



2SB798

PN EPITAXIAL SILICON TRANSISTOR

POWER TRANSISTOR

DESCRIPTION

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

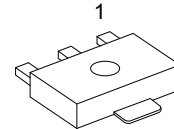
FEATURES

* Low Collector Saturation Voltage:

$$V_{CE(sat)} < -0.4V \text{ (} I_C = -1.0A, I_B = -100mA \text{)}$$

* Excellent DC Current Gain Linearity :

$$h_{FE} = 100 \text{ Typ. (} V_{CE} = -1.0V, I_C = -1.0A \text{)}$$



SOT-89

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB798L-X-AB3-R	2SB798G-X-AB3-R	SOT-89	B	C	E	Tape Reel

2SB798L-X-AB3-R (1) Packing Type (2) Package Type (3) Rank (4) Lead Free		(1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE1} (4) Halogen Free, L: Lead Free
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■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

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: 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.

1. $PW \leq 10\text{ms}$, Duty Cycle $\leq 50\%$

2. 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)

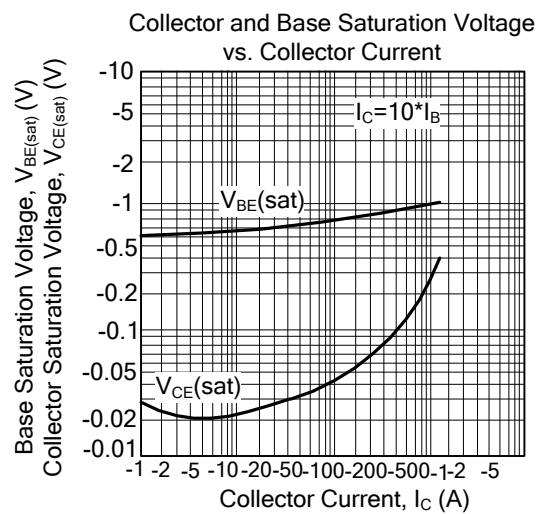
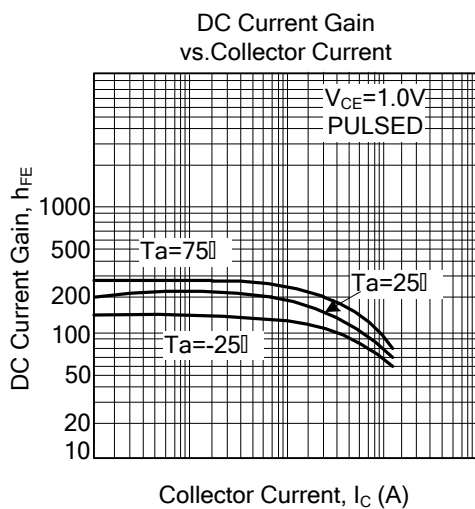
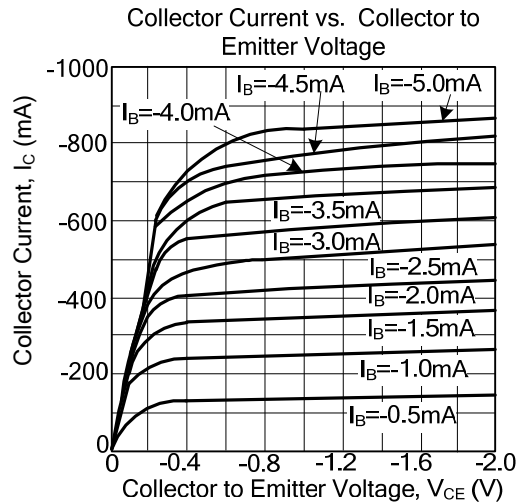
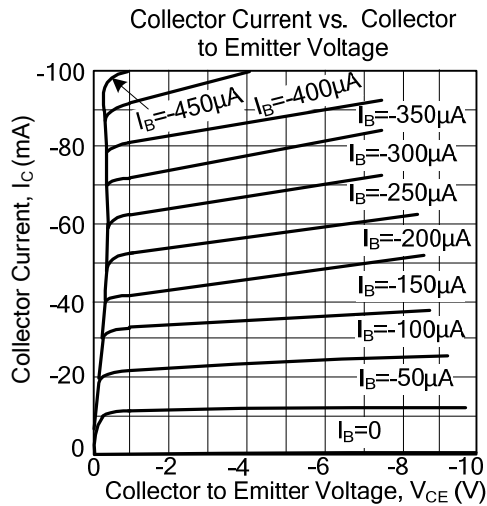
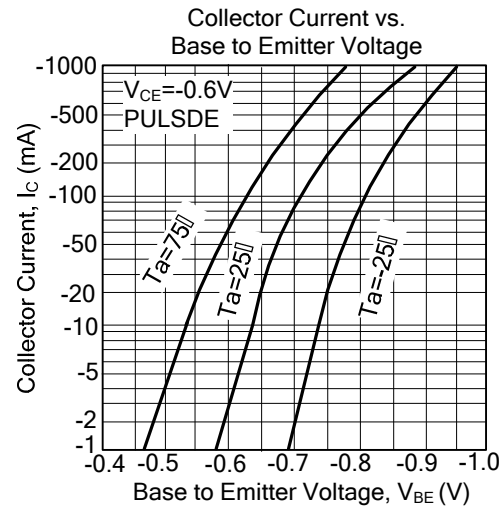
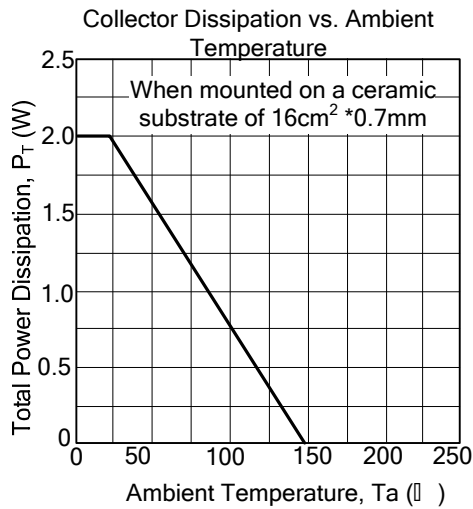
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -30\text{V}$, $I_E = 0$			-100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -5.0\text{V}$, $I_C = 0$			-100	nA
DC Current Gain	h_{FE1}	$V_{CE} = -1.0\text{V}$, $I_C = -100\text{mA}$	90	200	400	
DC Current Gain	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

