To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

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

April 1st, 2010
Renesas Electronics Corporation

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

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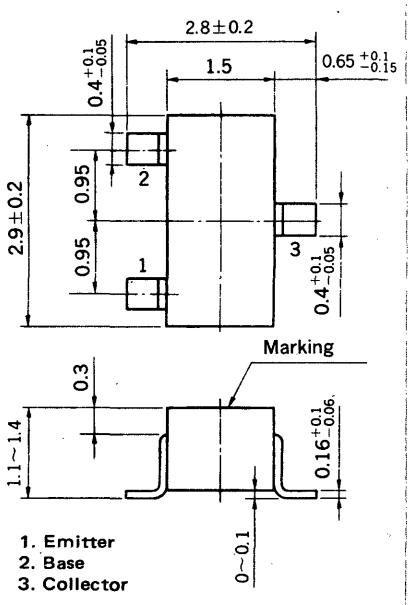
(Note 2) "Renesas Electronics product(s)" means any product developed or manufactured by or for Renesas Electronics.

RENESAS

SILICON TRANSISTOR
2SA1226

HIGH FREQUENCY AMPLIFIER
PNP SILICON EPITAXIAL TRANSISTOR
MINI MOLD

PACKAGE DIMENSIONS
in millimeters



FEATURES

- High Gain Bandwidth product f_T = 400 MHz TYP.
- Low Output Capacitance C_{ob} = 1.1 pF TYP.
- Low Noise, NF = 3.5 dB TYP. (f = 1.0 MHz)

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current (T_a = 25 °C)			
Collector to Base Voltage (R_{BE} = ∞)	V_{CBO}	−40	V
Collector to Emitter Voltage (Open Base)	V_{CEO}	−40	V
Emitter to Base Voltage	V_{EBO}	−5.0	V
Collector Current (DC)	I_C	−30	mA
Maximum Power Dissipation			
Total Power Dissipation at 25 °C Ambient Temperature	P_T	200	mW
Maximum Temperatures			
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			−0.1	μA	V_{CB} = −40 V, I_E = 0
Emitter Cutoff Current	I_{EBO}			−0.1	μA	V_{EB} = −4.0 V, I_C = 0
DC Current Gain	h_{FE}	40	90	180		V_{CE} = −10 V, I_C = −1.0 mA
Collector Saturation Voltage	$V_{CE(sat)}$		−0.09	−0.3	V	I_C = −10 mA, I_B = −1.0 mA
Base to Emitter Voltage	V_{BE}	−0.67	−0.72		V	V_{CE} = −10 V, I_C = −10 mA
Gain Bandwidth Product	f_T	250	400		MHz	V_{CE} = −10 V, I_E = 1.0 mA
Output Capacitance	C_{ob}		1.1	2.0	pF	V_{CB} = −10 V, I_E = 0, f = 1.0 MHz
Noise Figure	NF		3.5		dB	V_{CE} = −10 V, I_C = −1.0 mA R_G = 500 Ω, f = 1.0 MHz

