



2SB1188

PNP SILICON TRANSISTOR

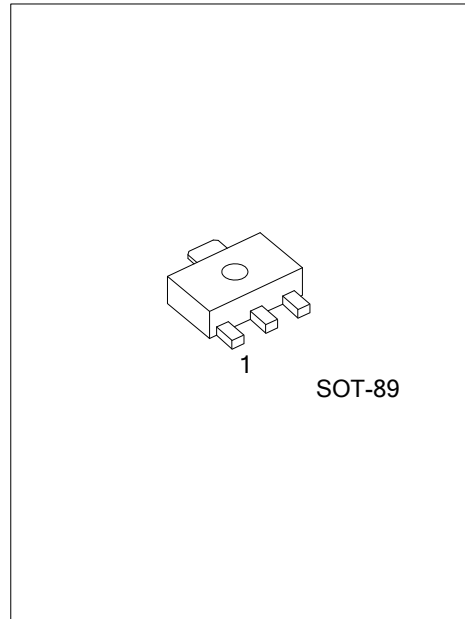
MEDIUM POWER LOW VOLTAGE TRANSISTOR

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



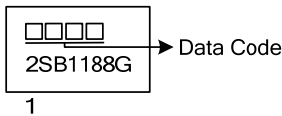
ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
2SB1188G-x-AB3-R	SOT-89	B	C	E	Tape Reel

Note: Pin Assignment: B: Base C: Collector E: Emitter

<p>2SB1188G-x-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p>	<p>(1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE2} (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}	-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	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40~+150	$^\circ\text{C}$

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.

■ THERMAL RESISTANCES CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	250	$^\circ\text{C}/\text{W}$
Junction to Case	θ_{JC}	35.7	$^\circ\text{C}/\text{W}$

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

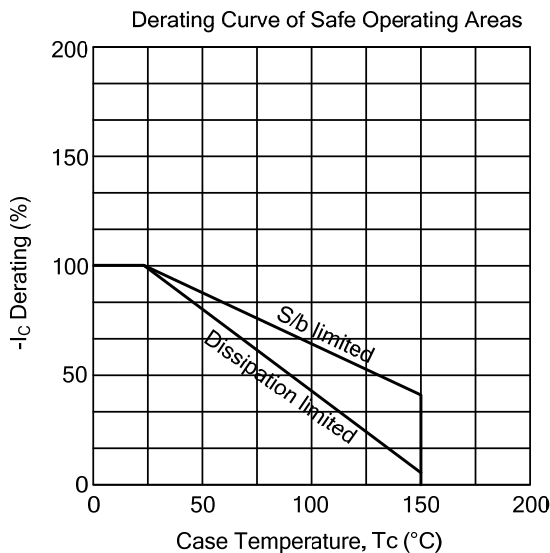
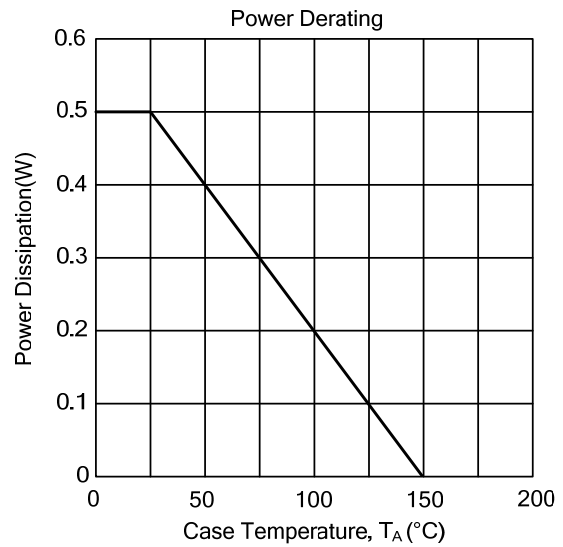
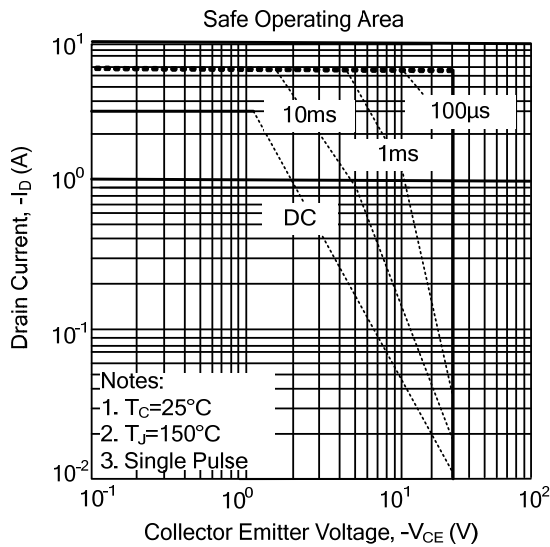
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV_{CBO}	$I_C = -50\mu\text{A}$	-40			V
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = -1\text{mA}$	-30			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E = -50\mu\text{A}$	-5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$			-1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-1	μA
DC Current Gain(Note)	h_{FE1}	$V_{CE} = -2\text{V}, I_C = -20\text{mA}$	30	200		
	h_{FE2}	$V_{CE} = -2\text{V}, I_C = -1\text{A}$	100	150	400	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$		-0.3	-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$		-1.0	-2.0	V
Current Gain Bandwidth Product	f_T	$V_{CE} = -5\text{V}, I_C = -0.1\text{A}$		80		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		45		pF

Note: Pulse test: $P_w < 300\mu\text{s}$, Duty Cycle $< 2\%$

■ CLASSIFICATION OF h_{FE2}

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

■ TYPICAL CHARACTERISTICS



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