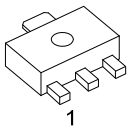
2SB798

PNP EPITAXIAL SILICON TRANSISTOR

POWER TRANSISTOR



SOT-89

■ 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 (Ic = -1.0A, I_B = -100mA)
* Excellent DC Current Gain Linearity :
  h_{FE} = 100 Typ. (V_{CE} = -1.0V, I_C = -1.0A)

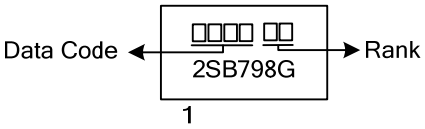
■ ORDERING INFORMATION

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

2SB798G-x-AB3-R (1)Packing Type (2)Package Type (3)Rank (4)Green Package	(1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE1} (4) G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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	°C
Storage Temperature		T_{STG}	-55 ~ +150	°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. $P_W \leqq$ 10ms,Duty Cycle $\leqq$ 50%
3. When mounted on a ceramic substrate of 16cm^2×0.7 mm.

■ ELECTRICAL CHARACTERISTICS (T_A=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= 10mA		110		MHz
Output Capacitance	C_{ob}	V_{CB}= -6.0V, I_E= 0, f=1MHz		36		pF

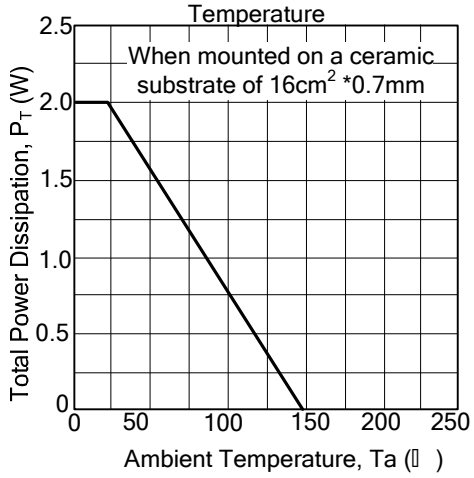
Note: $P_W \leqq$ 350μs, Duty Cycle $\leqq$ 2%

■ CLASSIFICATION OF hFE1

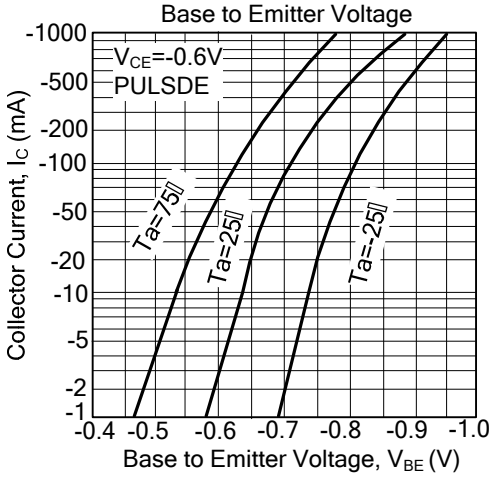
RANK	DM	DL	DK
RANGE	90-180	135-270	200-400

■ TYPICAL CHARACTERISTICS

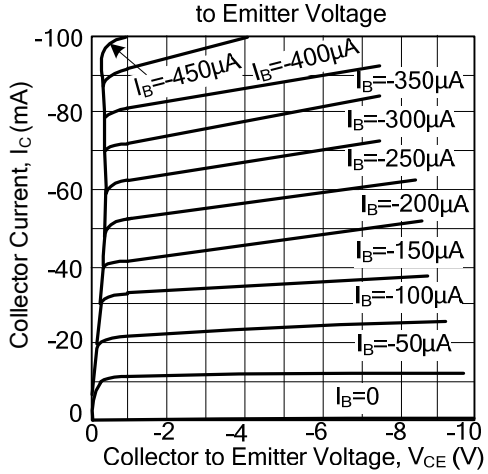
Collector Dissipation vs. Ambient Temperature



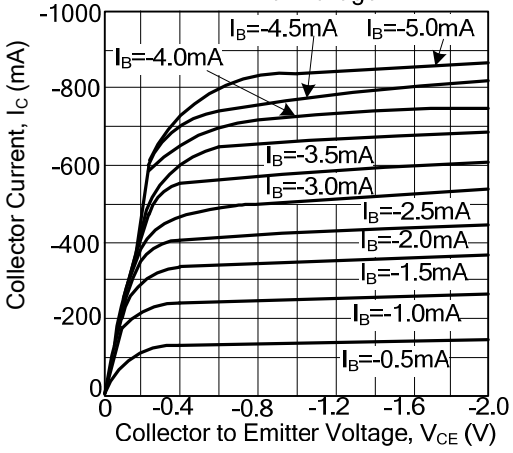
Collector Current vs. Base to Emitter Voltage



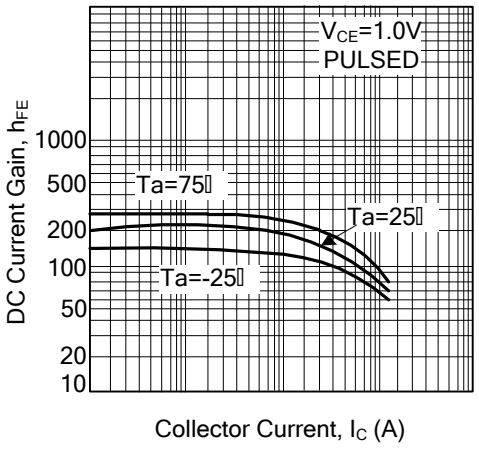
Collector Current vs. Collector to Emitter Voltage



Collector Current vs. Collector to Emitter Voltage



DC Current Gain vs.Collector Current



Collector and Base Saturation Voltage vs. Collector Current