



UNISONIC TECHNOLOGIES CO., LTD

2SB1188

PNP SILICON TRANSISTOR

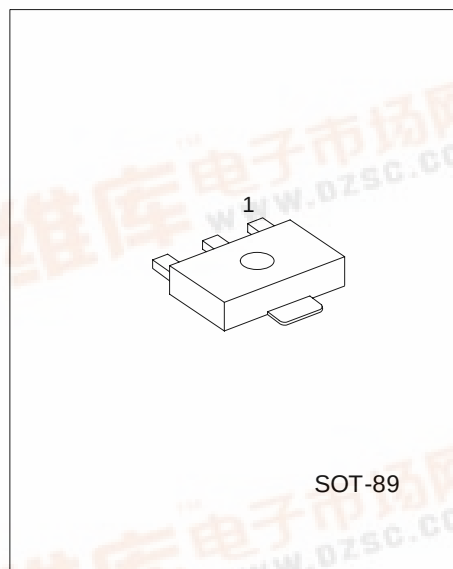
MEDIUM POWER LOW VOLTAGE TRANSISTOR

DESCRIPTION

The UTC 2SB1188 is a medium power low voltage transistor, designed for audio power amplifier, DC-DC converter and voltage regulator.

FEATURES

- *High current output up to 3A
- *Low saturation voltage



SOT-89

*Pb-free plating product number: 2SB1188L

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SB1188-x-AB3-R	2SB1188L-x-AB3-R	SOT-89	B	C	E	Tape Reel

2SB1188L-x-AB3-R (1) Packing Type (2) Package Type (3) Rank (4) Lead Plating	(1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE2} (4) L: Lead Free Plating, Blank: Pb/Sn
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2SB1188

PNP SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector -Base Voltage	V _{CBO}	-40	V
Collector -Emitter Voltage	V _{CEO}	-30	V
Emitter -Base Voltage	V _{EBO}	-5	V
Peak Collector Current	I _{CM}	-7	A
DC Collector Current	I _C	-3	A
Base Current	I _B	-0.6	A
Power Dissipation	P _D	0.5	W
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-40 ~ +150	°C

Note 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.

■ 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			-1000	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =-3V, I _C =0			-1000	nA
DC Current Gain(Note 1)	h _{FE1}	V _{CE} =-2V, I _C =-20mA	30	200		
	h _{FE2}	V _{CE} =-2V, I _C =-1A	100	150	400	
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =-2A, I _B =-0.2A		-0.3	-0.5	V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C =-2A, I _B =-0.2A		-1.0	-2.0	V
Current Gain Bandwidth Product	f _T	V _{CE} =-5V, I _C =-0.1A		80		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz		45		pF

