

To our customers,

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## Old Company Name in Catalogs and Other Documents

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

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

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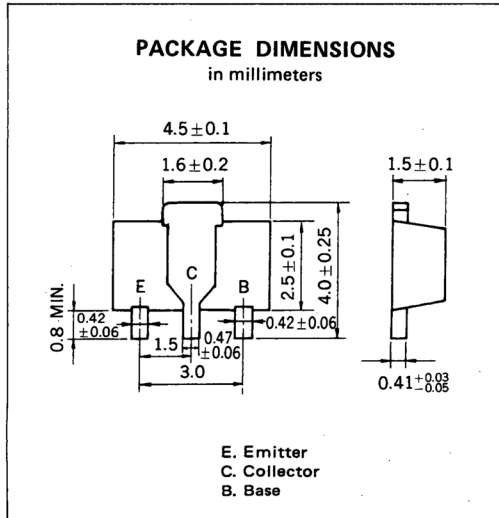
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PNP SILICON EPITAXIAL TRANSISTOR  
POWER MINI MOLD

DESCRIPTION

2SB1115, 1115A are designed for audio frequency power amplifier and switching application, especially in Hybrid Integrated Circuits.



FEATURES

- Low  $V_{CE(sat)}$ .  $V_{CE(sat)} = -0.2$  V at 1 A
- Complement to 2SD1615, 1615A

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

	2SB1115	2SB1115A	
Collector to Base Voltage	$V_{CBO}$	-60	-80 V
Collector to Emitter Voltage	$V_{CEO}$	-50	-60 V
Emitter to Base Voltage	$V_{EBO}$	-6.0	V
Collector Current (DC)	$I_C(\text{DC})$	-1.0	A
Collector Current (Pulse)*	$I_C(\text{Pulse})$	-2.0	A
Total Power Dissipation**	$P_T$	2.0	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

\*\*When mounted on ceramic substrate of 16 cm<sup>2</sup> x 0.7 mm

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS	
						2SB1115	2SB1115A
Collector Cutoff Current	$I_{CBO}$			-100	nA	2SB1115	$V_{CB} = -60$ V, $I_E = 0$
				-100	nA	2SB1115A	$V_{CB} = -80$ V, $I_E = 0$
Emitter Cutoff Current	$I_{EBO}$			-100	nA	$V_{EB} = -6.0$ V, $I_C = 0$	
DC Current Gain	$h_{FE1}$ ***	135	340	600		2SB1115	$V_{CE} = -2.0$ V, $I_C = -100$ mA
		135		400		2SB1115A	
DC Current Gain	$h_{FE2}$ ***	100	200			$V_{CE} = -2.0$ V, $I_C = -1.0$ A	
Collector Saturation Voltage	$V_{CE(sat)}$ ***		-0.2	-0.3	V	$I_C = -1.0$ A, $I_B = -50$ mA	
Base Saturation Voltage	$V_{BE(sat)}$ ***		-0.9	-1.2	V	$I_C = -1.0$ A, $I_B = -50$ mA	
Base to Emitter Voltage	$V_{BE}$ ***	-600		-700	mV	$V_{CE} = -2.0$ V, $I_C = -50$ mA	
Gain Bandwidth Product	$f_T$	80	120		MHz	$V_{CE} = -2.0$ V, $I_E = -100$ mA	
Output Capacitance	$C_{ob}$		25		pF	$V_{CB} = -10$ V, $I_E = 0$ , $f = 1.0$ MHz	

