

Electrical Characteristics: $T_A = 25^\circ\text{C}$ unless otherwise specified

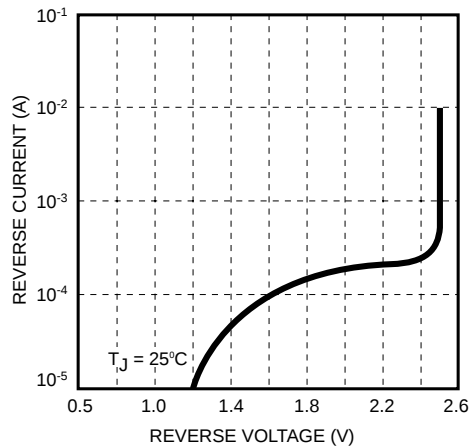
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Reverse Breakdown Voltage	$I_R = 1\text{mA}$	2.492	2.500	2.508	V
Reverse Breakdown Voltage	$0^\circ\text{C} \leq T_A \leq 105^\circ\text{C}$	2.492	2.500	2.508	V
Reverse Breakdown Voltage	$-40^\circ\text{C} \leq T_A \leq 0^\circ\text{C}$	2.480	2.500	2.508	V
Reverse Breakdown Change with Current	$400\mu\text{A} \leq I_R \leq 10\text{mA}$		2.6 3	10 12	mV mV
Reverse Dynamic Impedance	$I_R = 1\text{mA}$		0.2 0.4	1.0 1.4	Ω Ω
Temperature Stability	$0^\circ\text{C} \leq T_A \leq 70^\circ\text{C}$ (Note 1)				mV
Avg. Temp. Coefficient	$0^\circ\text{C} \leq T_A \leq 70^\circ\text{C}$ (Note 1)				ppm/ $^\circ\text{C}$
Long Term Stability	$T_A = 25^\circ\text{C} \pm 0.1\text{C}$, $I_R = 1\text{mA}$		20		ppm/kHr

The • denotes the specifications which apply over full operating temperature range.

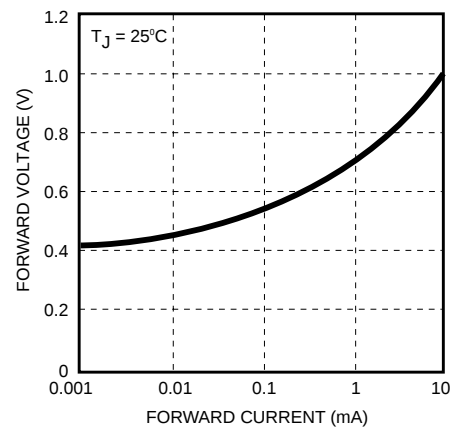
Note 1: Average temperature coefficient is defined as the total voltage change divided by the specified temperature range.

Typical Performance Characteristics

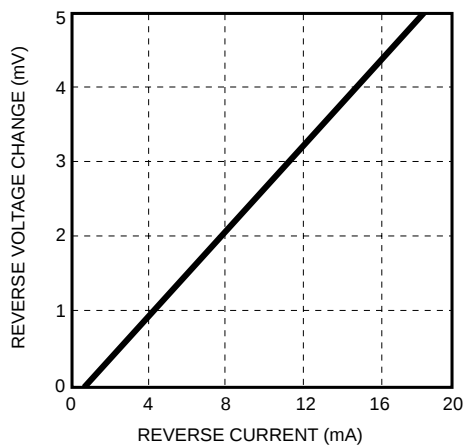
Reverse Current vs. Reverse Voltage



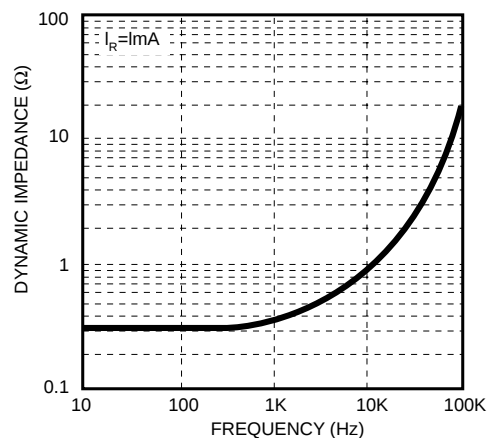
Forward Voltage vs. Forward Current



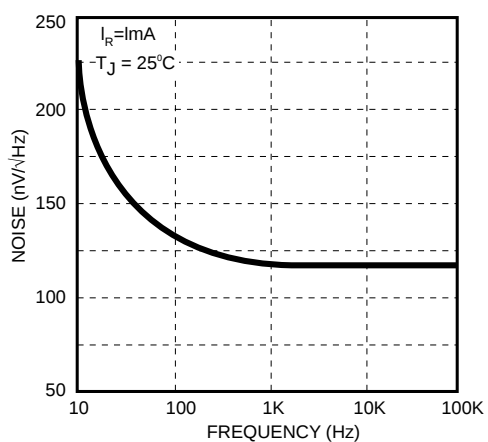
Change in Reverse Voltage vs. Reverse Current



