



## 2SB798

## PN EPITAXIAL SILICON TRANSISTOR

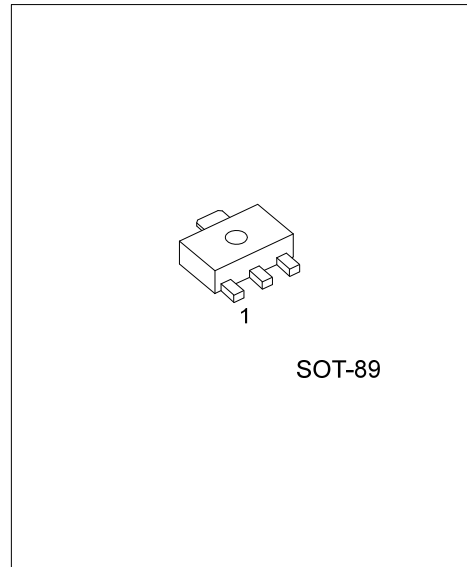
### POWER TRANSISTOR

#### 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. ( $V_{CE} = -1.0V, I_C = -1.0A$ )



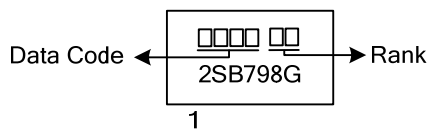
#### ORDERING INFORMATION

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> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Rank</p> <p>(4) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AB3: SOT-89</p> <p>(3) x: refer to Classification of <math>h_{FE1}</math></p> <p>(4) G: Halogen Free and Lead Free</p>
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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)

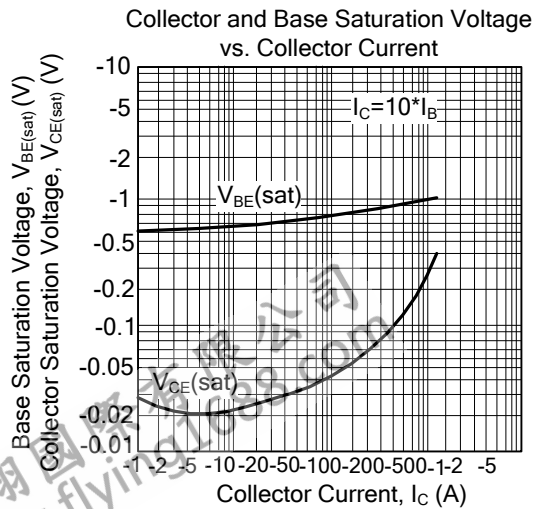
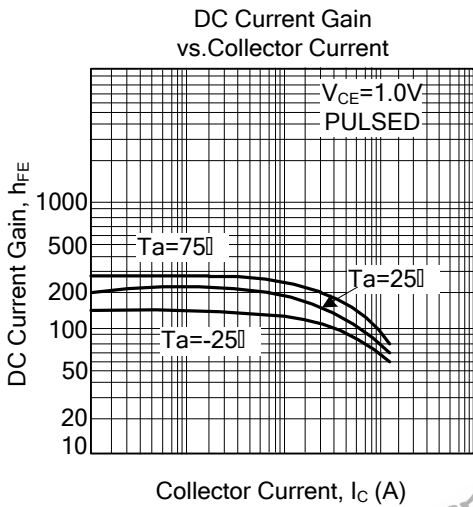
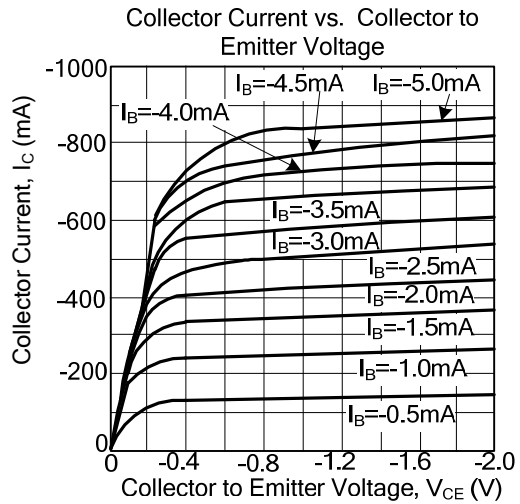
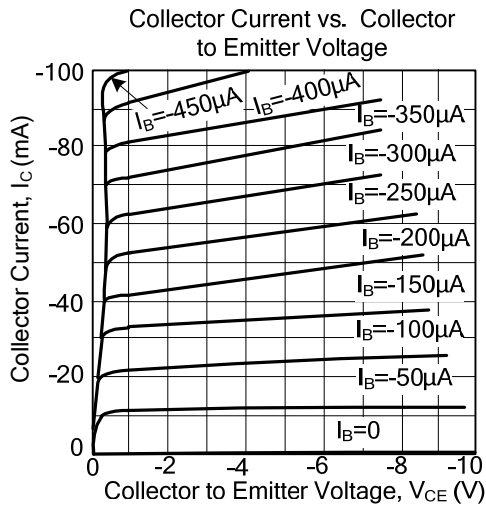
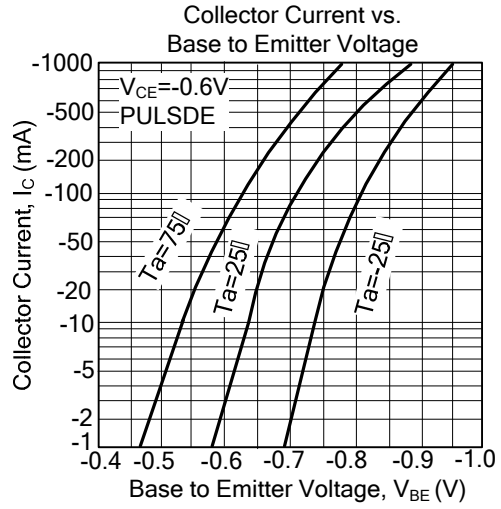
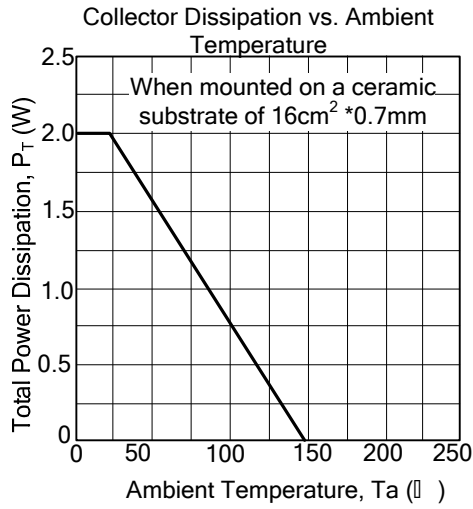
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	$I_{CBO}$	$V_{CB} = -30\text{V}$ , $I_E = 0$			-100	nA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB} = -5.0\text{V}$ , $I_C = 0$			-100	nA
DC Current Gain	$h_{FE1}$	$V_{CE} = -1.0\text{V}$ , $I_C = -100\text{mA}$	90	200	400	
DC Current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

