SIVI-BG40N100

TSMC 40nm-G (1P5M)

MAIN FEATURES

- Designed on TSMC 40nm Generic process
- V_{supply}: 2.5V → 3.6V
- Accuracy across PVT: ±1.5%
- Low power consumption less than 250µA
- Good supply rejection
- Low noise performance
- Capability of trimming the output voltage
- Small IP area < 0.02mm²
- Operational temperature from -40C° to 125C°

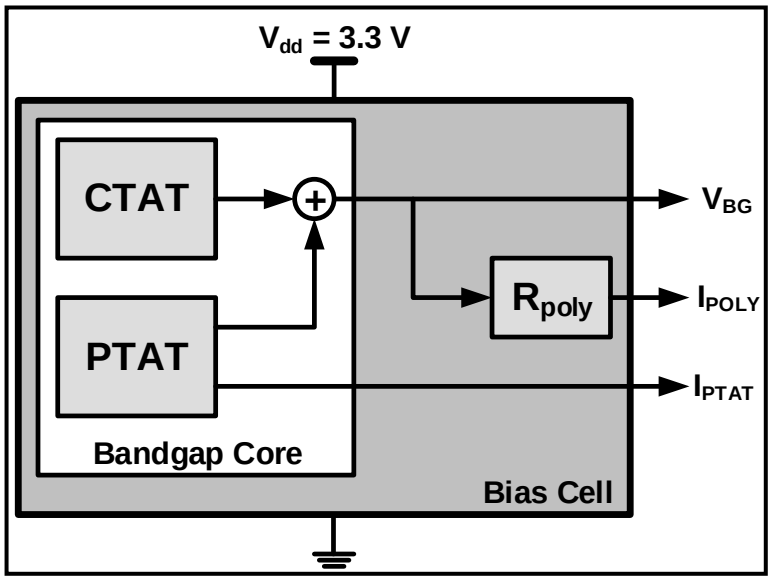
IP DESCRIPTION

SiVi-BG40n100 is a low current bandgap reference cell which consumes less the 250µA for operation. With its good accuracy and low current performance SiVi-BG40n100 is considered the optimum solution for low power SoC solutions

SiVi-BG40n100 is silicon verified on a Generic TSMC 40nm 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		-80		dB
	@1MHz		-60		
Spot Noise @10kHz				300	nV/√Hz
Temperature Coefficient	@T = -40°C	-8		-20	ppm/°C
	@T = 27°C	-2		5	
	@T = 125°C	-15		40	
Voltage Coefficient (2.0V →3.6V Vdd)				1.0	%/V
Startup time, CL=5pf			100		µs
Output Voltage		0.702	0.714	0.725	V
Current Consumption,				250	µA



SiVi-BG40n100 Block Diagram

Silicon Vision Tech. Ltd.
14 Manchester Square, London
W1U 3PP, United Kingdom
info@si-vision.com