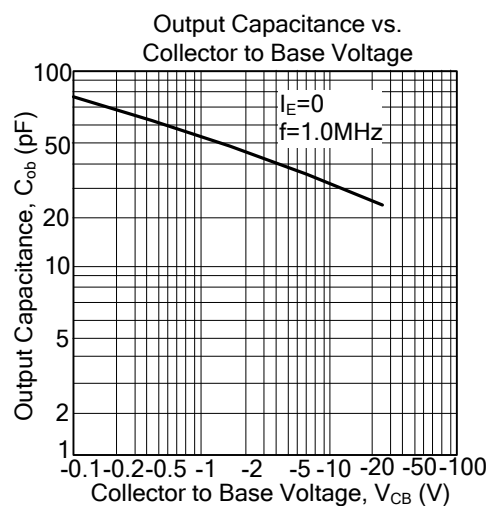
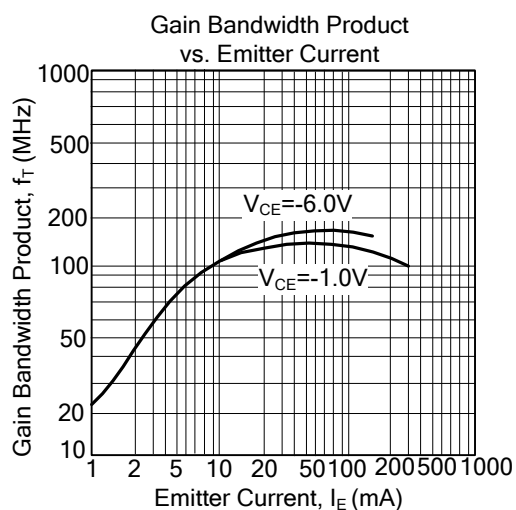
Note: 3. $PW \leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$

■ CLASSIFICATION OF h_{FE1}

MARKING	DM	DL	DK
h_{FE1}	90-180	135-270	200-400

TYPICAL CHARACTERISTICS





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