

POWER TRANSISTOR

DESCRIPTION

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

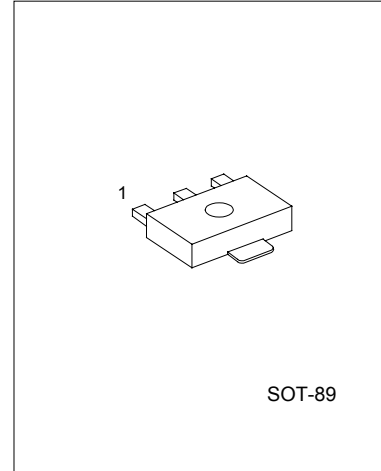
FEATURES

*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

1:EMITTER 2:COLLECTOR 3:BASE

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

PARAMETER		SYMBOL	RATING	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	$^\circ\text{C}$

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

Note 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)

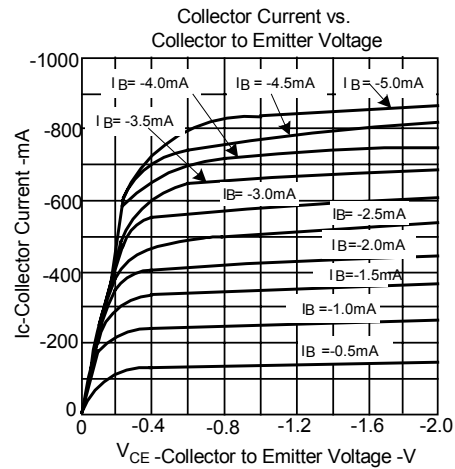
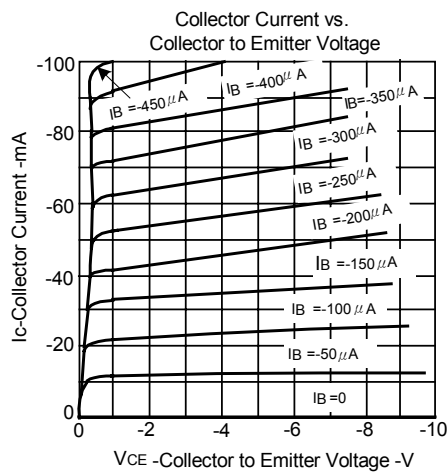
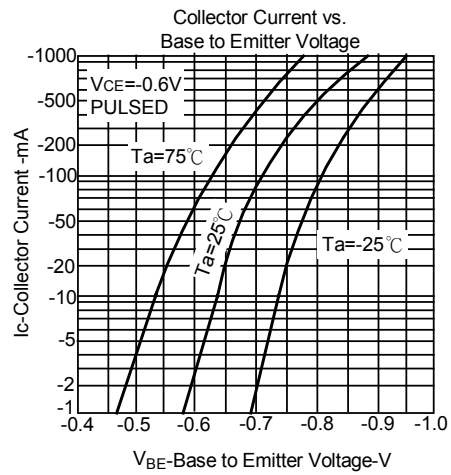
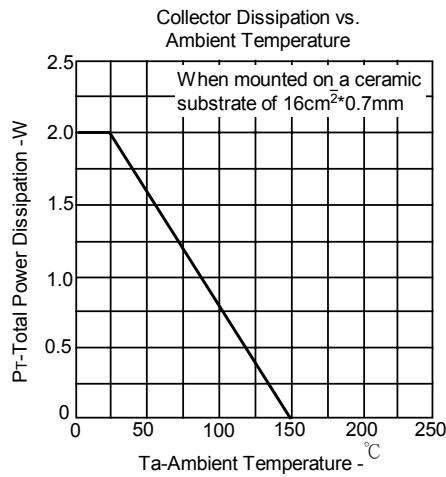
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -30V, I_E = 0$			-100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -5.0V, I_C = 0$			-100	nA
DC Current Gain	h_{FE1}	$V_{CE} = -1.0V, I_C = -100mA$	90	200	400	
DC Current Gain	h_{FE2}	$V_{CE} = -1.0V, I_C =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

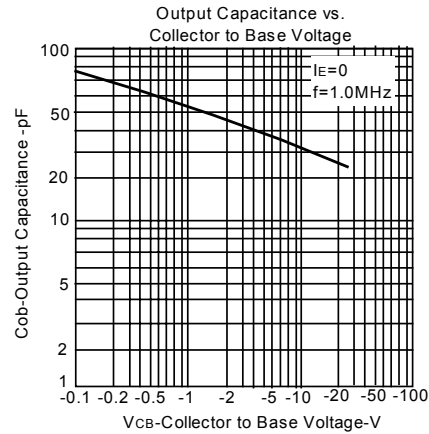
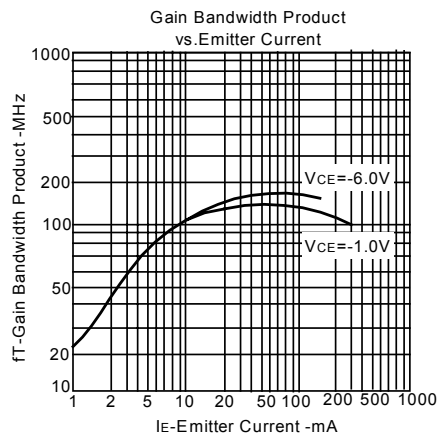
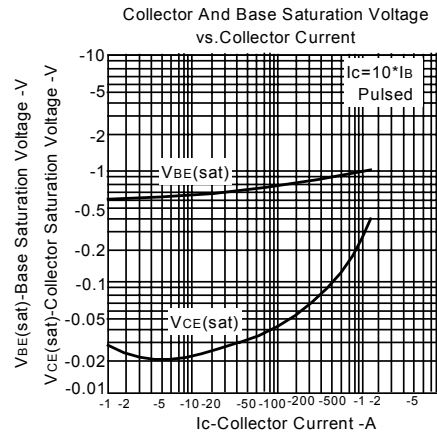
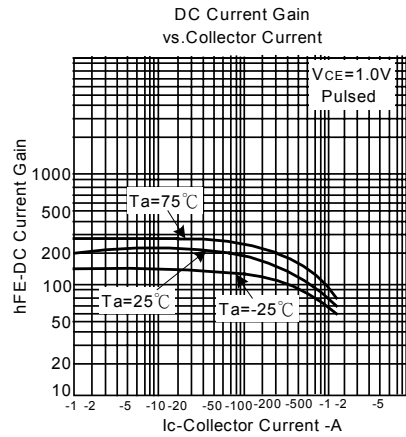
Note 3: $PW \leq 350\text{ }\mu\text{s}$, Duty Cycle $\leq 2\%$

CLASSIFICATION OF h_{FE1}

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

ELECTRICAL CHARACTERISTICS CURVES





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