

**TABLE 1—THERMAL VOLTAGE NOISE AT ROOM TEMPERATURE**

Resistance ( $\Omega$ )	Noise voltage spectral density ( $nV/\sqrt{Hz}$ )	Applications
1	0.127	Reference
50	0.899	Instrumentation and RF
75	1.10	CATV
100	1.27	Categories 5 and 6, platinum RTD
150	1.56	Professional microphones
600	3.12	Professional audio, DSL, plain-old telephone system
1000	4.02	Reference
4700	8.72	Consumer audio
10,000	12.7	Reference
47,000	27.6	Consumer audio
1 million	127	Reference

**Notes:**Temperature=293K. Boltzmann's Constant= $1.38E-23J/K$ .