Note 1: Pulse test: P_W<300μs, Duty Cycle<2%

■ CLASSIFICATION OF h_{FE2}

RANK	Q	P	E
RANGE	100 ~ 200	160 ~ 320	200 ~ 400

TYPICAL CHARACTERISTICS

Fig.1 Static characteristics

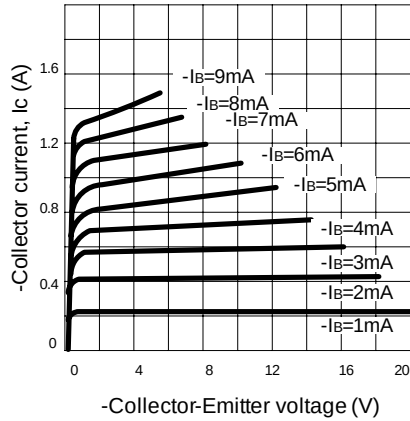


Fig.2 Derating curve of safe operating areas

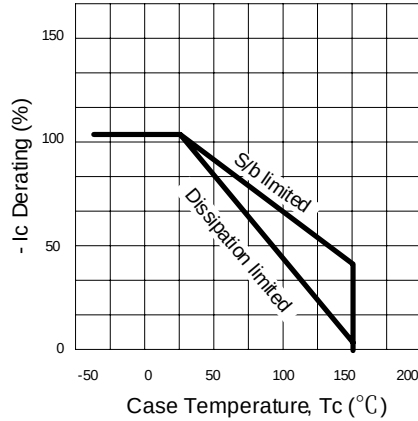


Fig.3 Power Derating

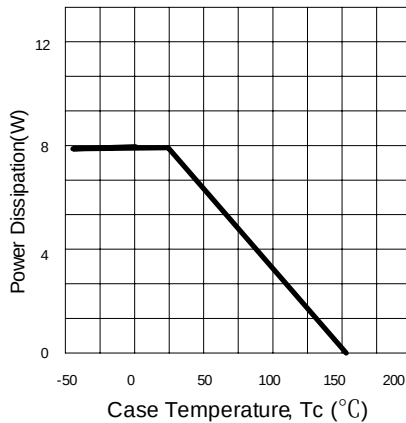


Fig.4 Collector Output capacitance

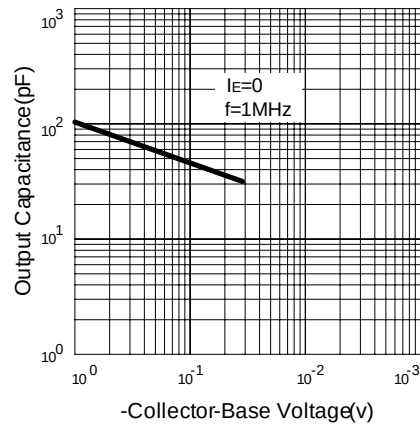


Fig.5 Current gain - bandwidth product

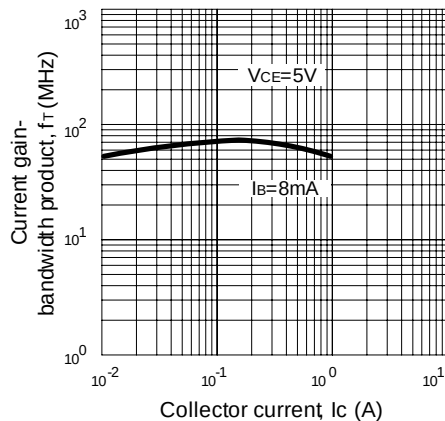
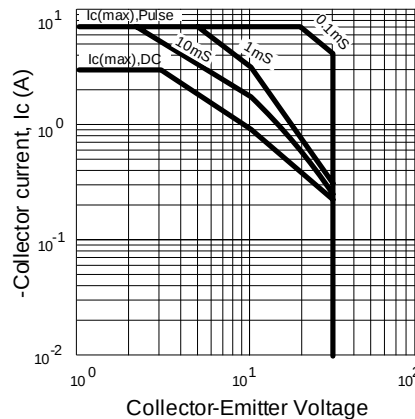


Fig.6 Safe Operating Area



■ TYPICAL CHARACTERISTICS(cont.)

Fig.7 DC current gain

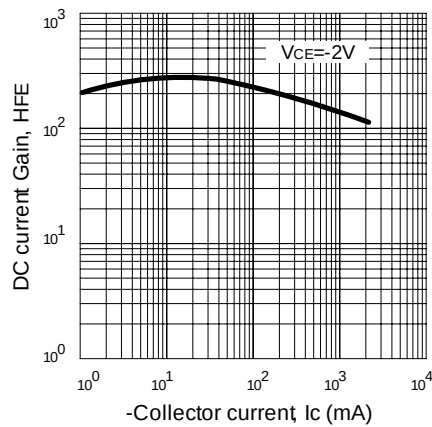
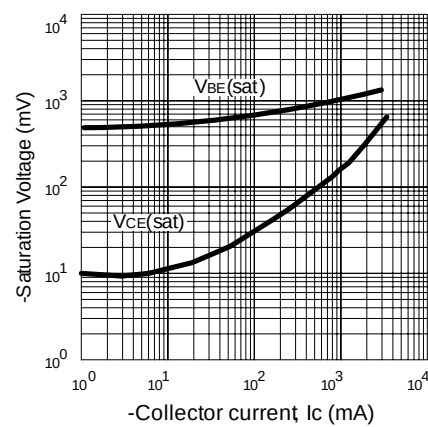


Fig.8 Saturation Voltage



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