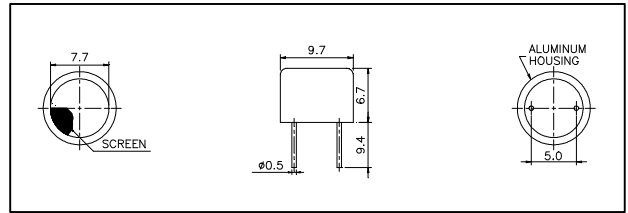
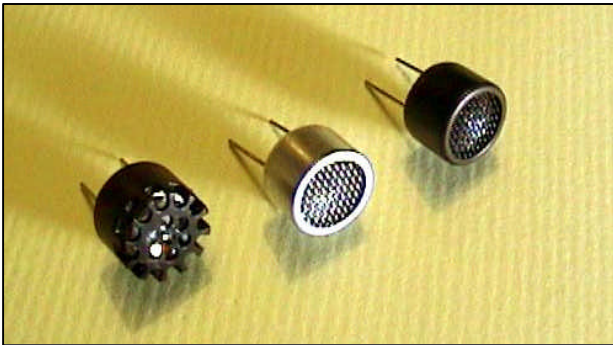


"L" Series

Open Face Piezo Transducers

Part # 40LR10 (621063, 625604), part # 40LT10 (621997, 626998)

Dimensions: Dimensions are in mm



Specification

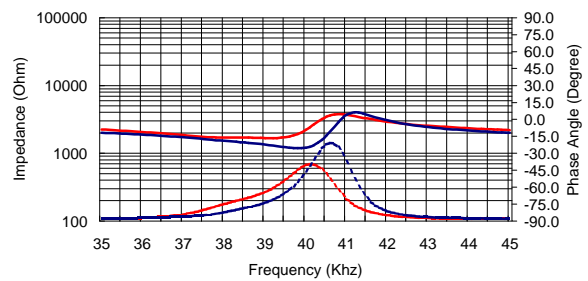
40LR10		Transmitter
40LT10		Receiver
Center Frequency		40.0±1.0Khz
Bandwidth (-6dB)	40LR10	2.5Khz
	40LT10	3.0Khz
Transmitting Sound Pressure Level		112dB min.
at 40.0Khz; 0dB re 0.0002μbar per 10Vrms at 30cm		
Receiving Sensitivity		-70dB min.
at 40.0Khz 0dB = 1 volt/μbar		
Capacitance at 1Khz		±20% 1900 pF
Max. Driving Voltage (cont.)		10Vrms
Total Beam Angle	-6dB	72° typical
Operation Temperature		-30 to 80°C
Storage Temperature		-40 to 85°C

All specification taken typical at 25°C
Closer frequently tolerance can be supplied upon request.

Impedance/Phase Angle vs. Frequency

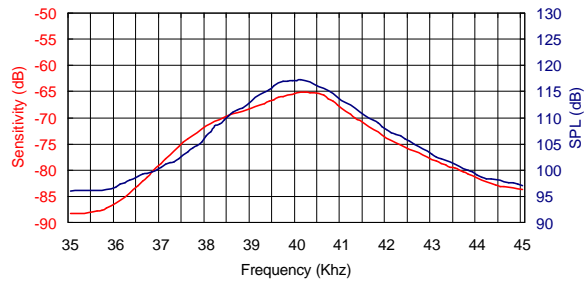
Tested under 1Vrms Oscillation Level

40LR10 Impedance —————
 40LR10 Phase —————
 40LT10 Impedance ·······
 40LT10 Phase ·······

