SIVI-BG180N300

TSMC/SMIC 180nm-G (1P5M)

MAIN FEATURES

- Designed on TSMC/SMIC 180nm Generic process
- V_{supply}: 2.5V → 3.6V
- Accuracy across PVT: ±2.5%
- Accuracy after trimming is less than ±0.1%
- Low noise performance
- Excellent supply rejection over wide frequency range
- Low current consumption
- Capability of trimming the output voltage
- IP Silicon area < 0.05mm²
- Operational temperature from -40C° to 125C°

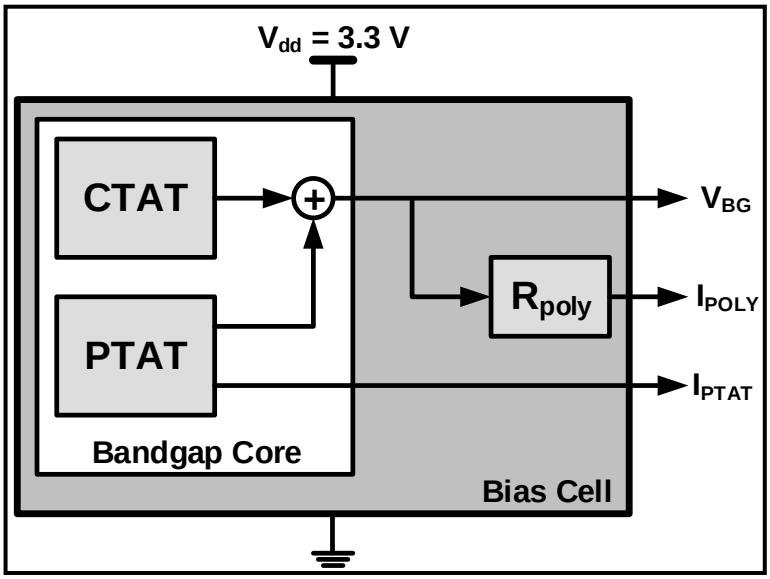
IP DESCRIPTION

SiVi-BG180n300 is a low noise bandgap reference cell with less than 75nV/√Hz spot noise at 100kHz. With its good accuracy and low noise performance SiVi-BG180n300 is considered the optimum solution for low noise SoC solutions

SiVi-BG180n300 is silicon verified on a Generic TSMC and SMIC 180nm process.

ELECTRICAL SPECIFICATIONS

Spec / Result		Min	Typ	Max	Unit
Supply Voltage		2.5	3.0	3.6	V
Temperature Range		-40	27	125	°C
PSRR	@10kHz		-65		dB
	@1MHz		-45		
Spot Noise @100kHz				75	nV/√Hz
Temperature Coefficient	@T = -40°C	-25		5	ppm/°C
	@T = 27°C	-7		-5	
	@T = 125°C	-20		0	
Voltage Coefficient (2.0V →3.6V Vdd)		0.25		0.8	%/V
Startup time, CL=5pf			300		µs
Output Voltage		1.21	1.23	1.24	V
Current Consumption,				480	µA



SiVi-BG180n300 Block Diagram

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