

To our customers,

Old Company Name in Catalogs and Other Documents

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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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PNP SILICON EPITAXIAL TRANSISTOR
MINI MOLD

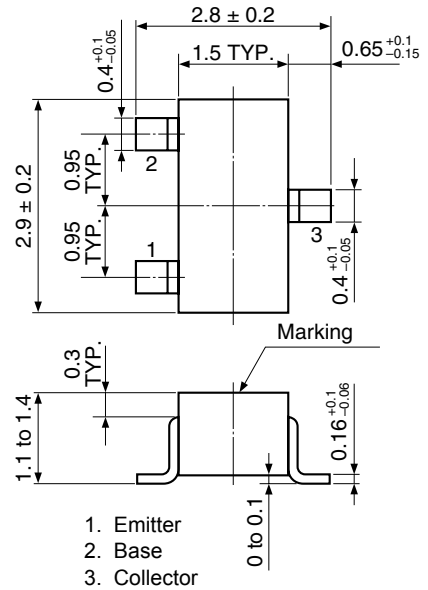
FEATURES

- Complementary to 2SC1623
- High DC Current Gain: $h_{FE} = 200$ TYP. ($V_{CE} = -6.0$ V, $I_C = -1.0$ mA)
- High Voltage: $V_{CEO} = -50$ V

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current (DC)	I_C	-100	mA
Total Power Dissipation	P_T	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

<R> PACKAGE DRAWING (Unit: mm)



ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cut-off Current	I_{CBO}			-0.1	μA	$V_{CB} = -60$ V, $I_E = 0$ A
Emitter Cut-off Current	I_{EBO}			-0.1	μA	$V_{EB} = -5.0$ V, $I_C = 0$ A
DC Current Gain	h_{FE}	90	200	600		$V_{CE} = -6.0$ V, $I_C = -1.0$ mA ^{Note}
Collector Saturation Voltage	$V_{CE(sat)}$		-0.18	-0.3	V	$I_C = -100$ mA, $I_B = -10$ mA
Base to Emitter Voltage	V_{BE}	-0.58	-0.62	-0.68	V	$V_{CE} = 6.0$ V, $I_C = -1.0$ mA
Gain Bandwidth Product	f_r		180		MHz	$V_{CE} = -6.0$ V, $I_E = 10$ mA
Output Capacitance	C_{ob}		4.5		pF	$V_{CB} = -10$ V, $I_E = 0$ A, $f = 1.0$ MHz