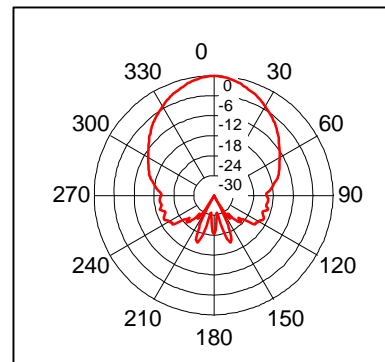


Sensitivity/Sound Pressure Level

Tested under 10Vrms @30cm



Beam Angle: Tested at 40.0Khz frequency



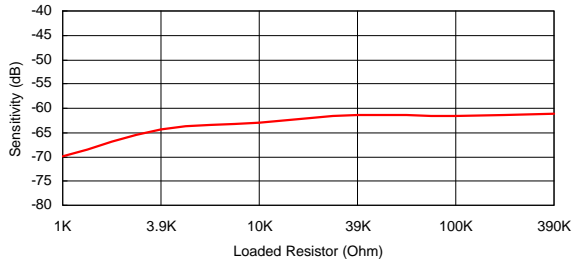
"L" Series

Open Face Piezo Transducers

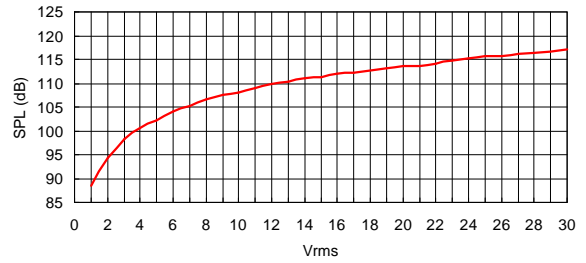
40LR10 Receiver

40LT10 Transmitter

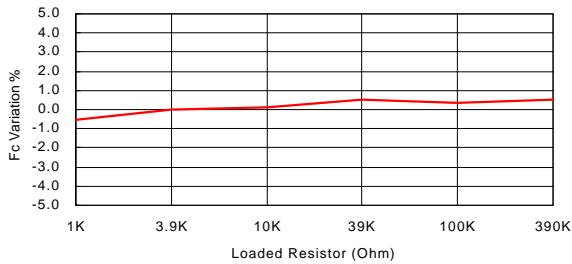
Sensitivity Variation vs. Loaded Resistor



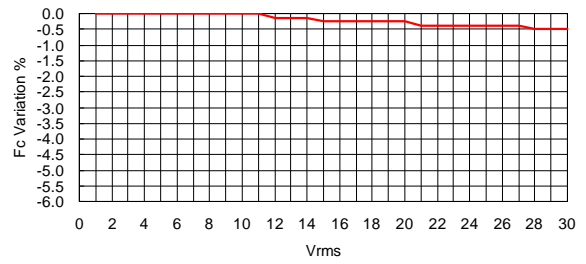
SPL Variation vs. Driving Voltage



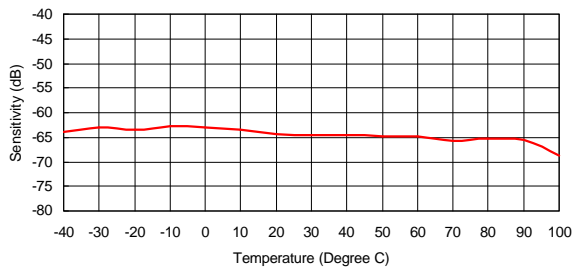
Center Frequency Shift vs. Loaded Resistor



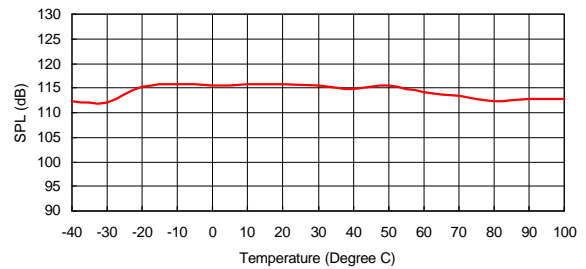
Center Frequency Shift vs. Driving Voltage