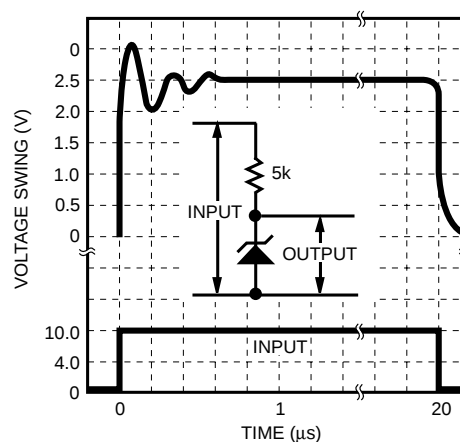
Dynamic Impedance vs. Frequency



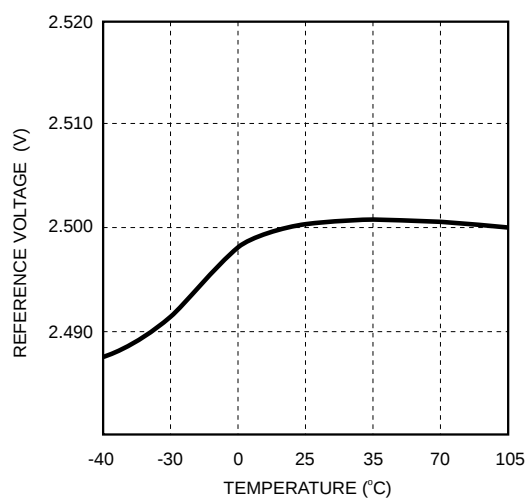
Zener Noise Voltage vs. Frequency



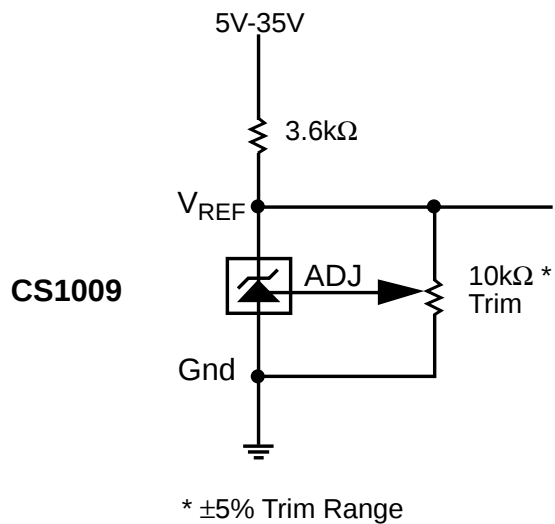
Response Time



Reference Voltage vs. Temperature



Application Diagram



Package Specification

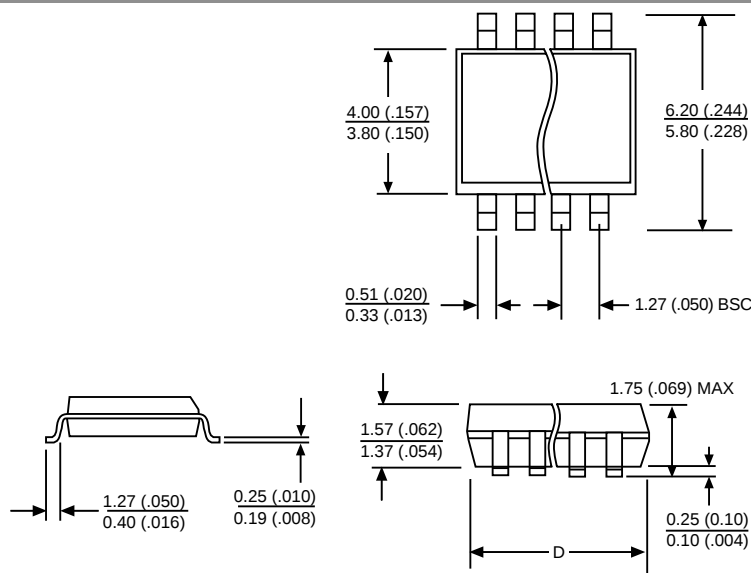
PACKAGE DIMENSIONS IN mm (INCHES)

Lead Count	D			
	Metric		English	
	Max	Min	Max	Min
8L SO Narrow	5.00	4.80	.197	.189

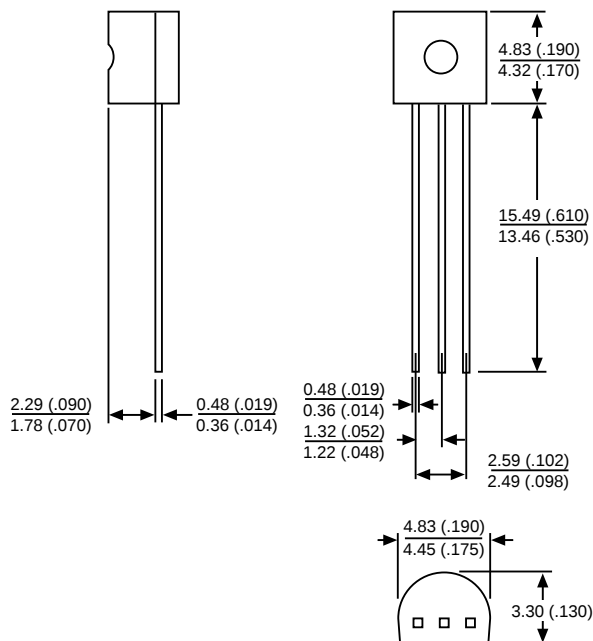
PACKAGE THERMAL DATA

Thermal Data		8L SO	TO-92	
R _{θJC}	typ	45	—	°C / W
R _{θJA}	typ	165	170	°C / W

Surface Mount Narrow Body (D); 150 mil wide



3 Lead TO-92 (Z)



Ordering Information

Part Number	Description
CS1009GD8	8 Lead SO Narrow
CS1009GDR8	8 Lead SO Narrow (tape & reel)
CS1009GZ3	3 Lead TO-92
CS1009GZR3	3 Lead TO-92 (tape & reel)

ON Semiconductor and the ON Logo are trademarks of Semiconductor Components Industries, LLC (SCILLC). ON Semiconductor reserves the right to make changes without further notice to any products herein. For additional information and the latest available information, please contact your local ON Semiconductor representative.