

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
2SB1572

PNP SILICON EPITAXIAL TRANSISTOR

FEATURES

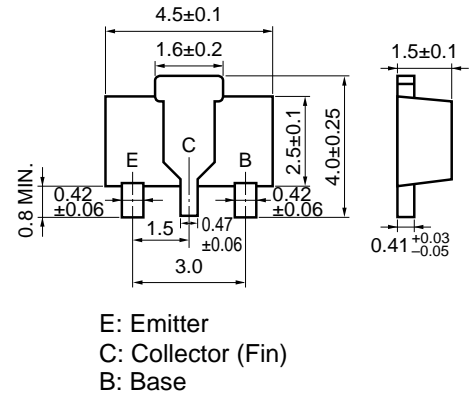
- Low $V_{CE(sat)}$: $V_{CE(sat)1} \leq -0.4$ V
- Complementary to 2SD2403

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

Collector to Base Voltage	V_{CBO}	-80	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-6.0	V
Collector Current (DC)	$I_{C(DC)}$	-3.0	A
Collector Current (pulse) ^{Note1}	$I_{C(pulse)}$	-5.0	A
Base Current (DC)	$I_{B(DC)}$	-0.2	A
Base Current (pulse) ^{Note1}	$I_{B(pulse)}$	-0.4	A
Total Power Dissipation ^{Note2}	P_T	2.0	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to + 150	$^\circ\text{C}$

- Notes 1.** $PW \leq 10$ ms, Duty Cycle $\leq 50\%$
 2. When mounted on ceramic substrate of $16\text{ cm}^2 \times 0.7$ mm

PACKAGE DRAWING (Unit: mm)



E: Emitter
 C: Collector (Fin)
 B: Base

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

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -80$ V, $I_E = 0$			-100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -6.0$ V, $I_C = 0$			-100	nA
DC Current Gain ^{Note}	h_{FE1}	$V_{CE} = -2.0$ V, $I_C = -0.1$ A	80			-
	h_{FE2}	$V_{CE} = -2.0$ V, $I_C = -1.0$ A	100	200	400	-
Base to Emitter Voltage ^{Note}	V_{BE}	$V_{CE} = -2.0$ V, $I_C = -0.1$ A	-0.63	-0.685	-0.73	V
Collector Saturation Voltage ^{Note}	$V_{CE(sat)1}$	$I_C = -2.0$ A, $I_B = -0.1$ A		-0.2	-0.4	V
Collector Saturation Voltage ^{Note}	$V_{CE(sat)2}$	$I_C = -3.0$ A, $I_B = -0.15$ A		-0.3	-0.6	V
Base Saturation Voltage ^{Note}	$V_{BE(sat)}$	$I_C = -2.0$ A, $I_B = -0.1$ A		-0.89	-1.2	V
Gain Bandwidth Product	f_T	$V_{CE} = -10$ V, $I_E = 0.3$ A		160		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, $f = 1.0$ MHz		45		pF
Turn-on Time	t_{on}	$I_C = -1.0$ A, $V_{CC} = -10$ V,		155		ns
Storage Time	t_{stg}	$R_L = 5.0$ Ω , $I_{B1} = -I_{B2} = -0.1$ A,		510		ns
Fall Time	t_f			35		ns