\*\*\*Pulsed: PW  $\leq$  350  $\mu$ s, Duty Cycle  $\leq$  2 %

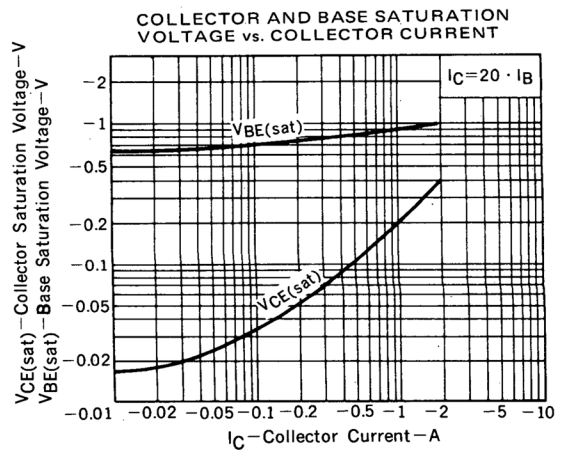
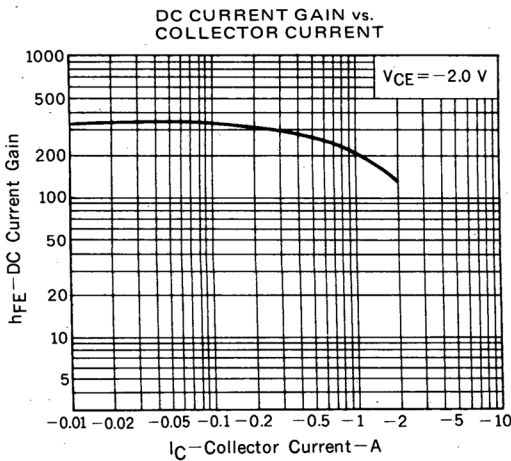
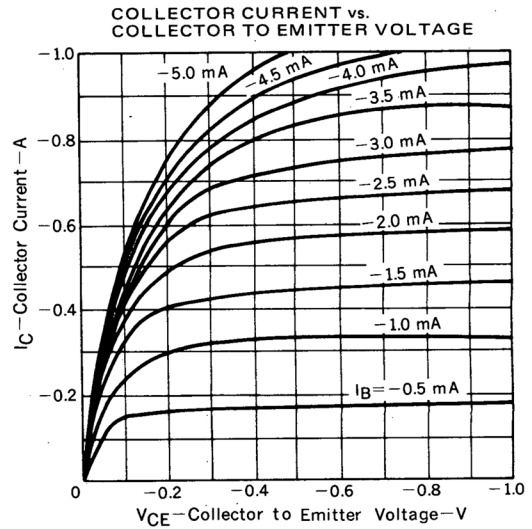
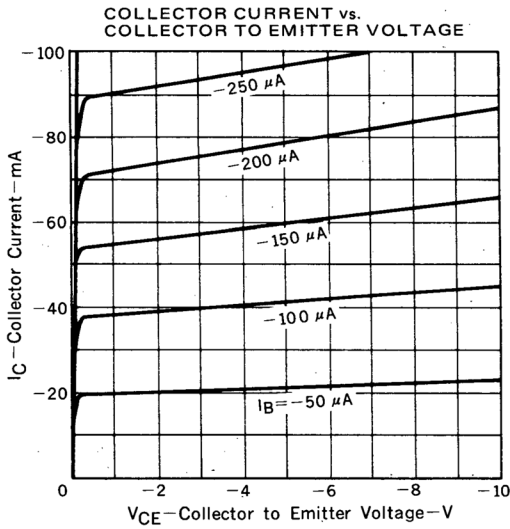
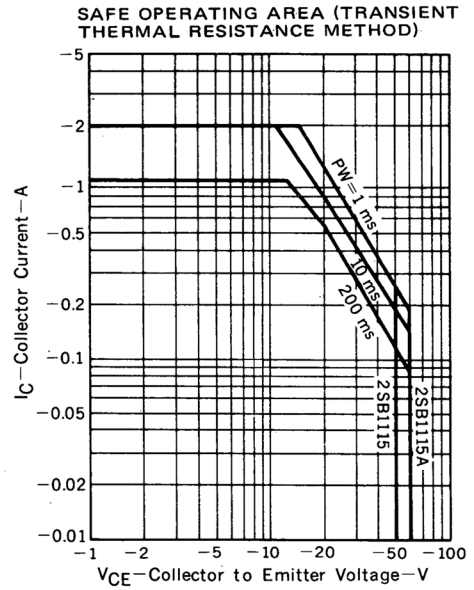
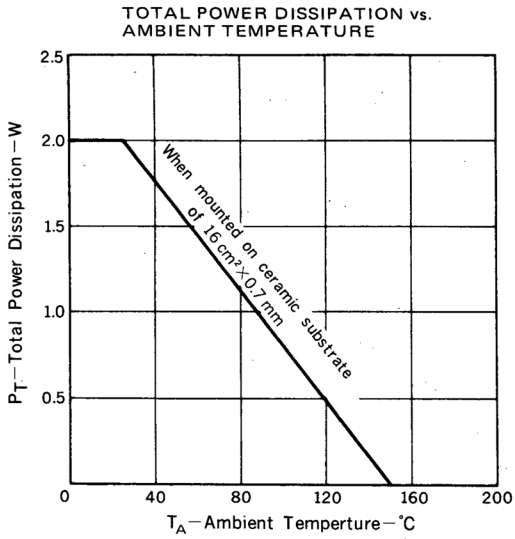
$h_{FE}$  Classification