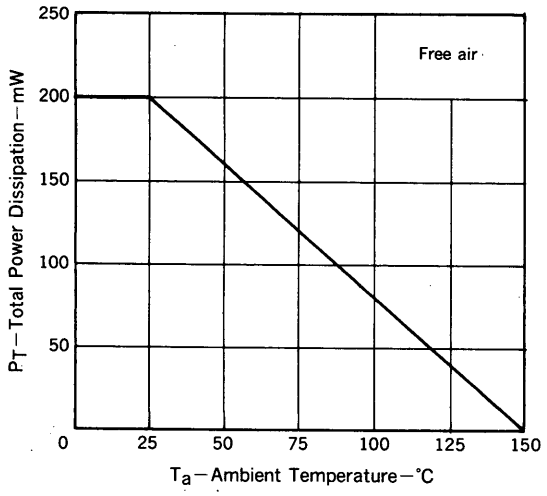
h_{FE} Classification

Marking	E2	E3	E4
h_{FE2}	40 to 80	60 to 120	90 to 180

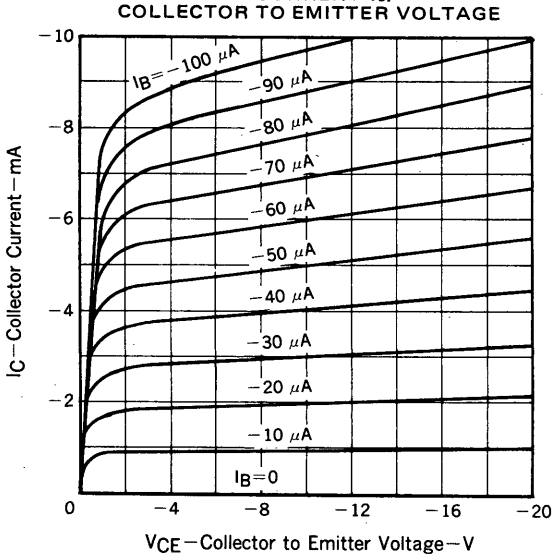
NEC Corporation

TYPICAL CHARACTERISTICS (T_a = 25 °C)

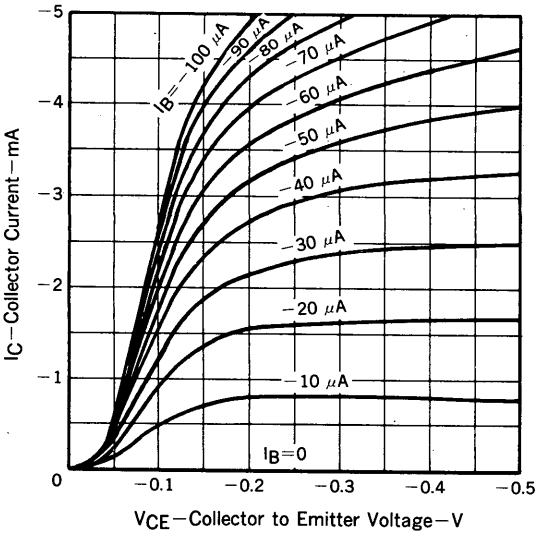
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



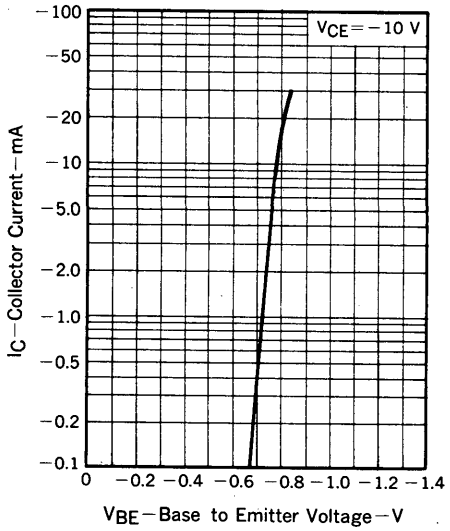
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



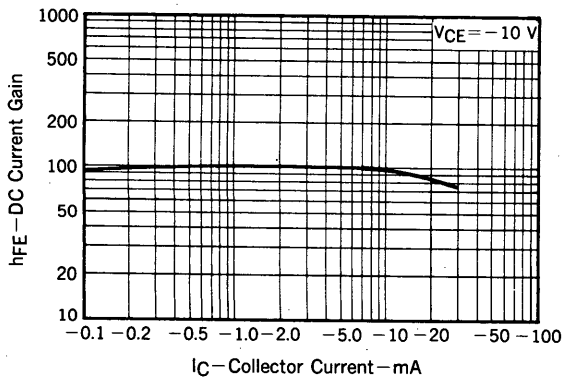
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