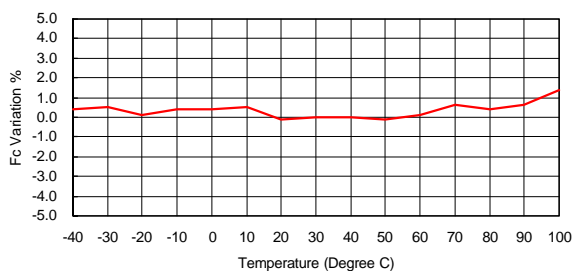
Sensitivity Variation vs. Temperature



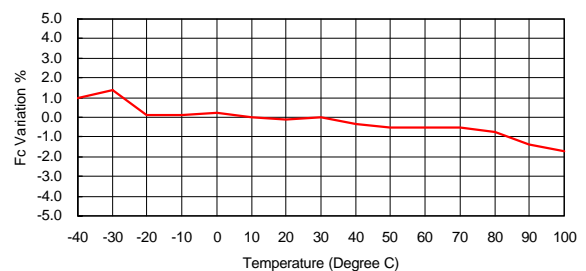
SPL Variation vs. Temperature



Center Frequency Shift vs. Temperature



Center Frequency Shift vs. Temperature



"L" Series

Open Face Piezo Transducers

Part # 40LR12, part # 40LT12

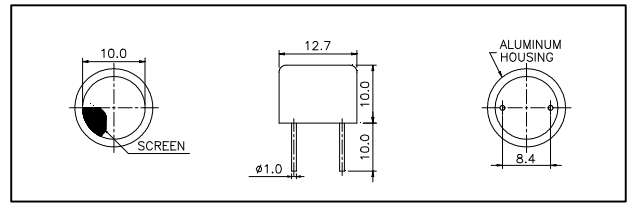


Specification

40LR12	Transmitter
40LT12	Receiver
Center Frequency	40.0±1.0Khz
Bandwidth (-6dB)	40LT12 2.0Khz
	40LR12 2.0Khz
Transmitting Sound Pressure Level	115dB min.
at 40.0Khz; 0dB re 0.0002μbar per 10Vrms at 30cm	
Receiving Sensitivity	-67dB min.
at 40.0Khz 0dB = 1 volt/μbar	
Capacitance at 1Khz	±20% 2400 pF
Max. Driving Voltage (cont.)	20Vrms
Total Beam Angle	-6dB 85° typical
Operation Temperature	-30 to 80°C
Storage Temperature	-40 to 85°C

All specifications taken typical at 25°C
 Closer frequently tolerance can be supplied upon request.

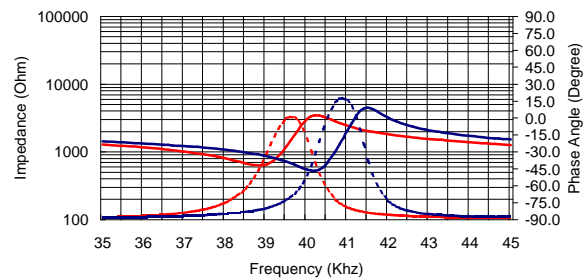
Dimensions: dimensions are in mm



Impedance/Phase Angle vs. Frequency

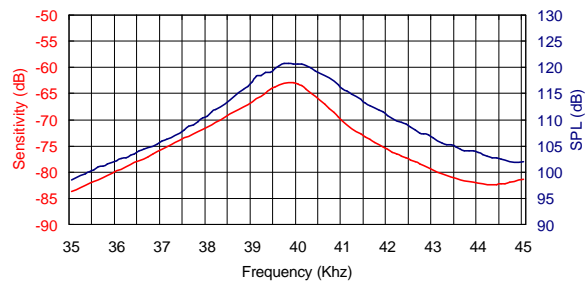
Tested under 1Vrms Oscillation Level

40LR12 Impedance —————
 40LR12 Phase —————
 40LT12 Impedance ······
 40LT12 Phase ······

