

# Voltage Reference Selection Guide

**Commercial** 0°C to 70°C

VOLTAGE V <sub>Z</sub> (V)	VOLTAGE TOLERANCE MAXIMUM T <sub>A</sub> = 25°C	PART NUMBER	TEMPERATURE DRIFT, ppm/°C OR mV CHANGE	MIL/IND TEMP	OPERATING CURRENT RANGE (OR SUPPLY CURRENT)	PACKAGE TYPE	IMPORTANT FEATURES
1.235	± 0.32%	LT1004-1.2	20ppm (typ)	M, I	10µA to 20mA	H, S, Z	Micropower Low TC Micropower with 7V Aux Reference Low TC Micropower with 7V Aux Reference Micropower Micropower
	± 1%	LT1034B-1.2	20ppm (max)	M, I	20µA to 20mA	H, S, Z	
	± 1%	LT1034-1.2	40ppm (max)	M, I	20µA to 20mA	H, S, Z	
	± 2% ± 1%	LM385-1.2 LM385B-1.2	20ppm (typ) 20ppm (typ)	M, I M	15µA to 20mA 15µA to 20mA	H, Z H, Z	
2.5	± 0.8%	LT1004-2.5	20ppm (typ)	M, I	20µA to 20mA	H, S, Z	Micropower Precision Precision Precision Bandgap Precision Bandgap Low TC Micropower with 7V Aux Reference Low TC Micropower with 7V Aux Reference General Purpose General Purpose Micropower Micropower 3 Terminal Low Drift 3 Terminal Low Drift 3 Terminal Low Drift 3 Terminal Low Drift
	± 0.2%	LT1009	6mV (max)	M, I	400µA to 10mA	H, Z	
	± 0.4%	LT1009S8	25ppm (max)	M, I	400µA to 20mA	S	
	± 0.05%	LT1019A-2.5	5ppm (max)	M	1.0mA	H, N	
	± 0.2%	LT1019-2.5	20ppm (max)	M, I	1.2mA	H, N, S	
	± 1%	LT1034B-2.5	20ppm (max)	M, I	20µA to 20mA	H, S, Z	
	± 1%	LT1034-2.5	40ppm (max)	M, I	20µA to 20mA	H, S, Z	
	± 4%	LM336-2.5	6mV (max)	M	400µA to 10mA	H, Z	
	± 2%	LM336B-2.5	6mV (max)	M	400µA to 10mA	H, Z	
	± 3%	LM385-2.5	20ppm (typ)	M, I	20µA to 20mA	H, Z	
	± 1.5%	LM385B-2.5	20ppm (typ)	M	20µA to 20mA	H, Z	
	± 3%	LT580J	85ppm (max)	M	1.5mA	H	
	± 1%	LT580K/K	40ppm (max)	M	1.5mA	H	
	± 0.4%	LT580L/U	25ppm (max)	M	1.5mA	H	
± 0.4%	LT580M	10ppm (max)	M	1.5mA	H		
4.5	± 0.05%	LT1019A-4.5	5ppm (max)	M	1.2mA	H, N	Precision Bandgap Precision Bandgap
	± 0.2%	LT1019-4.5	20ppm (max)	M, I	1.2mA	H, N, S	
5.0	± 0.05%	LT1019A-5	5ppm (max)	M	1.2mA	H, N	Precision Bandgap Precision Bandgap Very Low Drift Very Tight Initial Tolerance Low Cost, High Performance Precision, Enhanced Dynamics Precision, Enhanced Dynamics Precision, Enhanced Dynamics Precision, Enhanced Dynamics Precision, Enhanced Dynamics Precision Bandgap Precision Bandgap Tight Tolerance and Low TC Together Tight Tolerance and Low TC Together Tight Tolerance and Low TC Together Precision Bandgap Bandgap Precision Bandgap Precision Bandgap
	± 0.2%	LT1019-5	20ppm (max)	M, I	1.2mA	H, N, S	
	± 1%	LT1021B-5	5ppm (max)	M, I	1.2mA	H, N	
	± 0.05%	LT1021C-5	20ppm (max)	M, I	1.2mA	H, N	