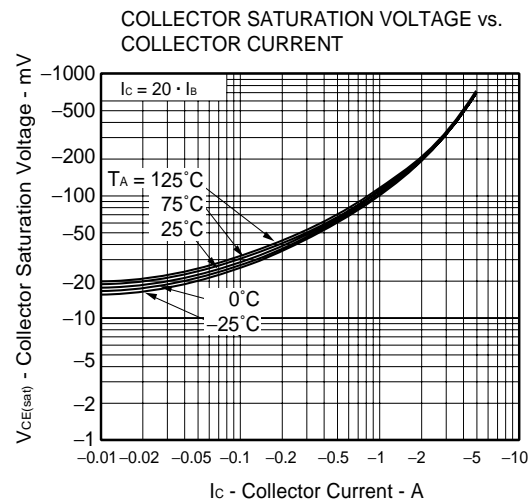
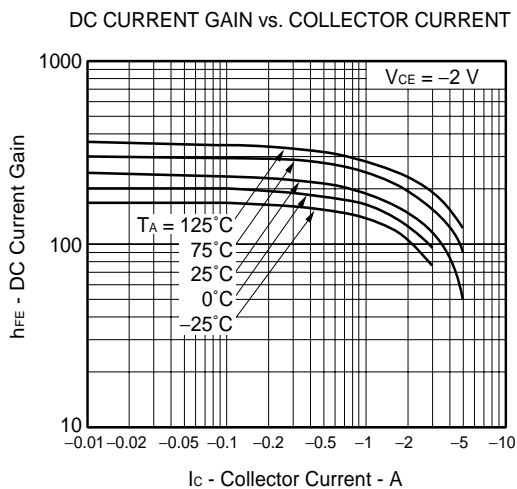
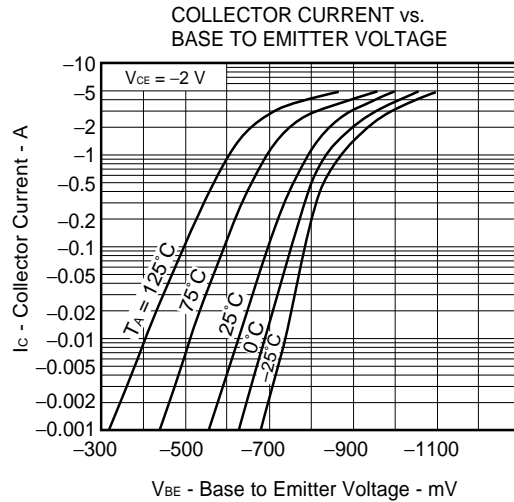
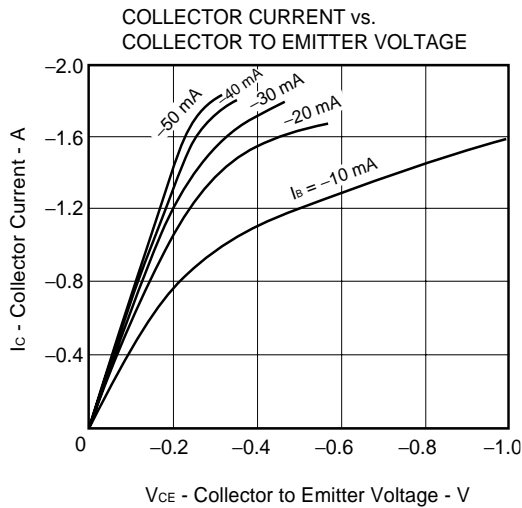
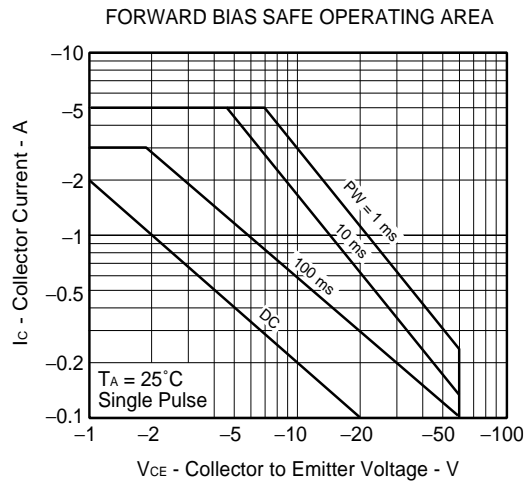
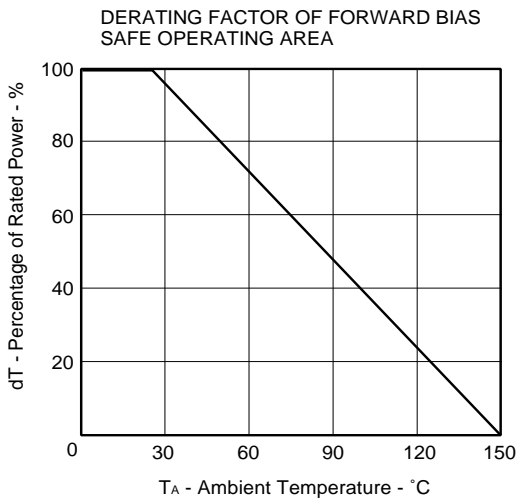
Note Pulsed: $PW \leq 350$ μs , Duty Cycle $\leq 2\%$