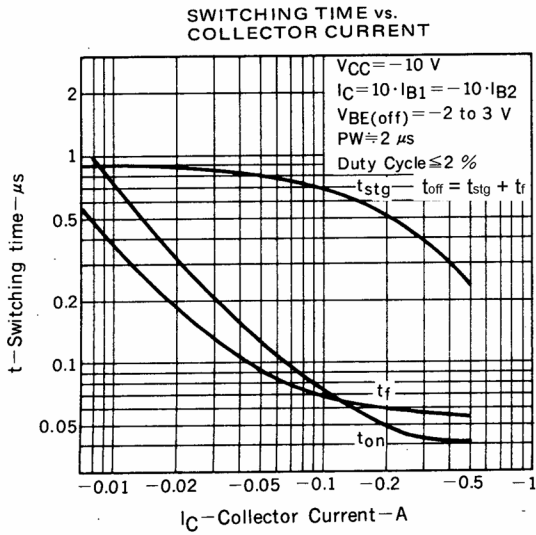
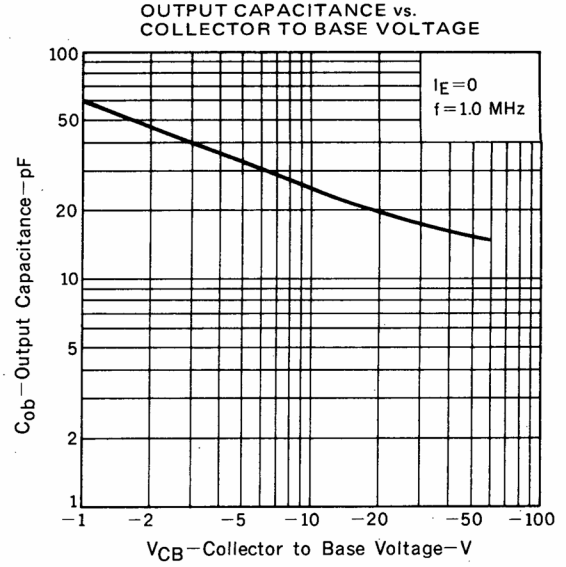
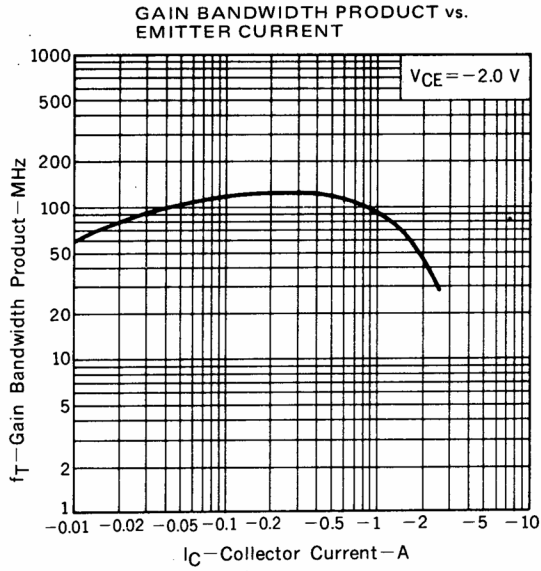
MARKING	2SB1115	YM	YL	YK
	2SB1115A	YQ	YP	
$h_{FE1}$		135 to 270	200 to 400	300 to 600

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