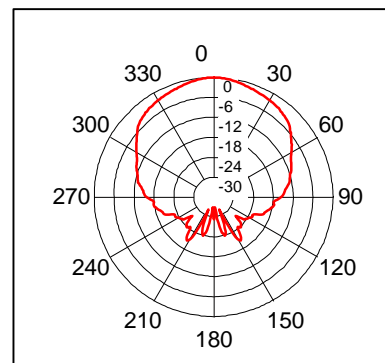


Sensitivity/Sound Pressure Level

Tested under 10Vrms @30cm



Beam Angle: Tested at 40.0Khz frequency



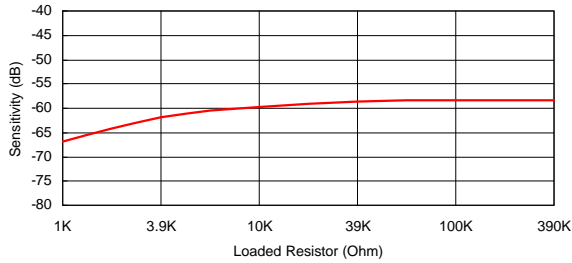
"L" Series

Open Face Piezo Transducers

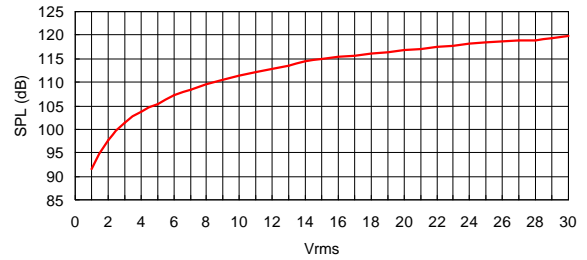
40LR12 Receiver

40LT12 Transmitter

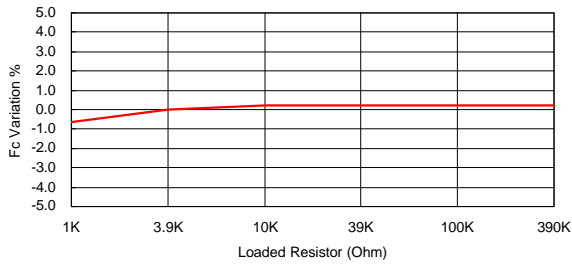
Sensitivity Variation vs. Loaded Resistor



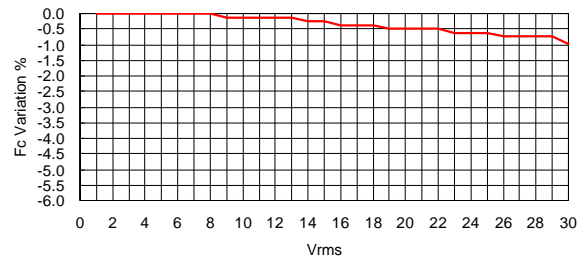
SPL Variation vs. Driving Voltage



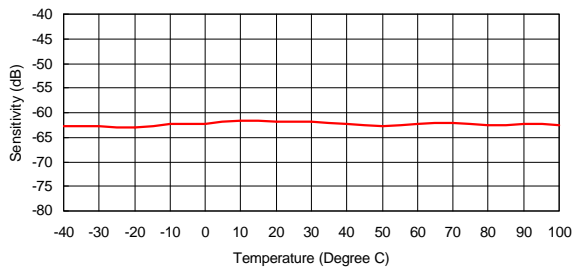
Center Frequency Shift vs. Loaded Resistor



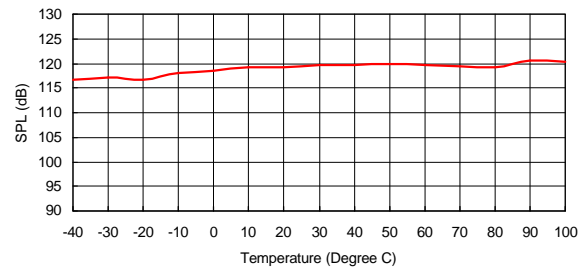
Center Frequency Shift vs. Driving Voltage



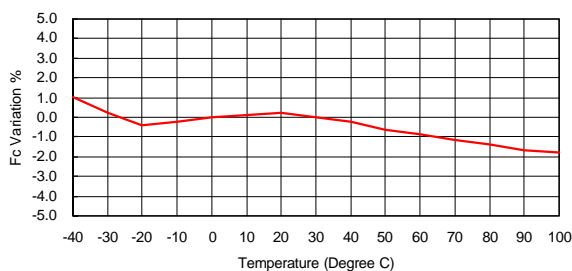
Sensitivity Variation vs. Temperature



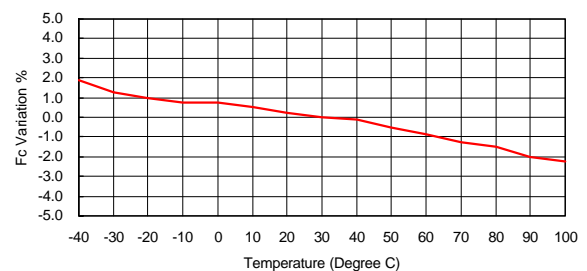
SPL Variation vs. Temperature



Center Frequency Shift vs. Temperature



Center Frequency Shift vs. Temperature



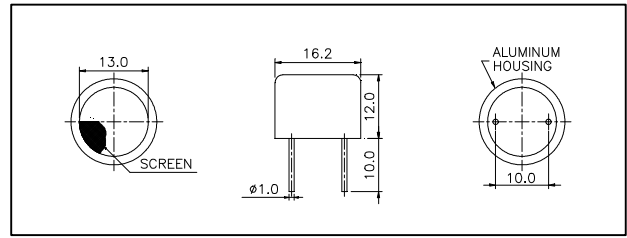
"L" Series

Open Face Piezo Transducer

Part # 40LR16 (621128) Part # 40LT16 (621126)