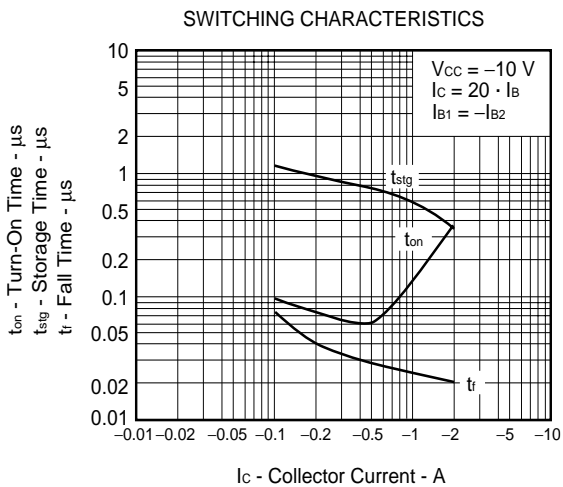
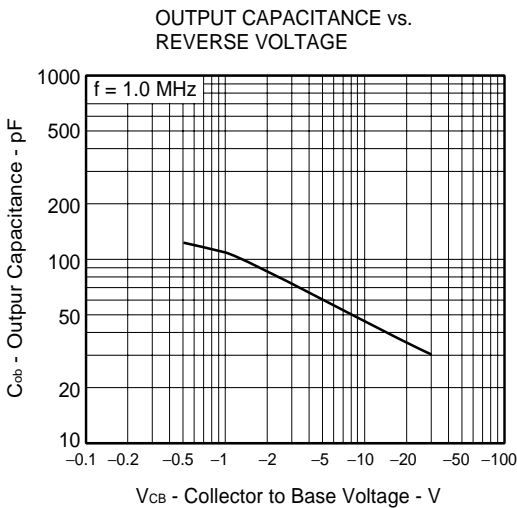
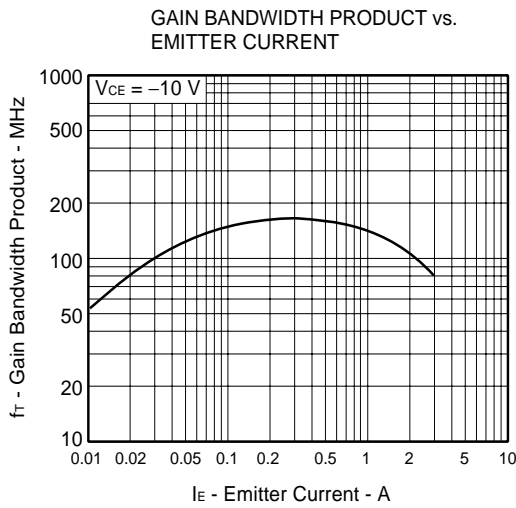
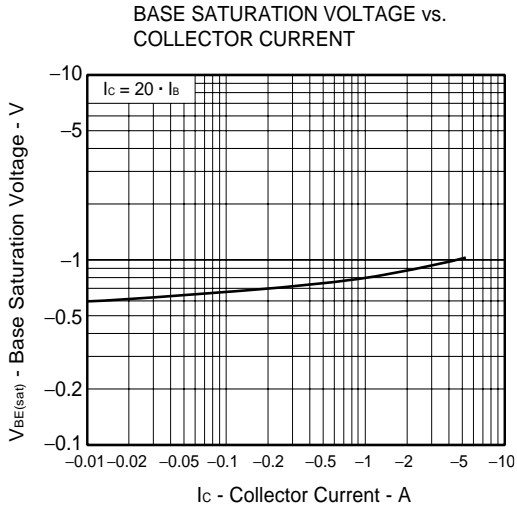
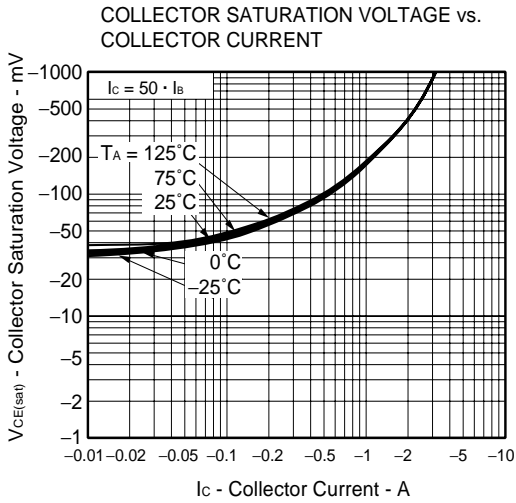
h_{FE} CLASSIFICATION

Marking	HX	HY	HZ
h_{FE2}	100 to 200	160 to 320	200 to 400

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