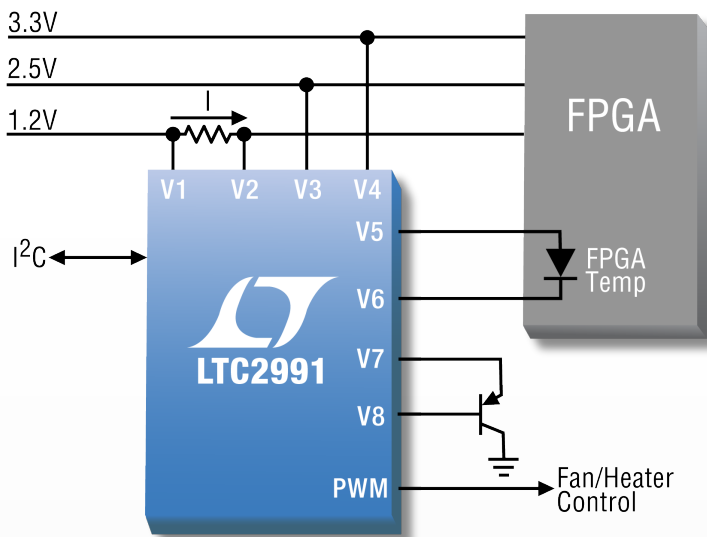


Digital Temperature Monitors



Measures:

- External Temperature
- Internal Temperature
- Single-Ended Voltage
- Differential Voltage
- Rail-to-Rail Current
- Internal V_{CC}

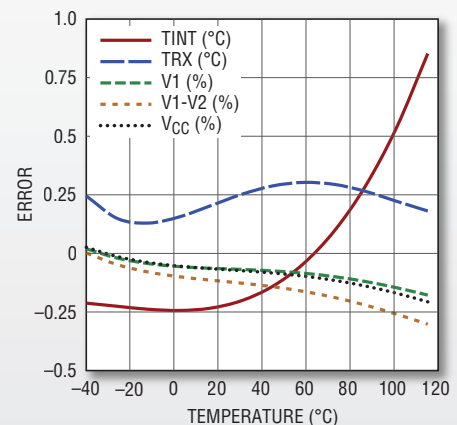
LTC2990/LTC2991: Quad/Octal I²C Temperature, Voltage and Current Monitors

The LTC[®]2990/LTC2991 are temperature, voltage and current monitors for 3V to 5.5V systems that integrate a 14-bit ADC, 10ppm/°C reference and I²C interface to provide sub-millivolt voltage resolution and 1% current measurement, as well as ±1°C accuracy internally and up to ±0.7°C accuracy remotely when making temperature measurements. The LTC2990/LTC2991 use up to eight single-ended inputs to conveniently measure any combination of parameters simultaneously.

Digital Temperature Monitors

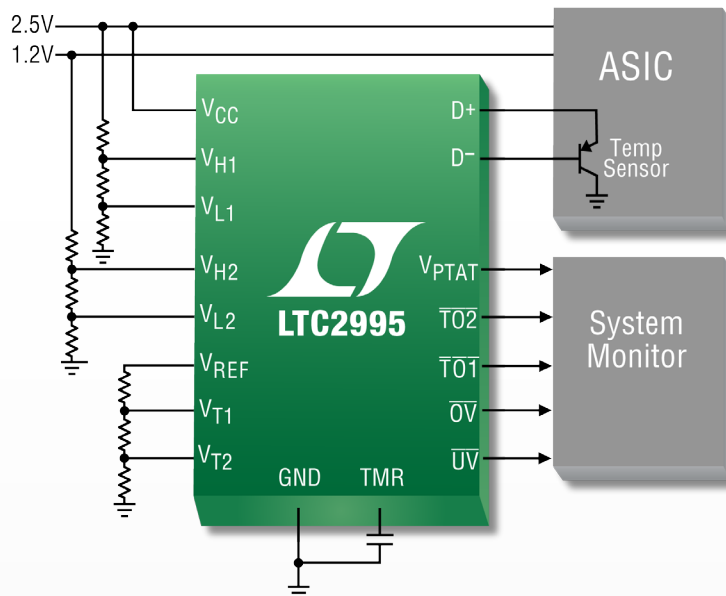
	LTC2990	LTC2991
Voltage Supply Range	3V to 5.5V	3V to 5.5V
Ext Temp Accuracy (typ)	±0.5°C at -40°C to 85°C	±0.7°C at -40°C to 85°C
Int Temp Accuracy (typ)	±1°C at 0°C to 85°C	±1°C at 25°C
Resolution	0.0625°C	0.0625°C
# of Temp Channels	2	4
# of Voltage Channels	4	8
Int Temp Measurement	•	•
Ext Temp Measurement	•	•
Single-Ended Voltage Measurement	•	•
Differential Voltage Measurement	•	•
Int V_{CC} Measurement	•	•
Ext Current Measurement	•	•
Interface	I ² C	I ² C
Comments	10 Possible Measurement Configurations	35 Measurement Configurations, PWM Output, Digital Filter
Package	MSOP-10	MSOP-16

Temperature and Voltage
Total Unadjusted Error



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Analog Temperature Monitors



LTC2995/LTC2996/LTC2997: Fast, Small and Simple V_{PTAT} Monitoring

The LTC[®]2995/LTC2996/LTC2997 are analog temperature monitors for low voltage systems that provide a 3.5ms-updated voltage proportional to absolute temperature (V_{PTAT}) so that systems can quickly react with subdegree accuracy when making internal or external temperature measurements. The full-featured LTC2995 provides equally impressive high voltage monitoring capabilities for two rails, as well as temperature and voltage alerts, for a truly comprehensive thermal monitoring solution. No code is required to configure these tiny devices.

	Analog Temperature Monitors		
	LTC2995	LTC2996	LTC2997
Voltage Supply Range	2.25V to 5.5V	2.25V to 5.5V	2.5V to 5.5V
Quiescent Current (typ)	220 μ A	200 μ A	170 μ A
Ext Temp Accuracy (typ)	$\pm 0.25^{\circ}\text{C}$ at -40°C to 125°C	$\pm 0.25^{\circ}\text{C}$ at -40°C to 125°C	$\pm 0.25^{\circ}\text{C}$ at -40°C to 100°C
Int Temp Accuracy (typ)	$\pm 0.5^{\circ}\text{C}$ at 25°C	$\pm 0.5^{\circ}\text{C}$ at -40°C to 125°C	$\pm 0.5^{\circ}\text{C}$ at -40°C to 85°C
# of Temp Channels	1	1	1
# of Voltage Channels	2		
Int Temp Measurement	•	•	•
Ext Temp Measurement	•	•	•
Series Resistance Cancellation	•	•	•
V_{PTAT} Output	•	•	•
Overtemperature Output	•	•	
Undertemperature Output	•	•	
Overvoltage Output	•		
Undervoltage Output	•		
1.8V Reference Output	•	•	•
Package	3 \times 3 QFN-20	3 \times 3 DFN-10	2 \times 3 DFN-6

