

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

DESCRIPTION

The 2SA1385-Z is designed for Audio Frequency Amplifier and Switching, especially in Hybrid Integrated Circuits.

FEATURES

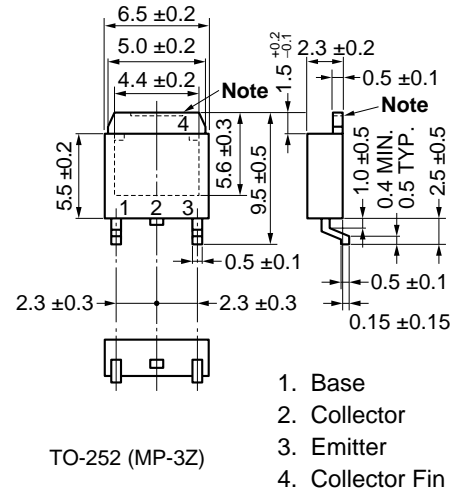
- Low $V_{CE(sat)}$: $V_{CE(sat)} = -0.18$ V TYP.
- Complement to 2SC3518-Z

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

Collector to base voltage	V_{CBO}	-60	V
Collector to emitter voltage	V_{CEO}	-60	V
Base to emitter voltage	V_{EBO}	-7	V
Collector current (DC)	$I_{C(DC)}$	-5	A
Collector current (pulse) ^{Note}	$I_{C(pulse)}$	-7	A
Total power dissipation ($T_c = 25^\circ\text{C}$)	P_T	10	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note $PW \leq 10$ ms, Duty Cycle $\leq 50\%$

<R> PACKAGE DRAWING (Unit: mm)



Note The depth of notch at the top of the fin is from 0 to 0.2 mm.

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ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

