



2SB798

PN EPITAXIAL SILICON TRANSISTOR

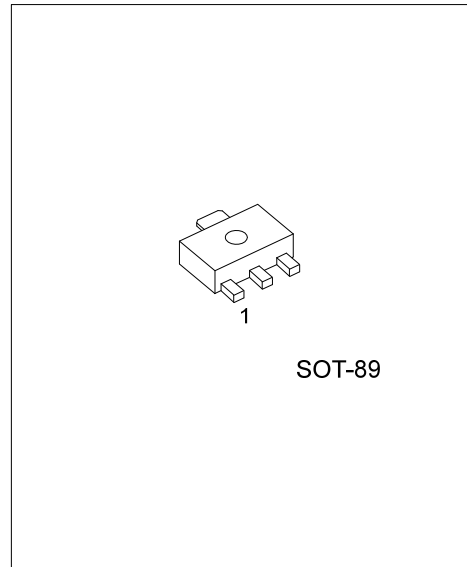
POWER TRANSISTOR

DESCRIPTION

The UTC **2SB798** is designed for audio frequency power amplifier applications, especially in Hybrid Integrated Circuits.

FEATURES

- * Low Collector Saturation Voltage:
 $V_{CE(sat)} < -0.4V$ ($I_C = -1.0A, I_B = -100mA$)
- * Excellent DC Current Gain Linearity :
 $h_{FE} = 100$ Typ. ($V_{CE} = -1.0V, I_C = -1.0A$)



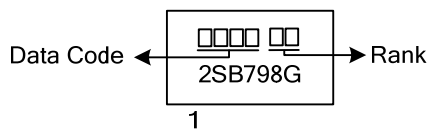
ORDERING INFORMATION

Order Number	Package	Pin Assignment			Packing
		1	2	3	
2SB798G-x-AB3-R	SOT-89	B	C	E	Tape Reel

Note: Pin Assignment: B: Base C: Collector E: Emitter

<p>2SB798G-x-AB3-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Rank (4) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE1} (4) G: Halogen Free and Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	-30	V
Collector-Emitter Voltage		V_{CEO}	-25	V
Emitter-Base Voltage		V_{EBO}	-5.0	V
Collector Current	DC	I_C	-1.0	A
	Pulse(Note 1)		-1.5	A
Collector Dissipation (Note 2)		P_C	2	W
Junction Temperature		T_J	150	$^\circ\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^\circ\text{C}$

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. $P_W \leq 10\text{ms}$, Duty Cycle $\leq 50\%$

3. When mounted on a ceramic substrate of $16\text{cm}^2 \times 0.7\text{mm}$.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

