

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

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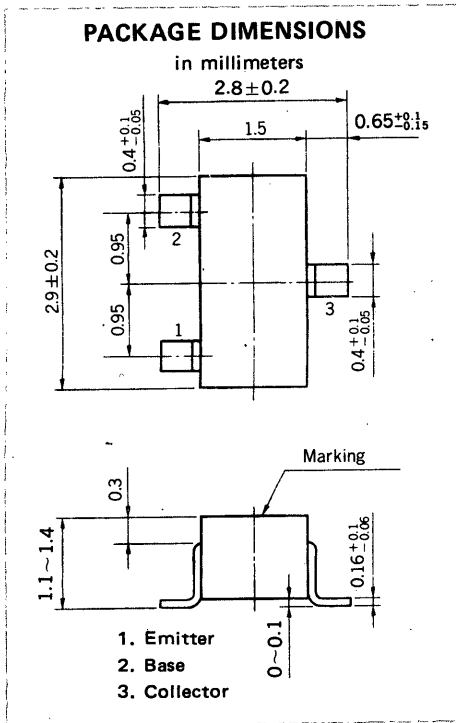
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AUDIO FREQUENCY POWER AMPLIFIER PNP SILICON EPITAXIAL TRANSISTOR MINI MOLD



DESCRIPTION

The 2SB736, 2SB736A are designed for use in small type equipments especially recommended for hybrid integrated circuit and other applications.

FEATURES

- Micro package.
- High DC current gain. h_{FE} : 200 TYP. ($V_{CE} = -1.0$ V, $I_C = -50$ mA)
- Complimentary to the NEC 2SD780, 2SD780A NPN Transistor.

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ($T_a = 25^\circ\text{C}$)	2SB736	2SB736A	
Collector to Base Voltage	V_{CBO} -60	-80	V
Collector to Emitter Voltage	V_{CEO} -60	-80	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current (DC)	I_C	-300	mA
Maximum Power Dissipation			
Total Power Dissipation at 25°C Ambient Temperature P_T		200	mW
Maximum Temperatures			
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$
Operating Junction Temperature	T_j	150	$^\circ\text{C}$

