

**L Series 40LT12 and 40LR12**

SensComp's 'L' Series Open Face Piezoelectric Ultrasonic Sensors – 40LT12 and 40LR12

**Features**

- Open Face Construction
- Increased Sensitivity
- Reduced Ringing Characteristics,
- Specifically Intended for Operation in Air at Ultrasonic Frequencies

**Part No.**

- \*PID# 621125LF – L Series 40LT12
- \*PID# 621124LF – L Series 40LR12
- \*RoHS Compliant

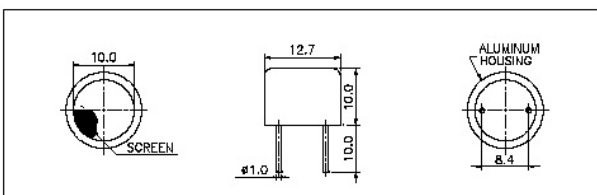
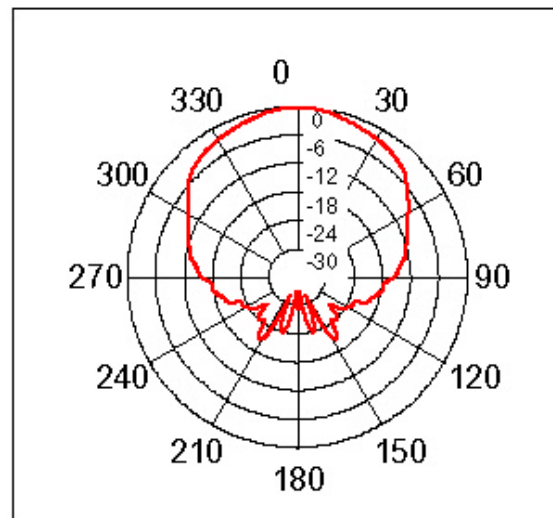
**Specifications**

<b>40LT12</b> .....	Transmitter
<b>40LR12</b> .....	Receiver
<b>Center Frequency</b> .....	40.0 ± 1.0 kHz
<b>Bandwidth (-6 dB)</b> 40LT12.....	2.0 kHz
40LR12.....	2.0 kHz
<b>Transmitting Sound Pressure Level</b> .....	115 dB min
at 40.0 kHz; 0dB re 0.0002 µbar	
Per 10 Vrms at 30 cm	
<b>Receiving Sensitivity</b> .....	-67 dB min
at 40.0 kHz; 0dB = 1 volt/ µbar	
<b>Capacitance at 1 kHz ± 20%</b> .....	2400 pf
<b>Maximum Driving Voltage (cont.)</b> .....	20 Vrms
<b>Total Beam Angle (-6 dB)</b> .....	85° typical
<b>Operating Temperature</b> .....	-30° to 80° C
<b>Storage Temperature</b> .....	-40° to 85° C
all specifications taken typical at 25° C	
<b>Dimensions:</b>	dimensions are in mm

**Specifications**

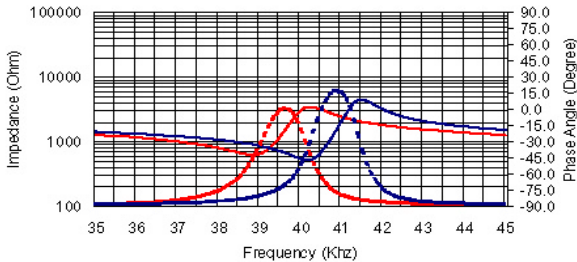


**Beam Angle:** Tested at 40.0 kHz

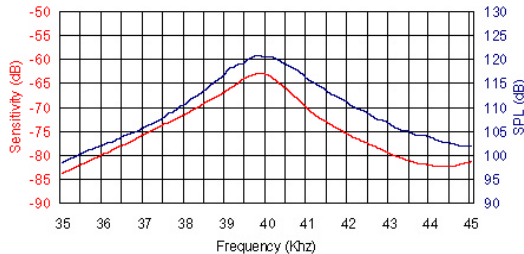


40LR12 Impedance ————  
 40LR12 Phase - - - - -  
 40LT12 Impedance ————  
 40LT12 Phase - - - - -