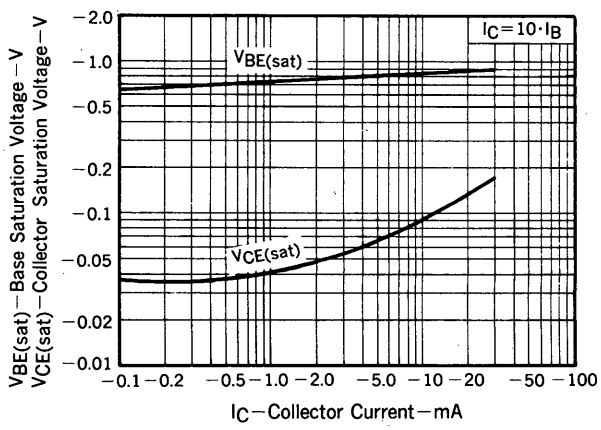
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



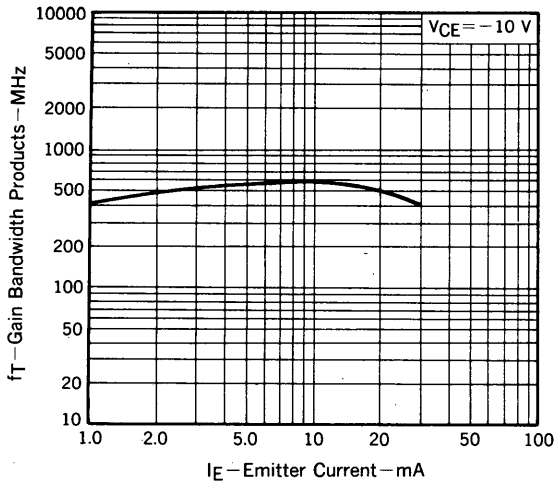
DC CURRENT GAIN vs. COLLECTOR CURRENT



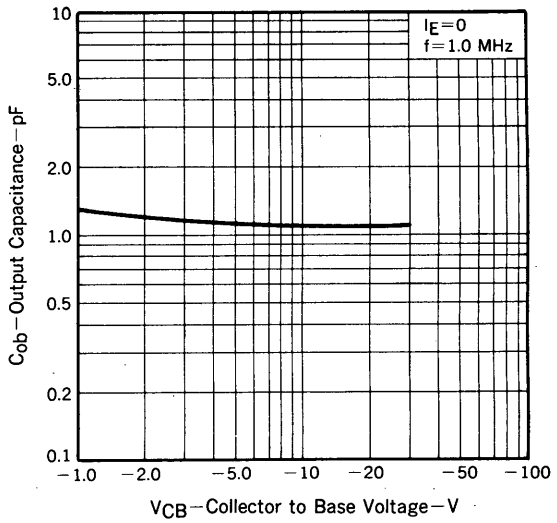
BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



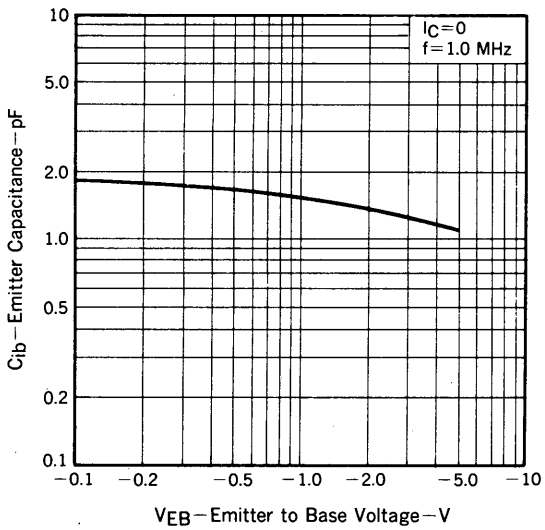
GAIN BANDWIDTH PRODUCTS vs.
EMITTER CURRENT



OUTPUT CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



INPUT CAPACITANCE vs.
EMITTER TO BASE VOLTAGE



NEC Corporation

INTERNATIONAL ELECTRON DEVICES DIV.
SUMITOMO MITA Building, 37-8,
Shiba Gochome, Minato-ku, Tokyo 108, Japan
Tel: Tokyo 456–3111
Telex Address: NECTOK J22686
Cable Address: NEC TOKYO

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AUG.–31–84M
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