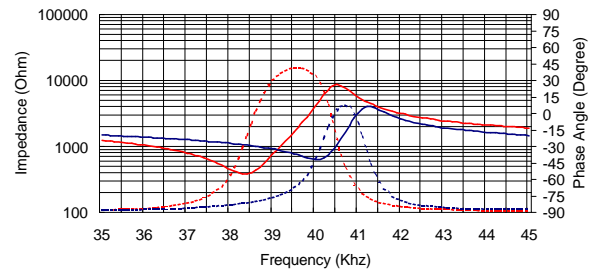
Dimensions: dimensions are in mm



Impedance/Phase Angle vs. Frequency

Tested under 1Vrms Oscillation Level

40LR16 Impedance ———— (red solid line)
 40LR16 Phase ———— (blue solid line)
 40LT16 Impedance ······ (red dotted line)
 40LT16 Phase ······ (blue dotted line)

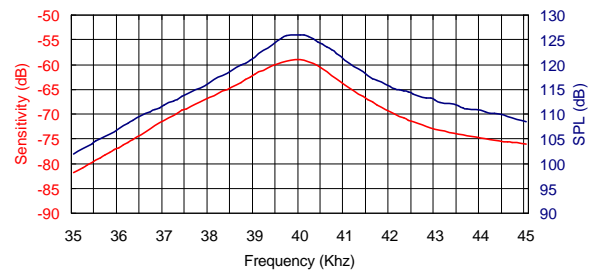


Specification

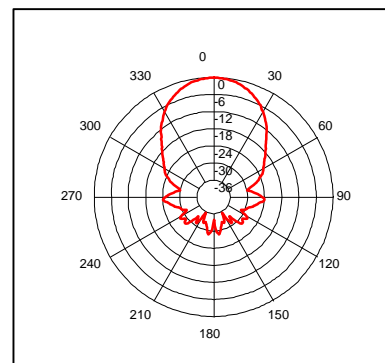
40LT16		Transmitter
40LR16		Receiver
Center Frequency		40.0±1.0Khz
Bandwidth (-6dB)	40LT16	2.0Khz
	40LR16	2.5Khz
Transmitting Sound Pressure Level		120dB min.
at 40.0Khz; 0dB re 0.0002μbar per 10Vrms at 30cm		
Receiving Sensitivity		-65dB min.
at 40.0Khz 0dB = 1 volt/μbar		
Capacitance at 1Khz		±20% 2400 pF
Max. Driving Voltage (cont.)		20Vrms
Total Beam Angle	-6dB	55° typical
Operation Temperature		-30 to 80°C
Storage Temperature		-40 to 85°C

