SIVI-BG180N5100

TSMC 180nm non pure 5V (1P5M)

MAIN FEATURES

- Designed on TSMC 180nm non pure 5V process
- V_{supply}: 2.5V → 5.5V
- Accuracy across PVT: +/- 1.4%
- High power supply rejection ratio over a wide frequency range
- Low value for integrated noise
- Low power consumption
- Capability of trimming the output voltage
- Small IP area < 0.025mm²
- Operational temperature from -40C° to 125C°

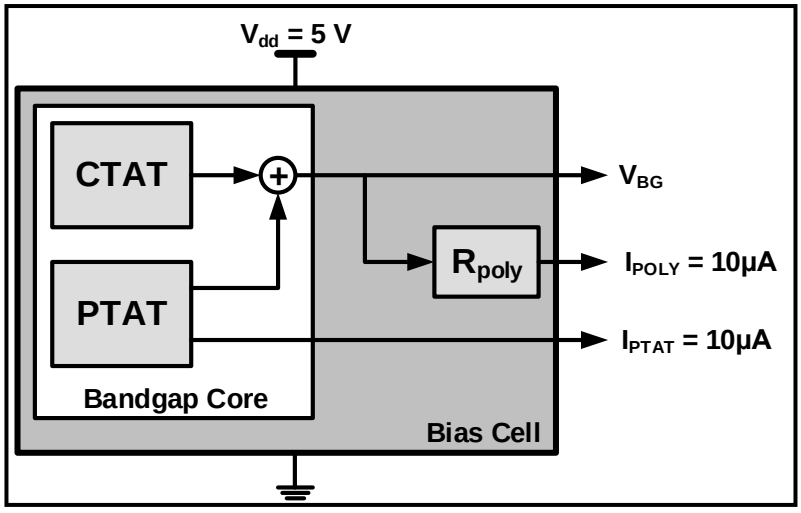
IP DESCRIPTION

SiVi-BG180n5100 is a high precision low current Bandgap reference circuit. The block is operating from a 5.5V supply voltage down to 2.5V. With 4 bits of calibration the Bandgap IP can be trimmed to less the 0.2% accuracy.

SiVi-BG180n5100 is silicon verified on a non-pure 5V TSMC 180nm process.

ELECTRICAL SPECIFICATIONS

Spec / Result		Min	Typ	Max	Unit
Supply Voltage		2.5	5	5.5	V
Temperature Range		-40	27	125	°C
PSRR	@10kHz		-60		dB
	@1MHz		-45		
Integrated Noise (0.1Hz→10Hz)			29.7		µV
Temperature Coefficient	@T = -40°C	-16		0	ppm/°C
	@T = 27°C	-14		2	
	@T = 125°C	11		23	
Voltage Coefficient (2.5V →5.5V Vdd)		-0.18		0.48	%/V
Startup time, CL=50pf			27		µs
Output Voltage		1.198	1.208	1.22	V
Current Consumption,				60	µA



SiVi-BG180n5100 Block Diagram

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