## **SIVI-BG180N200**



TSMC 180nm-G (1P5M)

## MAIN FEATURES

- Designed on TSMC180nm Generic process
- $V_{\text{supply}}$ : 2.0V  $\rightarrow$  3.6V
- Accuracy across PVT: ±5%
- Ultra-Low power consumption less than 250nA
- Good supply rejection
- Low noise performance
- Capability of trimming the output voltage
- Small IP area 
  0.025mm²
- Operational temperature from -40°C to 125°C

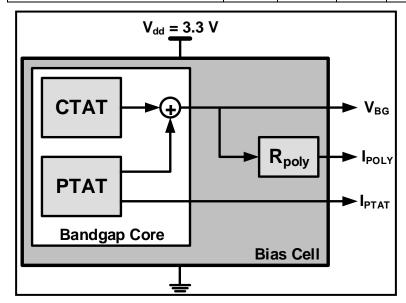
## IP DESCRIPTION

SiVi-BG180n200 is an ultra-low current bandgap reference cell which consumes less the 0.25  $\mu A$  for operation. With its good accuracy and ultra-low current performance SiVi-BG180n200 is considered the optimum solution for low power SoC solutions

SiVi-BG180n200 is silicon verified on a Generic TSMC 180nm process.

## **ELECTRICAL SPECIFICATIONS**

Spec / Result		Min	Тур	Max	Unit
Supply Voltage		2.0	3.0	3.6	V
Temperature Range		-40	27	125	°C
PSRR	@10kHz		-45		dB
	@1MHz		-25		
Integrated Noise (0.1Hz→10Hz)			70		μV
Temperature	@T = -40°C	-50		-10	ppm/°C
Coefficient	@T = 27°C	-50		8	
	@T = 125°C	40		280	
Voltage Coefficient (2.5V →3.6V		1.8		6.5	%/V
Vdd)					
Startup time, CL=5pf			300		μs
Output Voltage		1.180	1.237	1.361	V
Current Consumption,			0.24	0.4	μΑ



SiVi-BG180n200 Block Diagram

