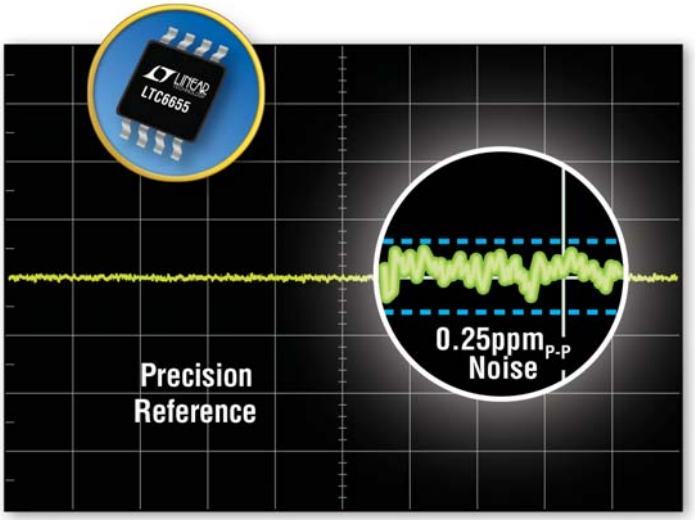
Precision Voltage References



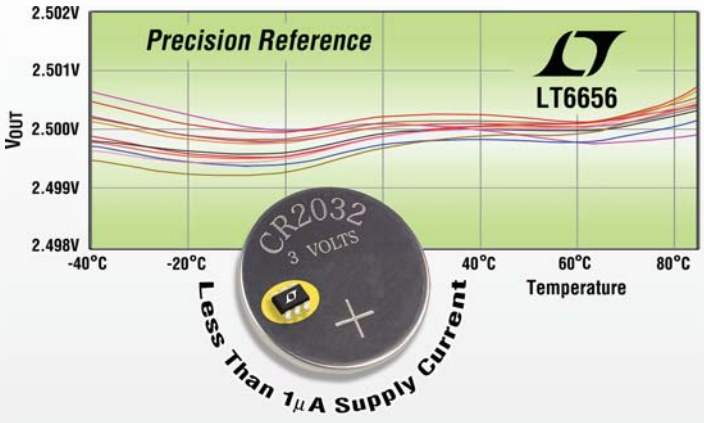
LTC6655: 0.25ppm Noise Precision Reference

- Low Noise: 0.25ppm$_{P-P}$ (0.1Hz to 10Hz)
  625nV$_{P-P}$ for the LTC6655-2.5
- Low Drift: 2ppm/°C Max
- High Accuracy: ±0.025% Max
- Fully Specified from –40°C to 125°C
- 100% Tested at –40°C, 25°C and 125°C
- Load Regulation: <10ppm/mA
- Sinks and Sources Current: ±5mA
- Low Dropout: 500mV
- Maximum Supply Voltage: 13.2V
- Low Power Shutdown: <20µA Max
- Available Output Voltages: 1.25V, 2.048V, 2.5V, 3V, 3.3V, 4.096V, 5V
- Available in an 8-Lead MSOP Package

The LTC®6655 is an ultra-stable voltage reference with outstanding noise performance, with only 625nV$_{P-P}$ noise (0.1Hz to 10Hz), temperature drift less than 2ppm/°C, and initial voltage accuracy within ±0.025%. It can be powered from as little as 500mV above the output voltage, up to a maximum supply voltage of 13.2V. Superior load regulation of 3ppm/mA and ±5mA source and sink capabilities, coupled with only 5ppm/V line rejection, give consistent performance over a wide range of line and load conditions. A shutdown mode allows the power consumption to be reduced to less than 20µA. The combination of extreme precision and high temperature operating range make the LTC6655 an ideal voltage reference for the most demanding automotive, industrial and instrumentation applications.