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

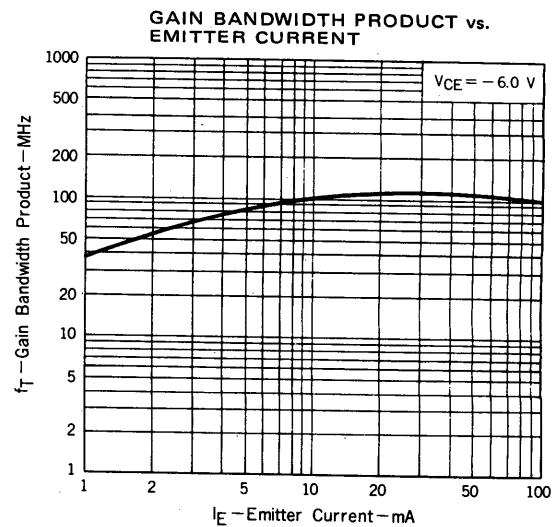
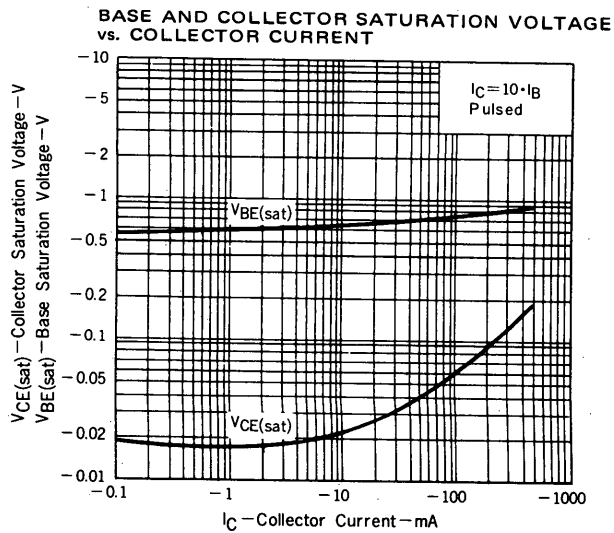
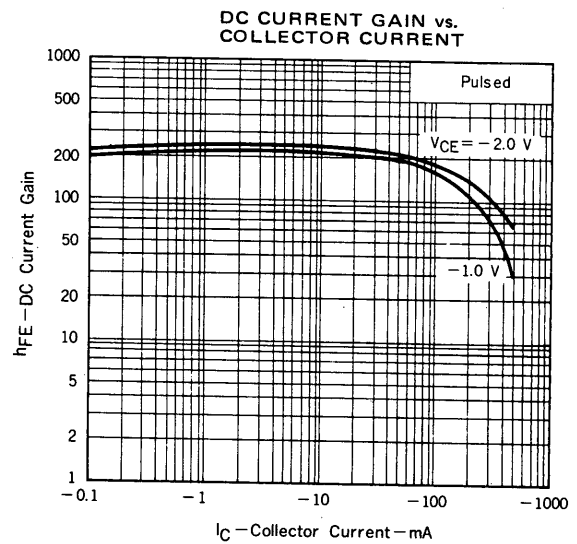
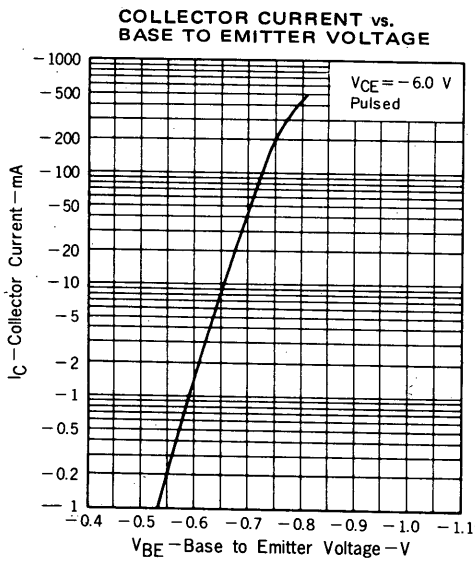
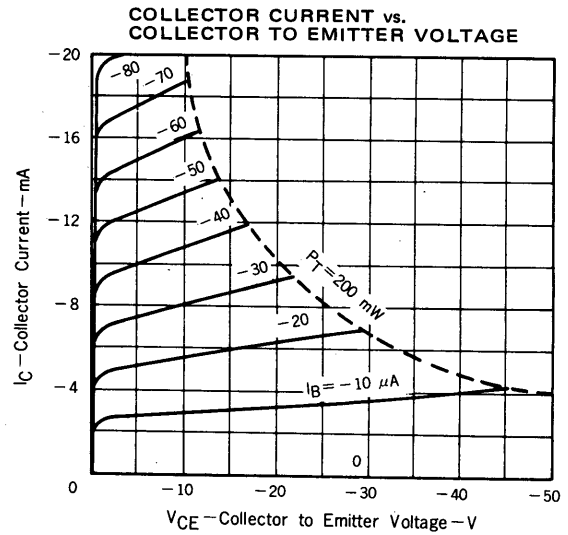
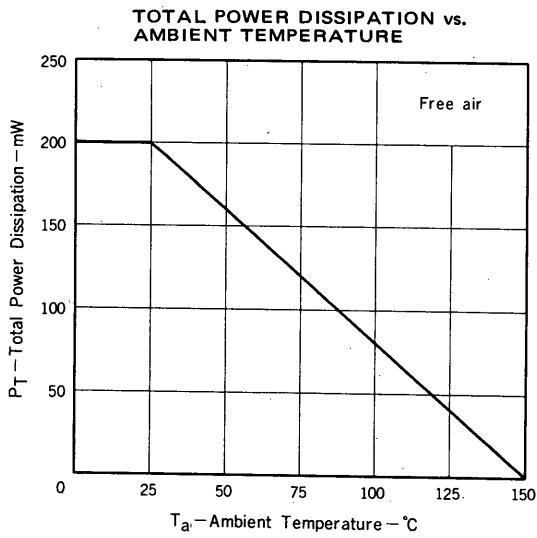
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			-100	nA	$V_{CB} = -50$ V, $I_E = 0$
Emitter Cutoff Current	I_{EBO}			-100	nA	$V_{EB} = -5.0$ V, $I_C = 0$
DC Current Gain	h_{FE1}	110	200	400		$V_{CE} = -1.0$ V, $I_C = -50$ mA *
DC Current Gain	h_{FE2}	30				$V_{CE} = -2.0$ V, $I_C = -300$ mA *
Base to Emitter Voltage	V_{BE}	-600	-660	-700	mV	$V_{CE} = -6.0$ V, $I_C = -10$ mA *
Collector Saturation Voltage	$V_{CE(sat)}$		-0.35	-0.6	V	$I_C = -300$ mA, $I_B = -30$ mA *
Output Capacitance	C_{ob}		13		pF	$V_{CB} = -6.0$ V, $I_E = 0$, $f = 1.0$ MHz
Gain Bandwidth Product	f_T		100		MHz	$V_{CE} = -6.0$ V, $I_E = 10$ mA

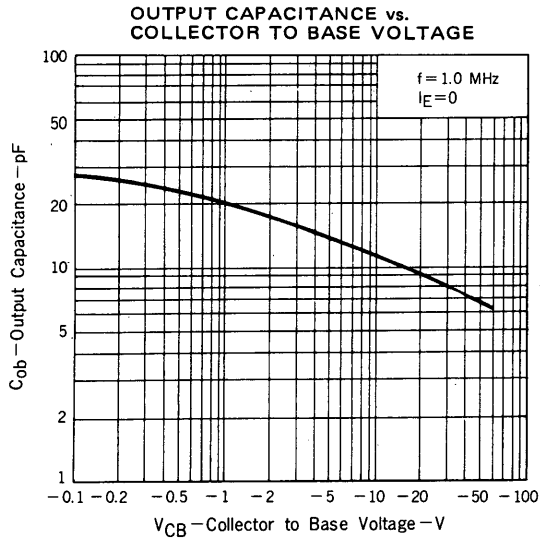
* Pulsed PW ≤ 350 μs , Duty Cycle $\leq 2\%$

h_{FE1} Classification

Marking	2SB736	BW1	BW2	BW3	BW4	BW5
	2SB736A	B51	B52	B53	B54	B55
h_{FE}	110 to 180	135 to 220	170 to 270	200 to 320	250 to 400	

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





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