

POWER TRANSISTOR

DESCRIPTION

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

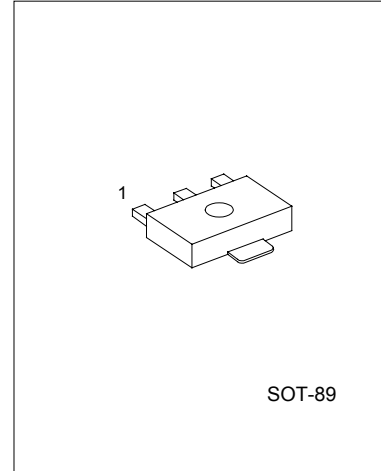
FEATURES

*Low Collector Saturation Voltage:

$$V_{CE(sat)} < -0.4V \quad (I_c = -1.0A, I_b = -100mA)$$

*Excellent DC Current Gain Linearity :

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



SOT-89

1:EMITTER 2:COLLECTOR 3:BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°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	°C
Storage Temperature		T _{STG}	-55 ~ +150	°C

Note 1: PW ≤ 10ms, Duty Cycle ≤ 50%

Note 2: When mounted on a ceramic substrate of 16cm² × 0.7 mm.

ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

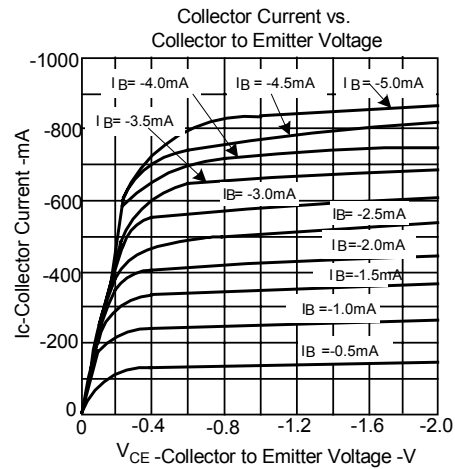
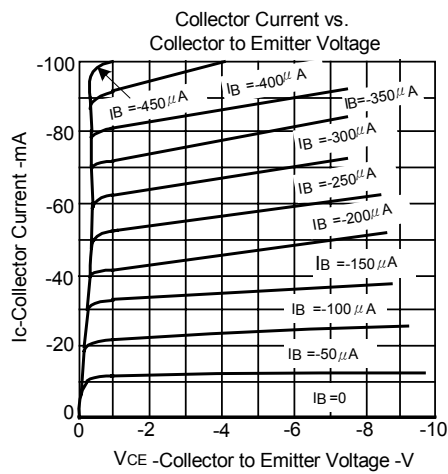
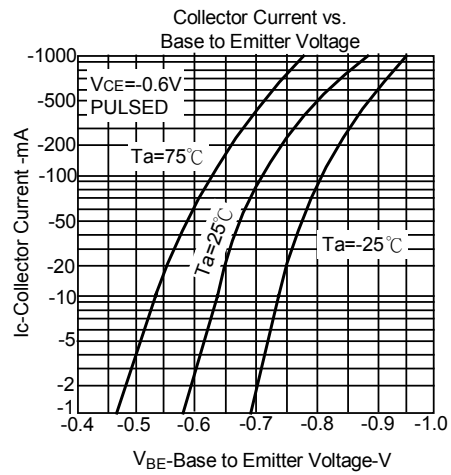
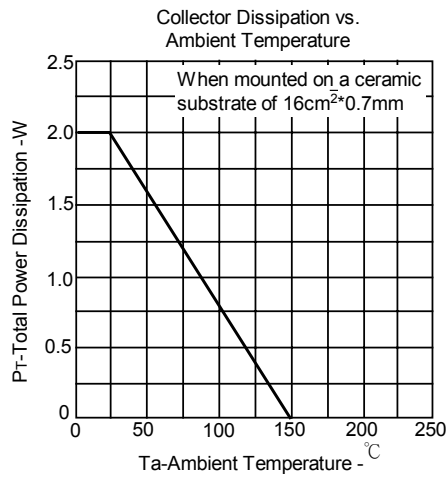
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I _{CBO}	V _{CB} = -30V, I _E = 0			-100	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} = -5.0V, I _C = 0			-100	nA
DC Current Gain	h _{FE1}	V _{CE} = -1.0V, I _C = -100mA	90	200	400	
DC Current Gain	h _{FE2}	V _{CE} = -1.0V, I _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 mA		110		MHz
Output Capacitance	C _{ob}	V _{CB} = -6.0V, I _E = 0, f = 1MHz		36		pF

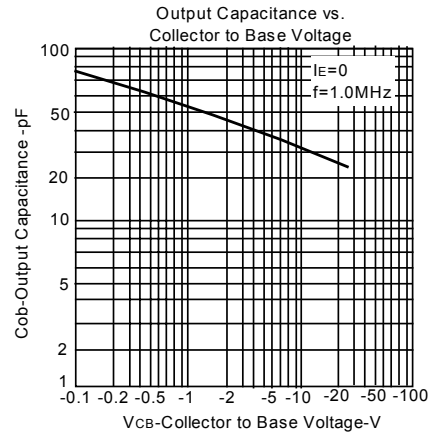
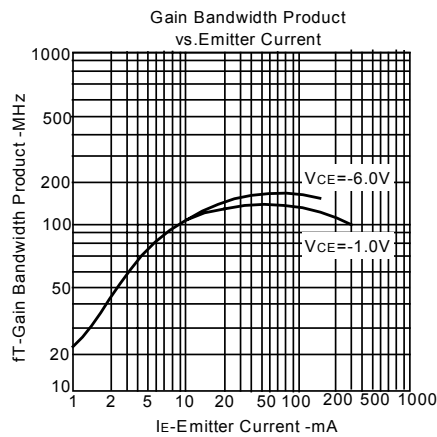
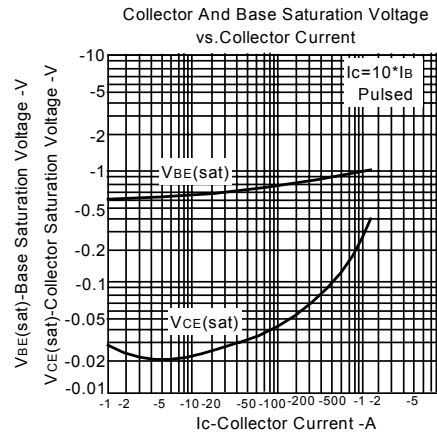
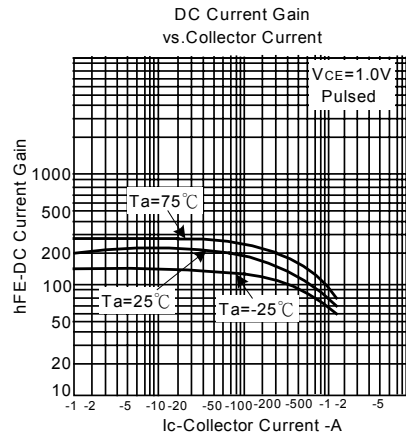
Note 3: PW ≤ 350 μs, Duty Cycle ≤ 2%

CLASSIFICATION OF h_{FE1}

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

ELECTRICAL CHARACTERISTICS CURVES





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