



## 2SA1201

## PNP SILICON TRANSISTOR

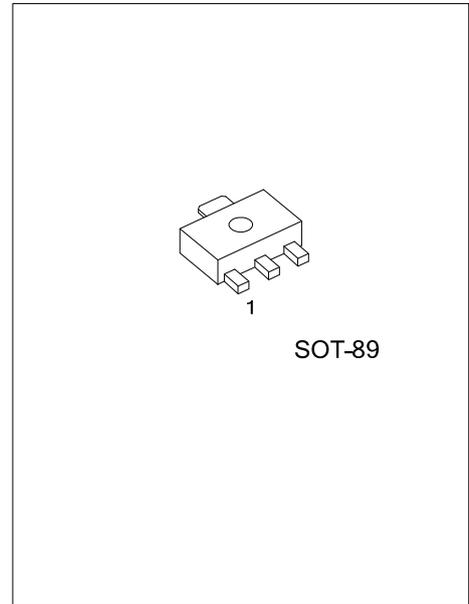
### SILICON PNP EPITAXIAL TRANSISTOR

#### DESCRIPTION

The UTC **2SA1201** is designed for power amplifier and voltage amplifier applications.

#### FEATURES

- \*High voltage:  $V_{CE0} = -120V$
- \*High transition frequency:  $f_T = 120MHz$ (typ.)
- \* $P_C = 1$  to  $2 W$ (mounted on ceramic substrate)



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SA1201L-x-AB3-R	2SA1201G-x-AB3-R	SOT-89	B	C	E	Tape Reel

Note: Pin Assignment: B: BASE C: COLLECTOR E: EMITTER

<p>2SA1201L-x-AB3-R</p>	<p>(1) R: Tape Reel</p> <p>(2) AB3: SOT-89</p> <p>(3) x: refer to Classification of <math>h_{FE}</math></p> <p>(4) G: Halogen Free, L: Lead Free</p>
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### ■ ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	-120	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-120	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current	I <sub>C</sub>	-800	mA
Base Current	I <sub>B</sub>	-160	mA
Collector Power Dissipation	P <sub>C</sub>	500	mW
		1000 (Note 2)	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ +150	°C

Note: 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. Mounted on cermic substrate( 250mm<sup>2</sup> × 0.8t )

### ■ ELECTRICAL CHARACTERISTICS(T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> =0	-120			V
Emitter to Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -1mA, I <sub>C</sub> =0	-5			V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> = -120V, I <sub>E</sub> =0			-0.1	μA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V, I <sub>C</sub> =0			-0.1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -100mA	80		240	
Collector to Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> = -500mA, I <sub>B</sub> = -50mA			-1.0	V
Base to Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -100mA			-1.0	V
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -100mA		120		MHz
Collector Output Capacitance	C <sub>OB</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> =0, f=1MHz			30	pF

### ■ CLASSIFICATION OF h<sub>FE</sub>

RANK	O	Y
RANGE	80 - 160	120 - 240

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