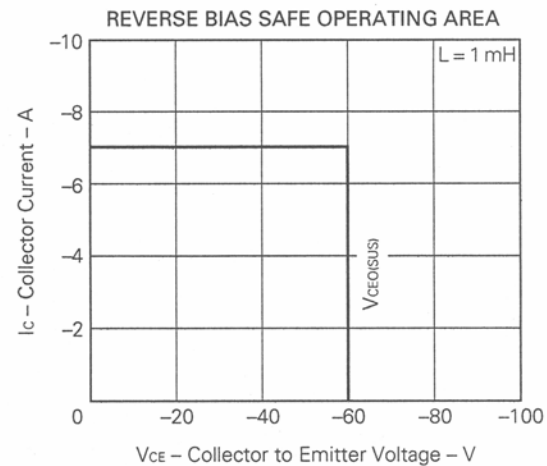
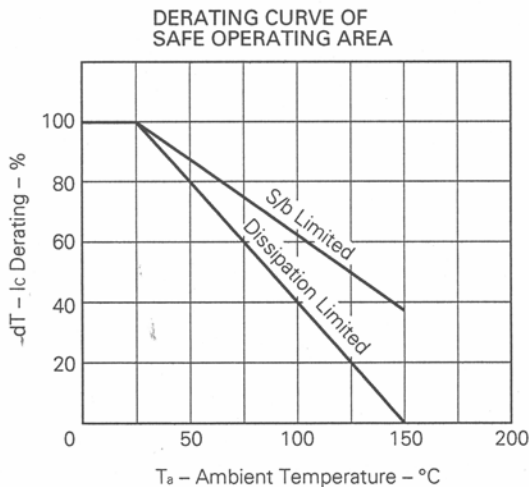
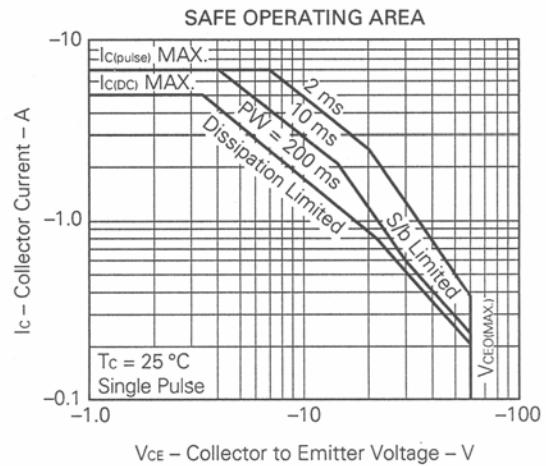
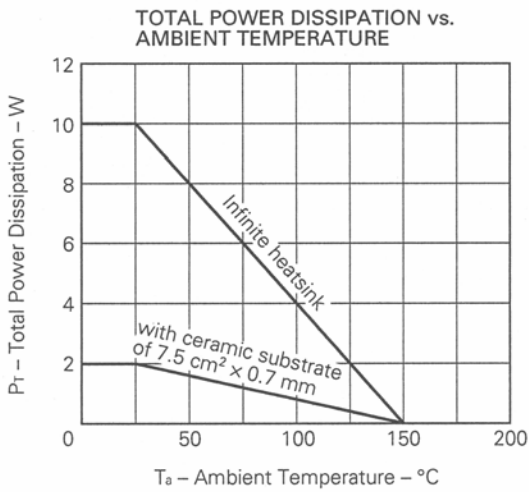
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I _{CB0}			-10	μA	V _{CB} = -50 V, I _E = 0
Emitter Cutoff Current	I _{EB0}			-10	μA	V _{EB} = -7.0 V, I _C = 0
DC Current Gain	h _{FE1} *	100	200	400		V _{CE} = -1.0 V, I _C = -2.0 A
DC Current Gain	h _{FE2} *	50	100			V _{CE} = -1.0 V, I _C = -5.0 A
Collector Saturation Voltage	V _{CE(sat)} *		-0.18	-0.3	V	I _C = -2.0 A, I _B = -0.2 A
Base Saturation Voltage	V _{BE(sat)} *			-1.2	V	I _C = -2.0 A, I _B = -0.2 A
Gain Bandwidth Product	f _T		140		MHz	V _{CE} = -10 V, I _C = -0.5 A
Turn-on Time	t _{on}		0.08	1.0	μs	I _C = -2.0 A, V _{CC} = -10 V R _L = 50 Ω I _{B1} = -I _{B2} = -0.2 A
Storage Time	t _{stg}		0.55	2.5	μs	
Fall time	t _f		0.18	1.0	μs	

