

# Analog IP Cell

1µA Bias Source

Bias1u XB06



## General Description

This cell is a low power Bias Source PTAT and UBE compensated with 1uA Output current.

## Ratings, Parameters and Conditions

| Parameter / Condition            | Symbol             | Min   | Typ. | Max                  | Unit | Comment         |
|----------------------------------|--------------------|-------|------|----------------------|------|-----------------|
| <b>Electrical Parameters:</b>    |                    |       |      |                      |      |                 |
| Operating Temperature            | TOP                | -40   |      | 85                   | °C   |                 |
| Supply Voltage                   | VDD                | 3,0   | 5,0  | 5,5                  | V    |                 |
| Current consumption              | IDD                | 4     | 5    | 9                    | µA   |                 |
| Output current p                 | IBIASP             | 0.74  | 1    | 1.28                 | µA   | VBIASP<VDD-0.4V |
| Output current n                 | IBIASN             | 0.74  | 1    | 1.28                 | µA   | VBIASN>0.4V     |
| TK1 Output current               | TK1                |       | 2e-4 |                      | 1/K  |                 |
| TK2 Output current               | TK2                |       | 2e-7 |                      | 1/K2 |                 |
| Power supply rejection ratio     | PSRR               | 110db |      |                      | dB   | f<100kHz        |
| <b>Absolute Maximum Ratings:</b> |                    |       |      |                      |      |                 |
| Operating Temperature            | T <sub>range</sub> | -40   |      | 120                  | °C   |                 |
| Supply Voltage                   | V <sub>dd</sub>    | -0.3  |      | 7                    | V    |                 |
| Input Voltage                    | V <sub>in</sub>    | -0.3  |      | V <sub>dd</sub> +0.7 |      |                 |
| Output Voltage                   | V <sub>out</sub>   | -0.3  |      | V <sub>dd</sub> +0.7 |      |                 |

## IO-Description

| Interface | I/O    | Function       | Comment |
|-----------|--------|----------------|---------|
| Bias_OUT  | Output | -              |         |
| GND, VDD  | Input  | voltage supply |         |

## Symbol