**Impedance/Phase Angle vs. Frequency**  
 Tested under 1 Vrms Oscillation Level

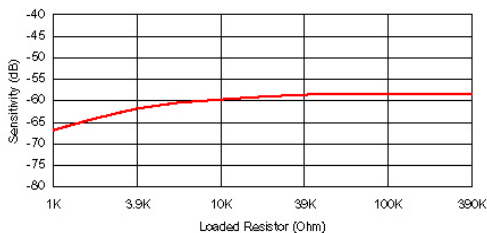


**Sensitivity/Sound Pressure Level**  
 Tested under 10 Vrms @ 30 cm

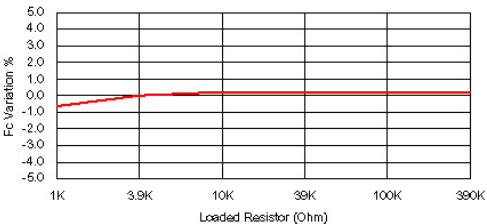


**40LR12 Receiver**

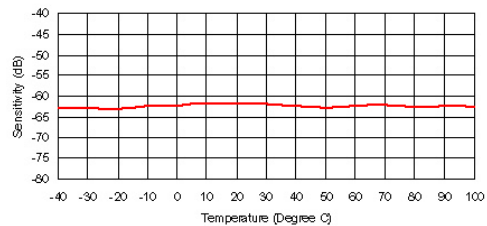
**Sensitivity Variation vs. Loaded Resistor**



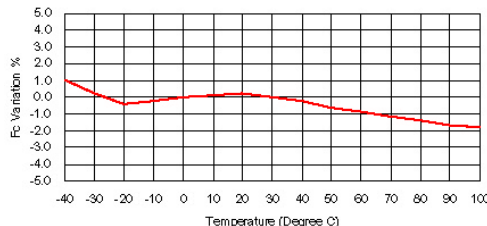
**Center Frequency Shift vs. Loaded Resistor**



**Sensitivity Variation vs. Temperature**

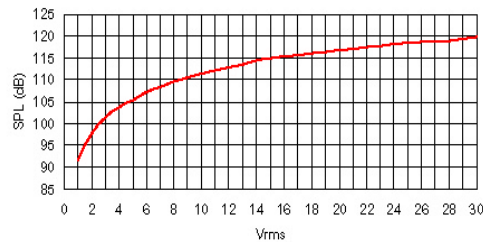


**Center Frequency Shift vs. Temperature**

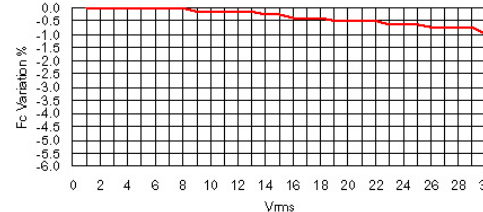


**40LT12 Transmitter**

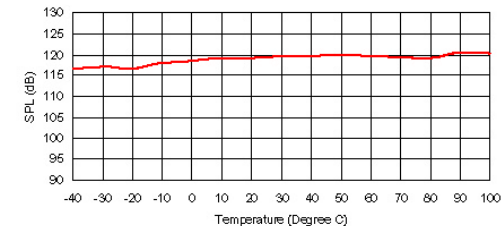
**SPL Variation vs. Driving Voltage**



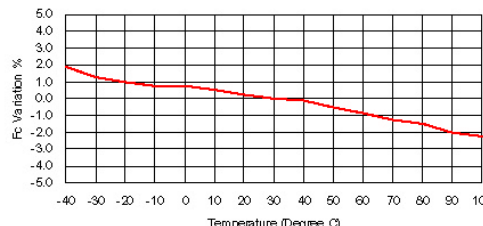
**Center Frequency Shift vs. Driving Voltage**



**SPL Variation vs. Temperature**



**Center Frequency Shift vs. Temperature**



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