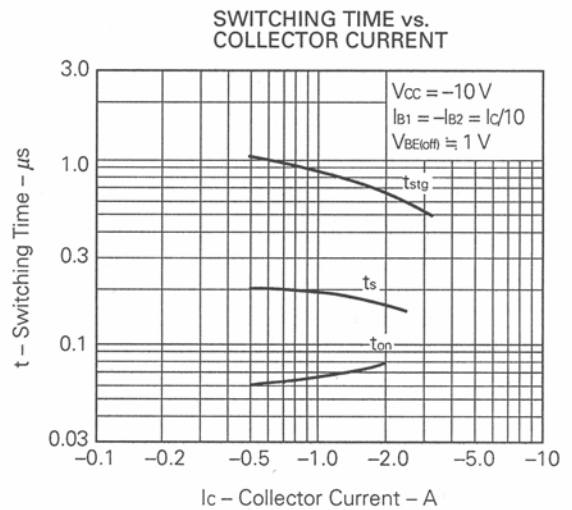
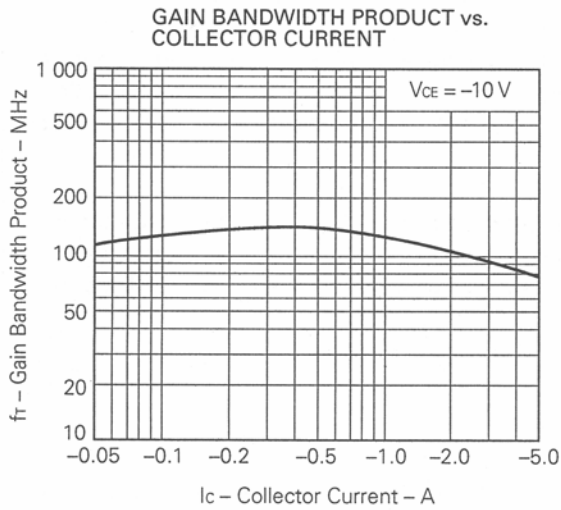
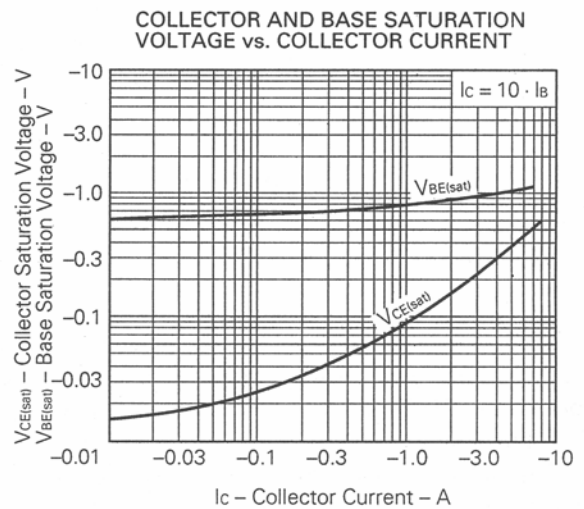
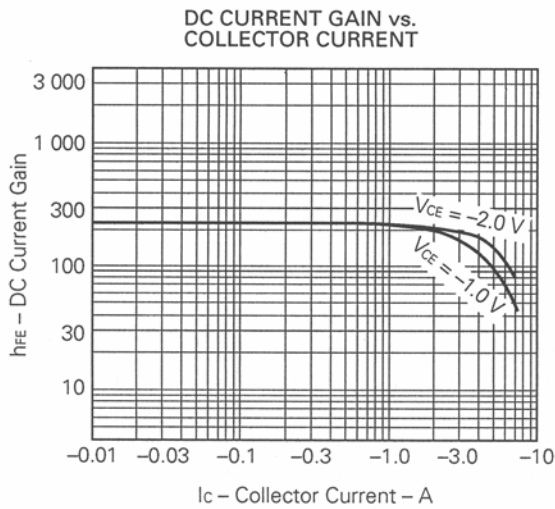
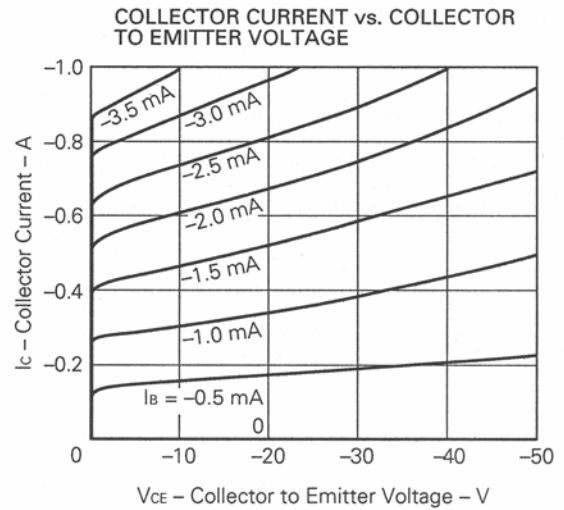
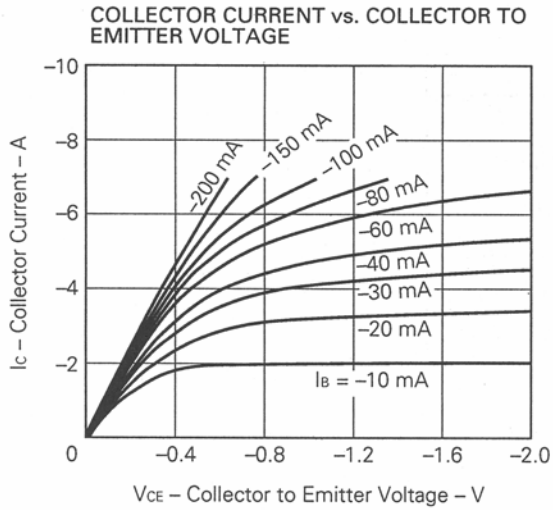
* Pulsed: PW ≤ 350 μs, Duty Cycle ≤ 2 %

h_{FE} Classification

MARKING	M	L	K
h _{FE1}	100 to 200	160 to 320	200 to 400

TYPICAL CHARACTERISTICS (T_a = 25 °C)





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