.0 A

I<sub>C</sub> Collector Current (pulse)\* . . . . . -4.0 A

\* PW ≤ 10 ms, Duty Cycle ≤ 50 %



**ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25 °C)**

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h <sub>FE1</sub> **	DC Current Gain	40	60	120	—	V <sub>CE</sub> = -5.0 V, I <sub>C</sub> = -0.1 A
h <sub>FE2</sub> **	DC Current Gain	6	22		—	V <sub>CE</sub> = -5.0 V, I <sub>C</sub> = -1.0 A
f <sub>T</sub>	Gain Bandwidth Product	10	40		MHz	V <sub>CE</sub> = -10 V, I <sub>E</sub> = 0.1 A
C <sub>ob</sub>	Output Capacitance		30	40	pF	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1.0 MHz
I <sub>CBO</sub>	Collector Cutoff Current			-10	μA	V <sub>CB</sub> = -400 V, I <sub>E</sub> = 0
I <sub>EBO</sub>	Emitter Cutoff Current			-10	μA	V <sub>EB</sub> = -5.0 V, I <sub>C</sub> = 0
V <sub>CE(sat)</sub> **	Collector Saturation Voltage		-0.25	-0.5	V	I <sub>C</sub> = -0.5 A, I <sub>B</sub> = -0.1 A
V <sub>BE(sat)</sub> **	Base Saturation Voltage		-0.85	-1.2	V	I <sub>C</sub> = -0.5 A, I <sub>B</sub> = -0.1 A
t <sub>on</sub>	Turn On Time		0.03	0.5	μs	I <sub>C</sub> = -1.0 A, R <sub>L</sub> = 150 Ω I <sub>B1</sub> = -I <sub>B2</sub> = -0.2 A V <sub>CC</sub> = -150 V
t <sub>stg</sub>	Storage Time		1.4	2.0	μs	
t <sub>f</sub>	Fall Time		0.1	0.7	μs	

\*\* Pulsed PW ≤ 350 μs, Duty Cycle ≤ 2 %

Classification of h<sub>FE1</sub>

Rank	L	K
Range	40 to 80	60 to 120

Test Conditions: V<sub>CE</sub> = -5.0 V, I<sub>C</sub> = -0.1 A

TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