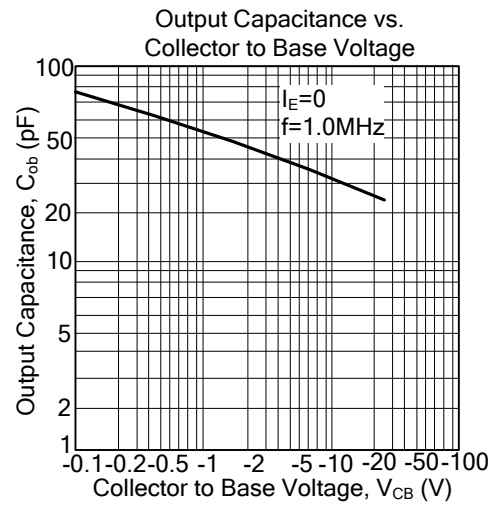
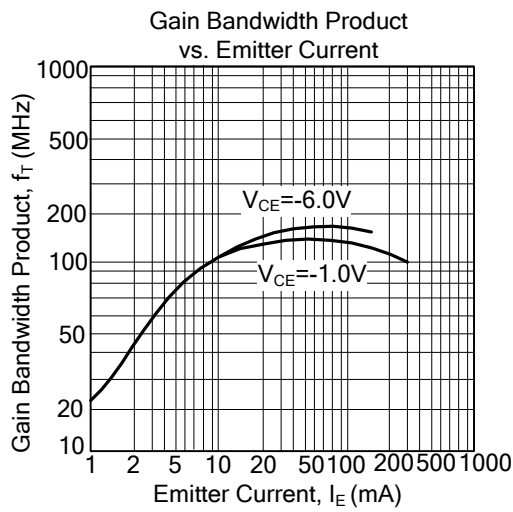
Note:  $P_W \leq 350\mu\text{s}$ , Duty Cycle  $\leq 2\%$

■ CLASSIFICATION OF  $h_{FE1}$

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

■ TYPICAL CHARACTERISTICS





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