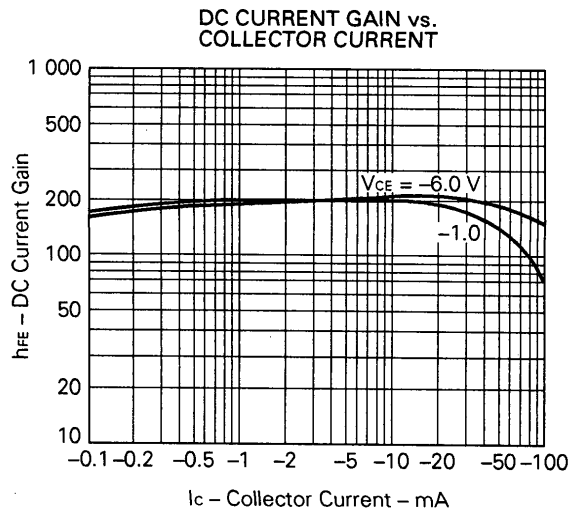
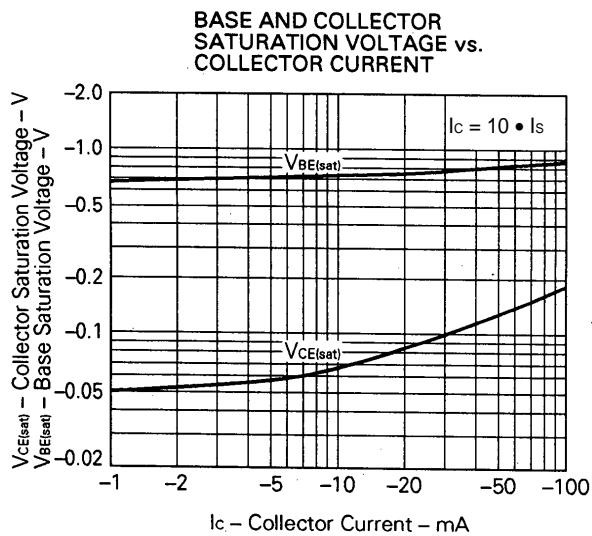
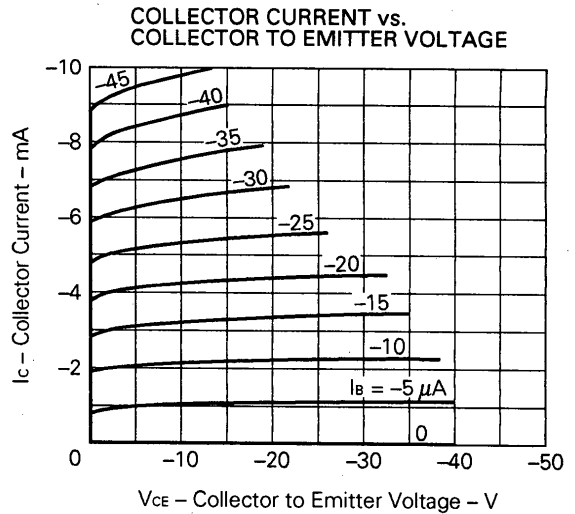
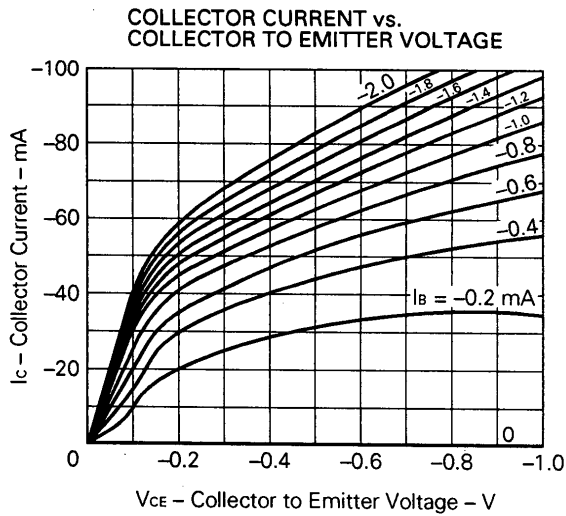
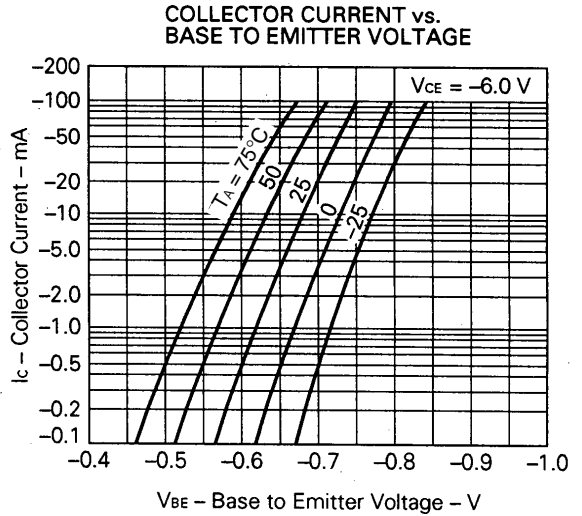
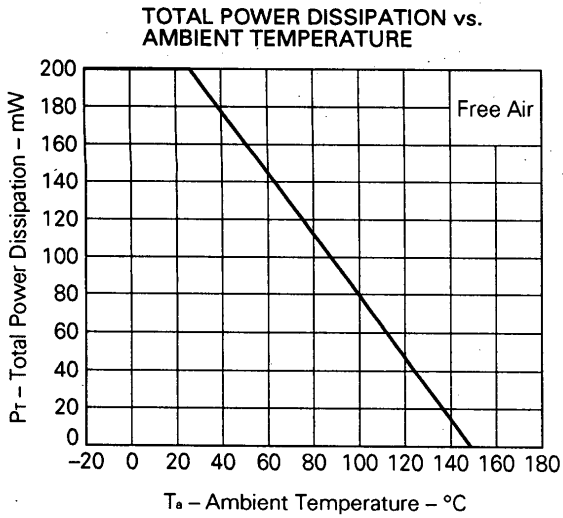
Note Pulsed: $PW \leq 350 \mu\text{s}$, Duty Cycle $\leq 2\%$

h_{FE} CLASSIFICATION

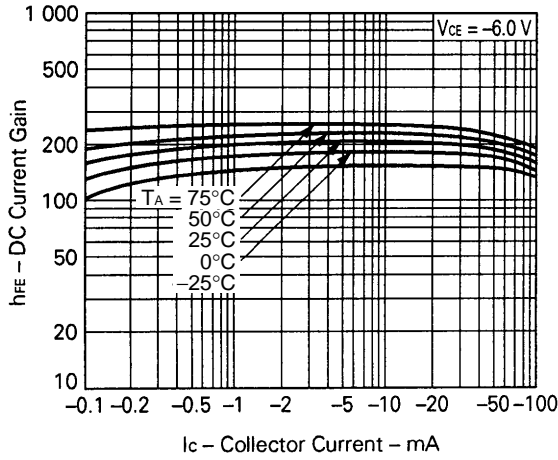
Marking	M4	M5	M6	M7
h_{FE}	90 to 180	135 to 270	200 to 400	300 to 600