LT6656: 1µA Precision Voltage Reference

- Low Drift
  A Grade: 10ppm/°C Max, B Grade: 20ppm/°C Max
- High Accuracy
  A Grade: 0.05% Max, B Grade: 0.1% Max
- Ultralow Supply Current: 850nA
- High Output Drive Current: 5mA Min
- Low Dropout Voltage: 10mV Max
- Fully Specified from –40°C to 85°C
- Operational from –55°C to 125°C
- Wide Supply Range to 18V
- Reverse Input/Output Protection
- Available Output Voltages: 1.25V, 2.048V, 2.5V, 3V, 3.3V, 4.096V, 5V
- Thermal Hysteresis: 25ppm
- Low Profile (1mm) ThinSOT™ Package



The LT®6656 offers high precision, very low dropout and incredibly low supply current in a ThinSOT package. Initial voltage accuracy is within ±0.05% and temperature drift is less than 10ppm/°C. The combination of precision, size and minimal power specifications will be attractive in a wide range of power-sensitive applications, and can be used as either a traditional voltage reference or a precision LDO regulator. In battery-powered devices, the LT6656's minimal space and power requirements allow it to be easily added to designs for improved precision without significantly impacting the existing footprint and power.

LINEAR TECHNOLOGY

	Reference Family	Initial Accuracy	Temperature Drift (Max) ppm/°C	0.1Hz - 10Hz Noise ppm	Output Current mA	I_Q/I_{SHUNT} mA	Dropout Voltage	Package	Temperature Grades	1.25V	2.048V	2.5V	3V	3.3V	4.096V	4.5V	5V	7V	10V
Series	LTC6655B	0.025%	2	0.25	±10	7	0.5	MS-8	H	●	●	●	●	●	●		●		
	LT1461A	0.04%	3	8	50	0.05	0.3	SO-8	C, I			●	●	●	●		●		
	LT1027B	0.05%	2	0.6	–10 to +15	3.1	3	DIP-8	C								●		
	LT1027C	0.05%	3	0.6	–10 to +15	3.1	3	DIP-8 SO-8	C								●		
	LT1019A	0.05%	5	2.5	±10	1	1.1	DIP-8 SO-8	C, I			●				●	●		●
	LT1031B	0.05%	5	0.6	±10	1.7	1	TO-39	C, M										●
	LT1236A	0.05%	5	0.6	±10	1.2	2.2	DIP-8 SO-8	C, I								●		●
	LTC6652A	0.05%	5	2.8	±5	0.56	0.3	MS-8	H	●	●	●	●	●	●		●		
	LTC6655C	0.05%	5	0.25	±10	7	0.5	MS-8	H	●	●	●	●	●	●		●		
	LT1027D	0.05%	5	0.6	–10 to +15	2.7	3	DIP-8 SO-8	C								●		
	LT6656A	0.05%	10	24	–0.1 to 10	0.001	0.01	SOT-23	C, I	●	●	●	●	●	●		●		
	LT1790A	0.05%	10	16	–3 to 5	0.06	0.1	SOT-23	C, I	●	●	●	●	●	●		●		
	LT1021C	0.05%	20	0.6	±10	1.2	2.2	TO-5 DIP-8	C, I, M								●		●
	LT1461B	0.06%	7	8	50	0.05	0.3	SO-8	C, I			●	●	●	●		●		
	LT1460A	0.075%	10	4	–1 to 20	0.175	0.9	DIP-8 SO-8	C			●					●		●
	LT1461C	0.08%	12	8	50	0.05	0.3	SO-8	C, I			●	●	●	●		●		
	LT1027E	0.10%	7.5	0.6	–10 to +15	2.7	3	DIP-8 SO-8	C								●		
	LT1236B	0.10%	10	0.6	±10	1.2	2.2	DIP-8 SO-8	C, I								●		●
	LTC6652B	0.10%	10	2.1	±5	0.56	0.3	MS-8	H	●	●	●	●	●	●		●		
	LT1460B	0.10%	10	4	–1 to 20	0.175	0.9	DIP-8 SO-8	I			●					●		●
	LT1031C	0.10%	15	0.6	±10	1.7	1	TO-39	C										●