	± 1%	LT1021D-5	20ppm (max)	M, I	1.2mA	H, J, N, S	
	± 0.02%	LT1027A	2ppm (max)	M	2mA	H	
	± 0.05%	LT1027B	2ppm (max)	M	2mA	H, N	
	± 0.05%	LT1027C	3ppm (max)	M	2mA	H, N	
	± 0.05%	LT1027D	5ppm (max)	M	2mA	N, H, S	
	± 0.1%	LT1027E	7.5ppm (max)	M	2mA	N, H, S	
	± 0.2%	LT1029A	20ppm (max)	M	700µA to 10mA	H, Z	
	± 1%	LT1029	34ppm (max)	M	700µA to 10mA	H, Z	
	± 0.05%	LT1236A-5	5ppm (max)	I	1.2mA	N, S	
	± 0.1%	LT1236B-5	10ppm (max)	I	1.2mA	N, S	
	± 0.1%	LT1236C-5	15ppm (max)	I	1.2mA	N, S	
	± 1%	REF02C	65ppm (max)	M	1.6mA	H, J, N	
	± 2%	REF02D	250ppm (max)	M	2.0mA	H, J, N	
± 0.3%	REF02E/A	8.5ppm (max)	M	1.4mA	H, J, N		
± 0.5%	REF02H	25ppm (max)	M	1.4mA	H, J, N		
6.9	± 3%	LM329A	10ppm (max)	M	600µA to 15mA	H, Z	Low Drift Low Drift General Purpose General Purpose Ultra Low Drift, 2ppm Long Term Stability*
	± 5%	LM329B	20ppm (max)	M	600µA to 15mA	H, Z	
	± 5%	LM329C	50ppm (max)	M	600µA to 15mA	H, Z	
	± 5%	LM329D	100ppm (max)	M	600µA to 15mA	H, Z	
	± 4%	LTZ1000	0.1ppm	M	4mA	H	
6.95	± 5%	LM399	2ppm (max)	M	500µA to 10mA	H	Ultra Low Drift Ultra Low Drift
	± 5%	LM399A	1ppm (max)	M	500µA to 10mA	H	
7.0	± 0.7%	LT1021B-7	5ppm (max)	M	1.0mA	H, N	Low Drift/Noise, Exc Stability Low Cost, High Performance
	± 0.7%	LT1021D-7	20ppm (max)	M	1.0mA	H, N, S	
10.0	± 0.05%	LT1019A-10	5ppm (max)	M	1.2mA	H, N	Precision Bandgap Precision Bandgap Very Low Drift Very Tight Initial Tolerance Low Cost, High Performance Very Low Drift Very Low Drift Very Tight Initial Tolerance Low Cost, High Performance Tight Tolerance and Low TC Together Tight Tolerance and Low TC Together Tight Tolerance and Low TC Together 3 Terminal Low Drift 3 Terminal Low Drift 3 Terminal Low Drift Precision Bandgap Precision Bandgap Precision Bandgap
	± 0.2%	LT1019-10	20ppm (max)	M, I	1.2mA	H, N, S	
	± 0.5%	LT1021B-10	5ppm (max)	M, I	1.7mA	H, N	
	± 0.05%	LT1021C-10	20ppm (max)	M, I	1.7mA	H, N	
	± 0.5%	LT1021D-10	20ppm (max)	M, I	1.7mA	H, N, S	
	± 0.05%	LT1031B	5ppm (max)	M	1.7mA	H	
	± 0.1%	LT1031C	15ppm (max)	M	1.7mA	H	
	± 0.2%	LT1031D	25ppm (max)	M	1.7mA	H	
	± 0.05%	LT1236A-10	5ppm (max)	I	1.2mA	N, S	
	± 0.1%	LT1236B-10	10ppm (max)	I	1.2mA	N, S	
	± 0.1%	LT1236C-10	15ppm (max)	I	1.2mA	N, S	
	± 0.3%	LT581J/S	30ppm (max)	M	1.0mA	H	
	± 0.1%	LT581K/T	15ppm (max)	M	1.0mA	H	
	± 0.05%	LT581L/U	5ppm (max)	M	1.0mA	H	
	± 1%	REF01C	65ppm (max)	M	1.6mA	H, J, N	
	± 0.3%	REF01E/A	8.5ppm (max)	M	1.4mA	H, J, N	
	± 0.5%	REF01H	25ppm (max)	M	1.4mA	H, J, N	

\*LTZ1000 requires external control and biasing circuits.