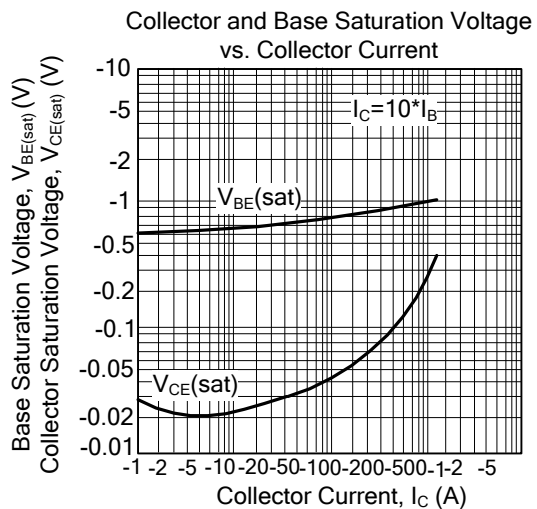
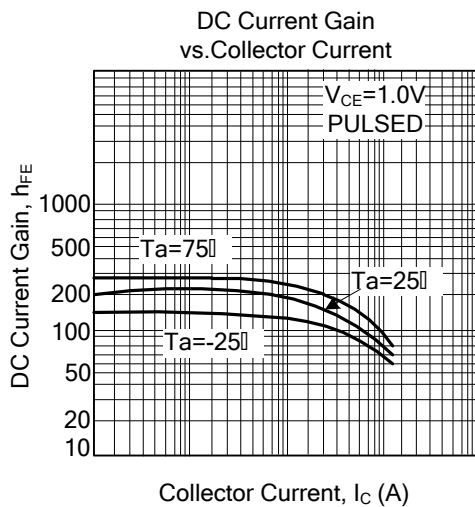
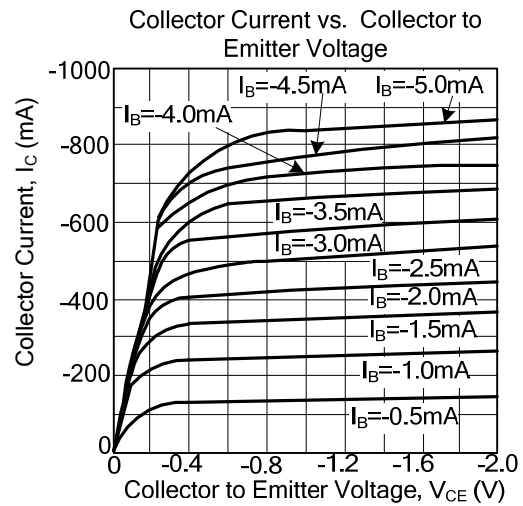
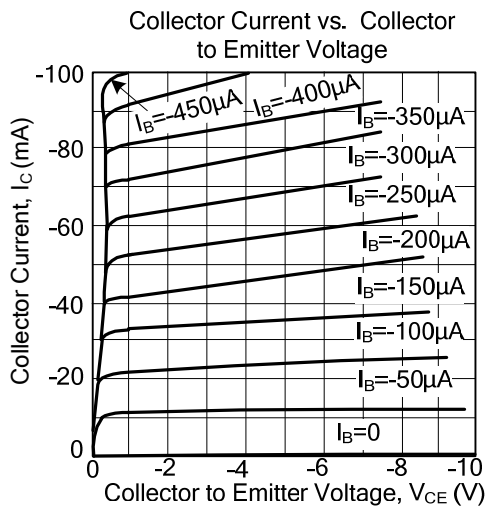
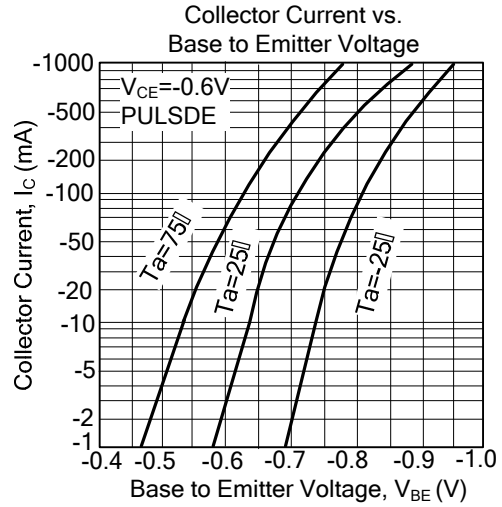
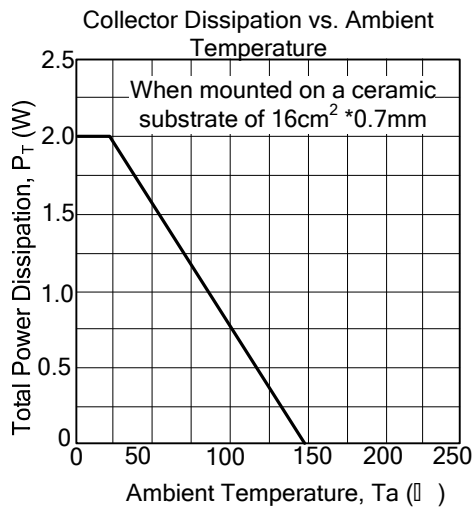
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -30\text{V}$, $I_E = 0$			-100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -5.0\text{V}$, $I_C = 0$			-100	nA
DC Current Gain	h_{FE1}	$V_{CE} = -1.0\text{V}$, $I_C = -100\text{mA}$	90	200	400	
DC Current Gain	h_{FE2}	$V_{CE} = -1.0\text{V}$, $I_C = -1.0\text{A}$	50	100		
Base to Emitter Voltage	V_{BE}	$V_{CE} = -6.0\text{V}$, $I_C = -10\text{mA}$	-600	-640	-700	mV
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -1.0\text{A}$, $I_B = -0.10\text{A}$		-0.25	-0.40	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -1.0\text{A}$, $I_B = -0.10\text{A}$		-1.0	-1.2	V
Gain Bandwidth Product	f_T	$V_{CE} = -6.0\text{V}$, $I_E = 10\text{mA}$		110		MHz
Output Capacitance	C_{ob}	$V_{CB} = -6.0\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		36		pF

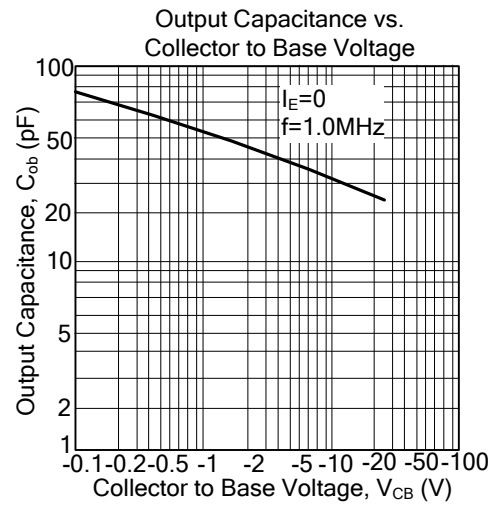
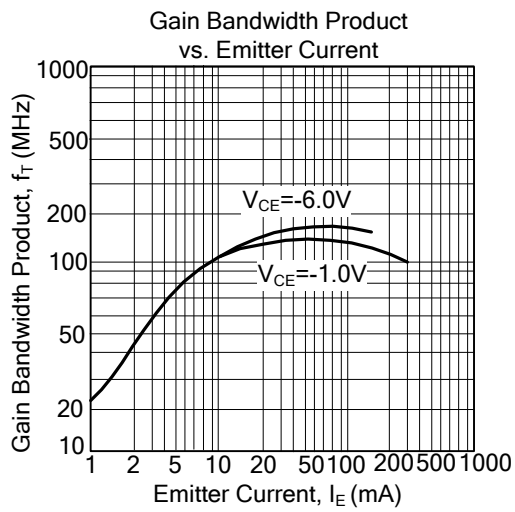
Note: $P_W \leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$

■ CLASSIFICATION OF h_{FE1}

RANK	DM	DL	DK
RANGE	90-180	135-270	200-400

TYPICAL CHARACTERISTICS





UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.