Sensitivity/Sound Pressure Level

Tested under 10Vrms @30cm



Beam Angle: Tested at 40.0Khz frequency



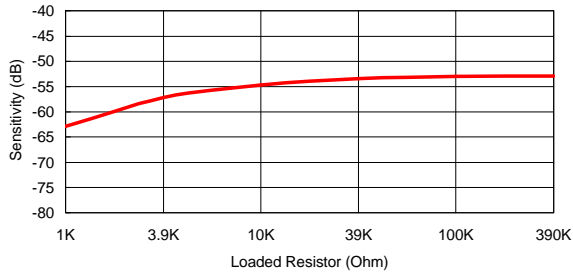
"L" Series

Open Face Piezo Transducers

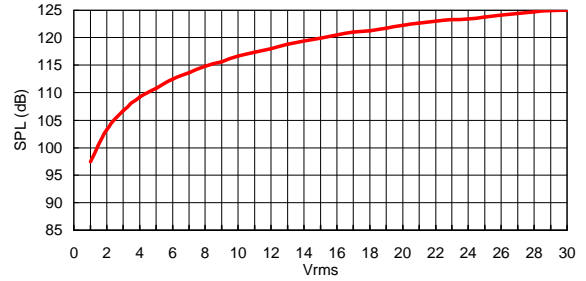
40LR16 Receiver

40LT16 Transmitter

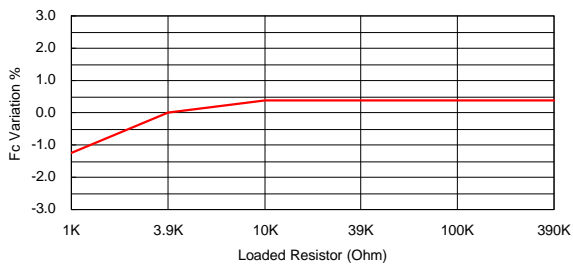
Sensitivity Variation vs. Loaded Resistor



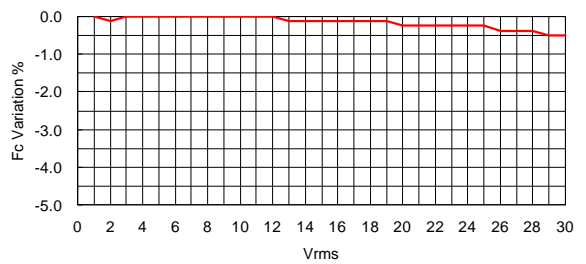
SPL Variation vs. Driving Voltage



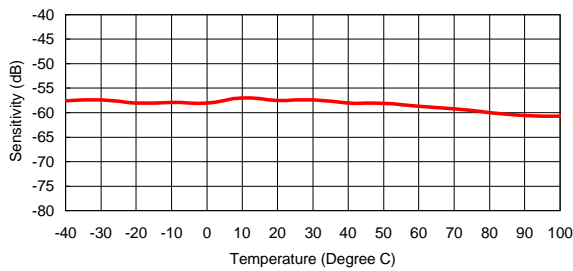
Center Frequency Shift vs. Loaded Resistor



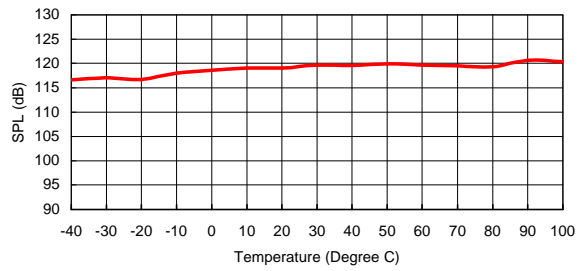
Center Frequency Shift vs. Driving Voltage



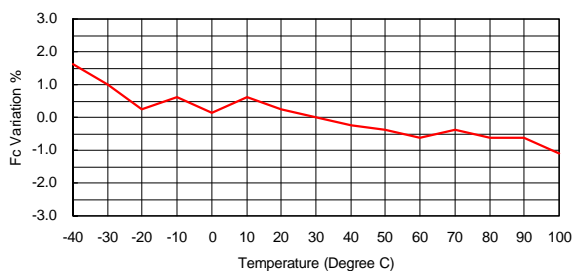
Sensitivity Variation vs. Temperature



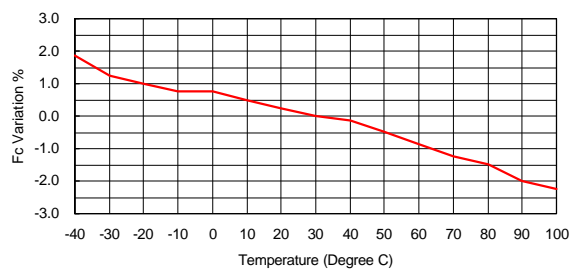
SPL Variation vs. Temperature



Center Frequency Shift vs. Temperature



Center Frequency Shift vs. Temperature



“L” Series

Open Face Piezo Transducers

The piezo-based "L" Series transducers offer the design engineer a unique blend of size and acoustical performance when developing an ultrasonic sensor.

This line of transducers is specifically intended for operation in air at ultrasonic frequencies and consists of transmitter/receiver pairs. All use screen mesh open face construction housed in a metal case. The key features: Wide selection and increased sensitivity for non hostile environments.

" L" Series transducers are non inventory items . For ordering information please contact Polaroid OEM Components Group 781-386-3965