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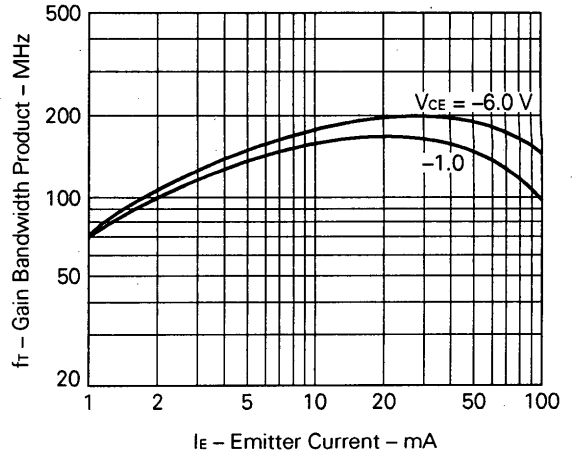
<R> TYPICAL CHARACTERISTICS (T_A = 25°C)



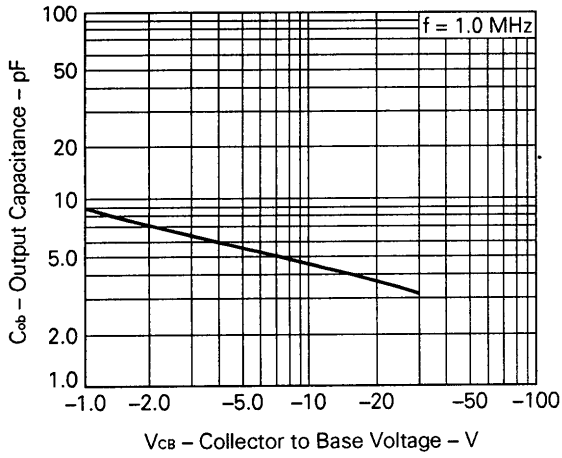
DC CURRENT GAIN vs. COLLECTOR CURRENT



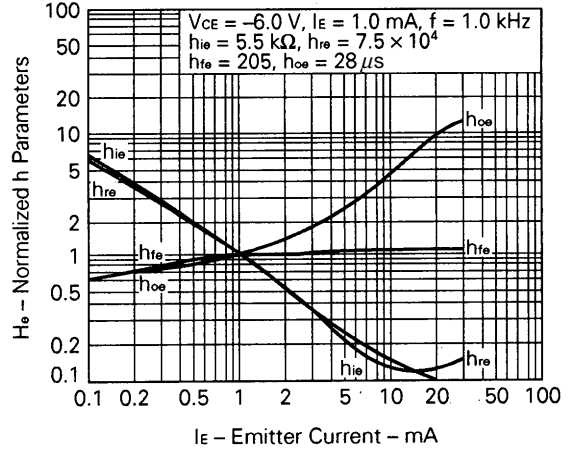
GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



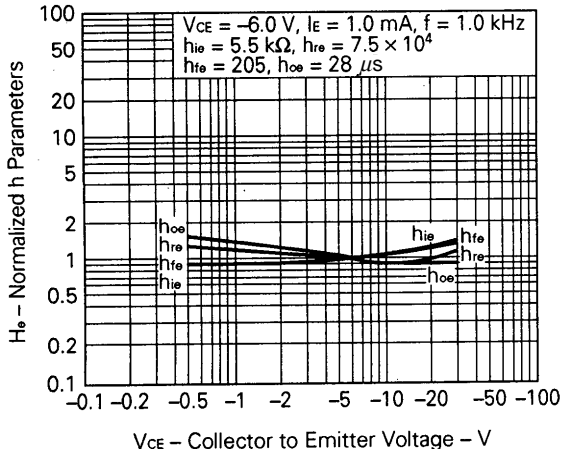
OUTPUT CAPACITANCE vs. REVERSE VOLTAGE



NORMALIZED h PARAMETER vs. EMITTER CURRENT



NORMALIZED h PARAMETER vs. COLLECTOR TO EMITTER VOLTAGE



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