	LT1236C	0.10%	15	0.6	±10	1.2	2.2	DIP-8 SO-8	C, I								●		●
	LT1460C	0.10%	15	4	–1 to 20	0.175	0.9	MS-8	C			●					●		●
	LT6656B	0.10%	20	24	–0.1 to 10	0.001	0.01	SOT-23	C, I	●	●	●	●	●	●		●		
	LT1460D	0.10%	20	4	–1 to 20	0.175	0.9	DIP-8 SO-8	C			●					●		●
	LT1790B	0.10%	25	16	–3 to 5	0.06	0.1	SOT-23	C, I	●	●	●	●	●	●		●		
	LT1460E	0.125%	20	4	–1 to 20	0.175	0.9	DIP-8 SO-8	I			●					●		●
	LT1461D	0.15%	20	8	10	0.05	0.3	SO-8	H			●	●	●	●		●		
	LT1460F	0.15%	25	4	–1 to 20	0.175	0.9	MS-8	C			●					●		●
	LTC1798	0.15%	40	8	–2 to 10	0.0065	0.1	SO-8	C			●	●		●		●		
	LTC1258	0.15%	40	8	–2 to 10	0.0065	0.1	MS-8	C			●	●		●		●		
	LT1019	0.20%	20	2.5	±10	1.2	1.1	DIP-8 SO-8	C, I			●				●	●		●
	LT1460H	0.20%	20	4	–1 to 20	0.175	0.9	SOT-23	C			●	●	●			●		●
	LT1460L	0.20%	20	4	–1 to 20	0.175	0.9	SO-8	I, H			●					●		
	LT6660H	0.20%	20	4	–1 to 20	0.2	0.9	2 x 2mm DFN	C			●	●	●			●		●
	LT1031D	0.20%	25	0.6	±10	1.7	1	TO-39	C, M										●
	LT1460M	0.20%	50	4	–1 to 20	0.175	0.9	SO-8	H			●					●		
	LT1460G	0.25%	25	4	–1 to 20	0.175	0.9	TO-92	C, I			●					●		●
	LT1460J	0.40%	20	4	–1 to 20	0.175	0.9	SOT-23	C			●	●	●			●		●
	LT6660J	0.40%	20	4	–1 to 20	0.2	0.9	2 x 2mm DFN	C			●	●	●			●		●
	LT6650	0.5%	30 Typ	50	±0.2	0.011	0.1	SOT-23	C, I, H	Adjustable									
	LT1460K	0.5%	50	4	–1 to 20	0.175	0.9	SOT-23	C			●	●	●			●		●
	LT6660K	0.5%	50	4	–1 to 20	0.2	0.9	2 x 2mm DFN	C			●	●	●			●		●
	LT1021B	1%	5	0.6	±10	1.2	2.2	TO-5 DIP-8	C, M								●	●	●
	LT1021D	1%	20	0.6	±10	1.2	2.2	SO-8 DIP-8	C, I								●	●	●
Shunt	LT1389A	0.05%	10	20	Shunt	0.006 to 2	N/A	SO-8	C	●									
	LT1634A	0.05%	10	7	Shunt	0.008 to 20	N/A	SO-8	C, I	●		●			●		●		
	LT1389B	0.05%	20	20	Shunt	0.006 to 2	N/A	SO-8	C	●		●							
	LT1634B	0.05%	25	7	Shunt	0.008 to 20	N/A	SO-8 MS-8	C, I	●		●			●		●		
	LT1389B	0.075%	50	20	Shunt	0.006 to 2	N/A	SO-8	C						●		●		
	LT1029A	0.2%	20		Shunt	0.6 to 10	N/A	TO-92	C								●		
	LT1009	0.2%	25		Shunt	0.4 to 10	N/A	SO-8 MS-8 TO-92	C, I			●							
	LT1634C	0.2%	25	7	Shunt	0.007 to 30	N/A	TO-92	C	●		●			●		●		
	LT1004	0.3%	20 typ		Shunt	0.01 to 20	N/A	SO-8 TO-92	C, I	●		●							
	LTC1431	0.4%	30 Typ	10	Shunt	1 to 100	N/A	DIP-8 TO-92	C, I	Adjustable									
	LT1029	1%	34		Shunt	0.6 to 10	N/A	TO-92	C								●		
	LT1034B	1.2%	20	2.4	Shunt	0.02 to 20	N/A	TO-92	C, I	●		●							
	LT1034	1.2%	40	2.4	Shunt	0.02 to 20	N/A	SO-8 TO-92	C, I	●		●							
	LTZ1000	4%	0.05	0.17	Shunt	N/A	N/A	TO-5	M									●	
	LM399A	5%	1	1.4	Shunt	N/A	N/A	TO-46	C									●	
	LM399	5%	2	1.4	Shunt	N/A	N/A	TO-46	C									●	

*Some parameters vary between package, voltage and temperature versions. For a complete list of products and full specifications visit www.linear.com

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