

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
FOR LOW-FREQUENCY POWER AMPLIFIERS AND LOW-SPEED SWITCHING

FEATURES

- Mold package that does not require an insulating board or insulation bushing
- Large current capacity in small dimension: $I_{C(DC)} = 7\text{ A}$
- Low collector saturation voltage: $V_{CE(sat)} = -0.5\text{ V MAX. (@ } -5\text{ A)}$
- Ideal for use in lamp drivers or inductance drivers
- Complementary transistor: 2SD1588

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

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-80	V
Collector to emitter voltage	V_{CEO}	-60	V
Emitter to base voltage	V_{EBO}	-7.0	V
Collector current (DC)	$I_{C(DC)}$	-7.0	A
Collector current (pulse)	$I_{C(pulse)}^*$	-15	A
Base current (DC)	$I_{B(DC)}$	-3.5	A
Total power dissipation	$P_T (T_c = 25^\circ\text{C})$	30	W
Total power dissipation	$P_T (T_a = 25^\circ\text{C})$	2.0	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* $PW \leq 300\ \mu\text{s}$, duty cycle $\leq 10\%$

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

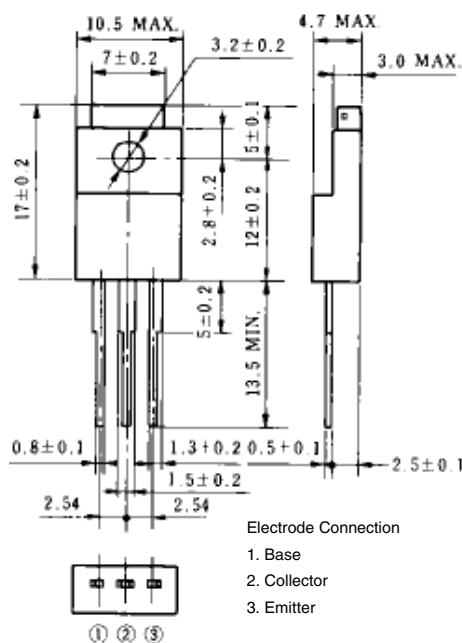
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -60\text{ V}, I_E = 0$			-10	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -5.0\text{ V}, I_C = 0$			-10	μA
DC current gain	h_{FE1}^{**}	$V_{CE} = -1.0\text{ V}, I_C = -3\text{ A}$	40		200	
DC current gain	h_{FE2}^{**}	$V_{CE} = -1.0\text{ V}, I_C = -5\text{ A}$	20			
Collector saturation voltage	$V_{CE(sat)}^{**}$	$I_C = -5\text{ A}, I_B = -0.5\text{ A}$			-0.5	V
Base saturation voltage	$V_{BE(sat)}^{**}$	$I_C = -5\text{ A}, I_B = -0.5\text{ A}$			-1.5	V

