



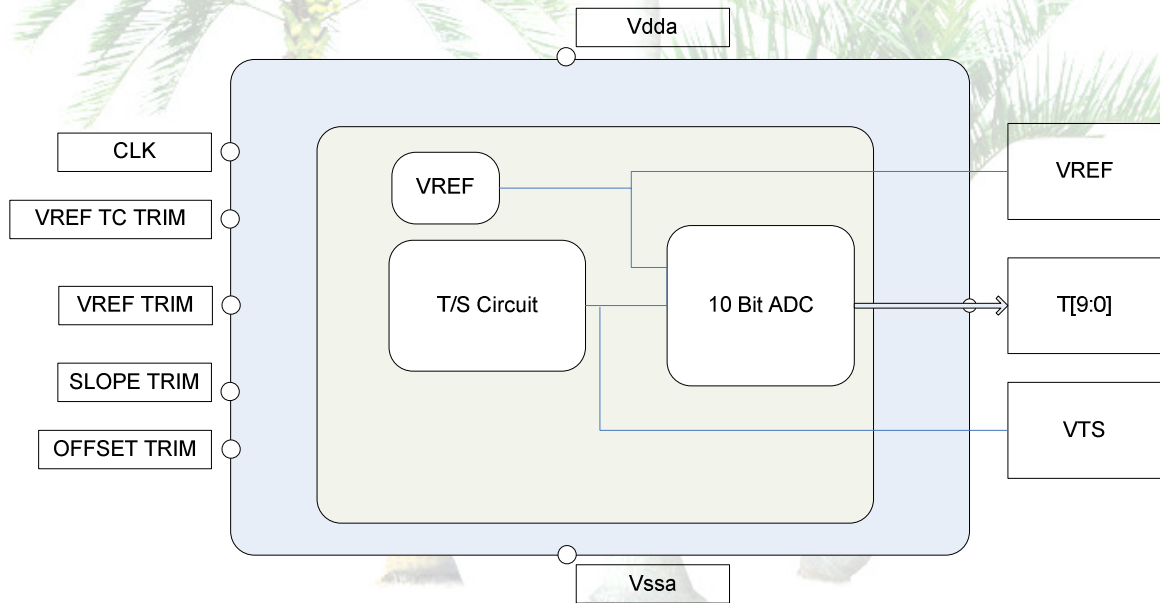
CoCo ChIP Low Power Temperature Sensor IP Block

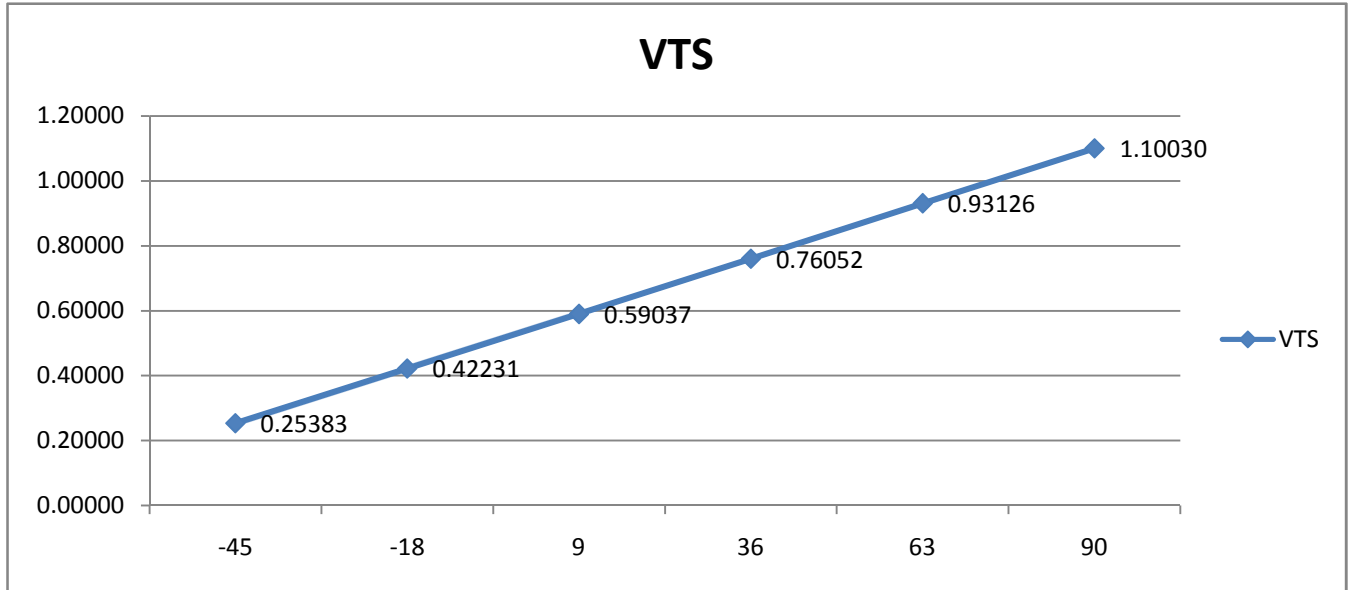
Functional Description

- Temperature Sensor with Analog Voltage Output and 10-bit Digital Output
- Measures temperature from -45 to +90C with +/- 0.5 deg C Accuracy
- Has Built-in ADC self calibration function with auto-zero
- Built in Bias circuits and precision voltage reference circuit
- Voltage Reference can be digitally trimmed for voltage and slope
- Temp Sensor portion can be trimmed for slope and Y-offset
- Can be slept in-between measurements with RESET and PD inputs (not shown)
- IBM CM7RF (0.18um) CMOS Process (Ask for other process options)
- Accurate Measurements made within 1.2ms from dead start-up
- Silicon Proven

Connections

Pin	Type	Function	Value
Vdda	Supply	Positive analog supply voltage	1.8 to 3.6V
T[9:0]	DO	10 bit Digital Temperature Reading	
VTS	Analog	Temperature Voltage	200mV to 1.1V
VREF	Analog	Reference Voltage for ADC	Typical 1.2V
TRIM	DI	Numerous Trim Bits	
Vssa	Supply	Negative Analog supply voltage	





Vts Linear Fit Residuals