** Pulse test $PW \leq 350\ \mu\text{s}$, duty cycle $\leq 2\%/pulsed$

h_{FE} CLASSIFICATION

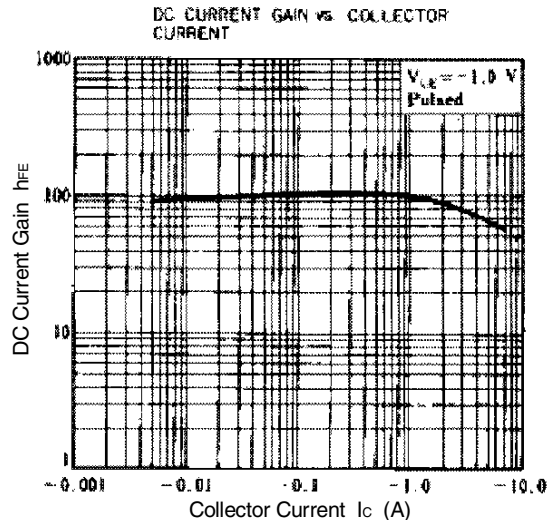
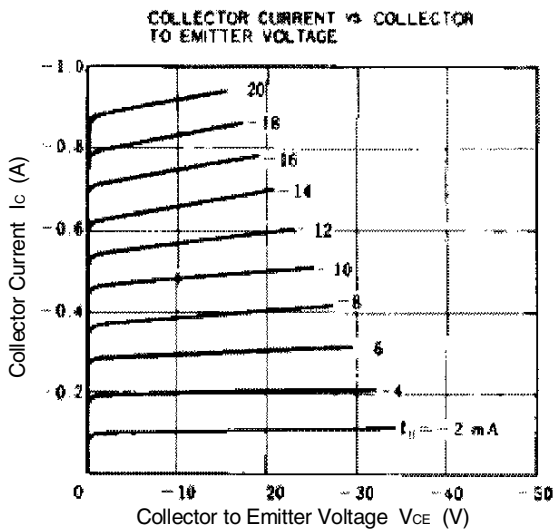
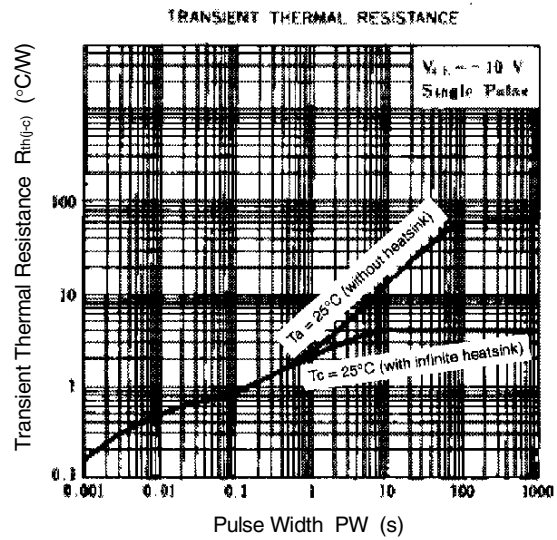
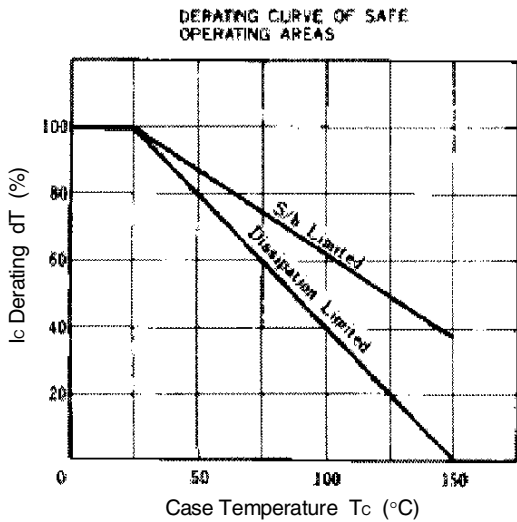
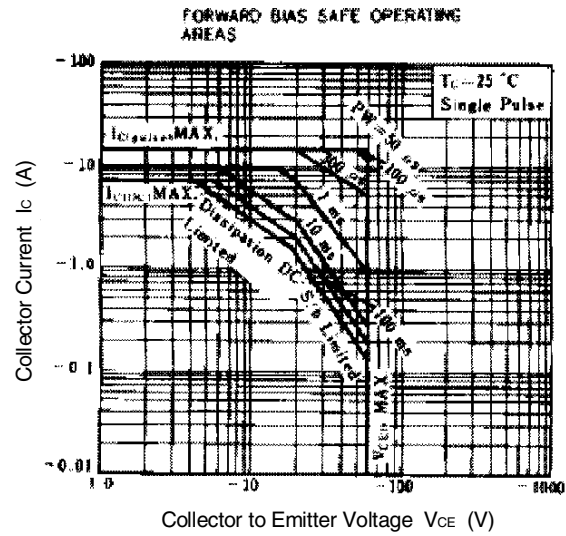
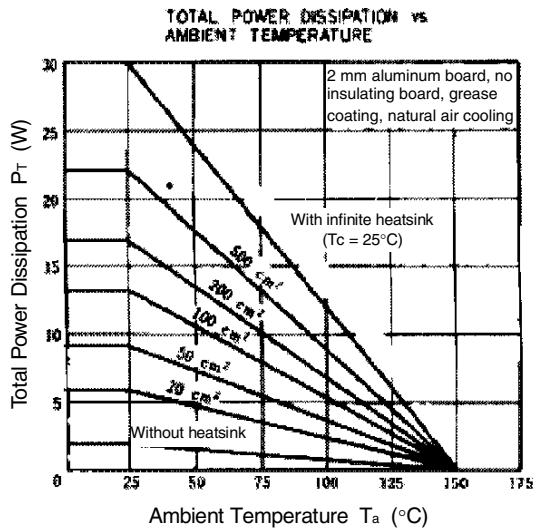
Marking	M	L	K
h_{FE1}	40 to 80	60 to 120	100 to 200

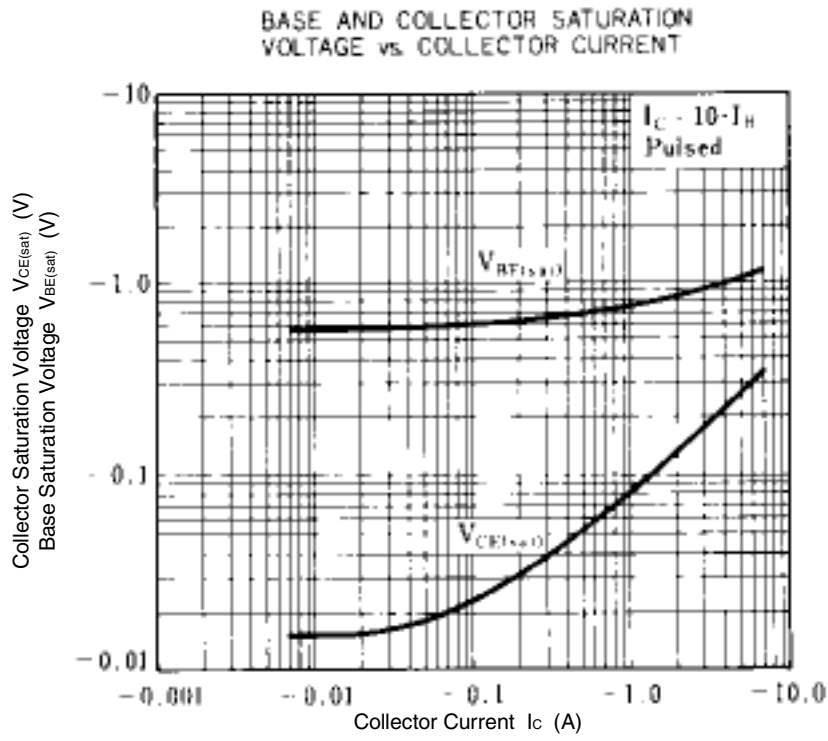
PACKAGE DRAWING (UNIT: mm)



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