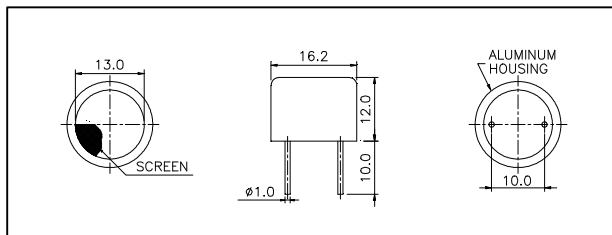


### PROWAVE Air Ultrasonic Ceramic Transducers 250ST/R160



**Dimensions:** dimensions are in mm



### Specification

|  |                                      |
|--|--------------------------------------|
| <b>250ST160</b>                                  | Transmitter                          |
| <b>250SR160</b>                                  | Receiver                             |
| <b>Center Frequency</b>                          | 25.0±1.0Khz                          |
| <b>Bandwidth (-6dB)</b>                          | 250ST160: 2.0Khz<br>250SR160: 2.0Khz |
| <b>Transmitting Sound Pressure Level</b>         | 112dB min.                           |
| at 25.0Khz; 0dB re 0.0002μbar per 10Vrms at 30cm |                                      |
| <b>Receiving Sensitivity</b>                     | -62dB min.                           |
| at 25.0Khz 0dB = 1 volt/μbar                     |                                      |
| <b>Capacitance at 1Khz</b>                       | ±20% 2400 pF                         |
| <b>Max. Driving Voltage (cont.)</b>              | 20Vrms                               |
| <b>Total Beam Angle</b>                          | -6dB 85° typical                     |
| <b>Operation Temperature</b>                     | -30 to 80°C                          |
| <b>Storage Temperature</b>                       | -40 to 85°C                          |

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

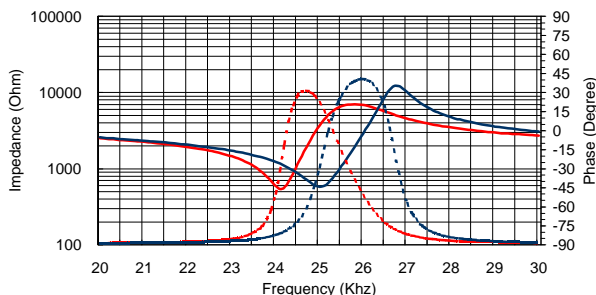
Model available:

|   |            |                          |
|---|------------|--------------------------|
| 1 | 250ST/R160 | Aluminum Housing         |
| 2 | 250ST/R16B | Black Al. Housing        |
| 3 | 250ST/R16F | Al. Housing w/Solid Grid |
| 4 | 250ST/R16P | Plastic Housing          |

### Impedance/Phase Angle vs. Frequency

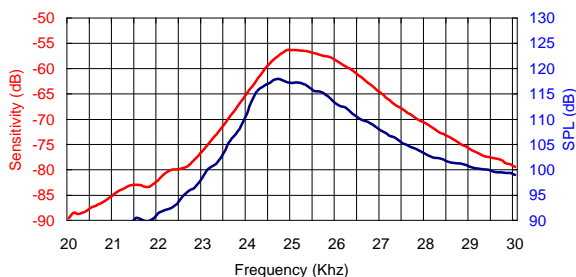
Tested under 1Vrms Oscillation Level

250SR160 Impedance (Red solid line)  
250SR160 Phase (Red dotted line)  
250ST160 Impedance (Blue solid line)  
250ST160 Phase (Blue dotted line)

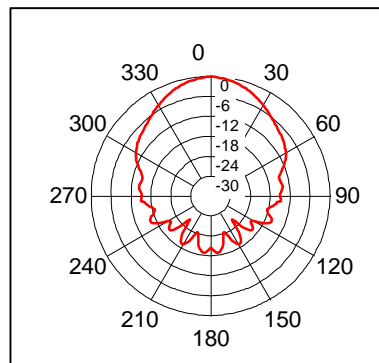


### Sensitivity/Sound Pressure Level

Tested under 10Vrms @ 30cm



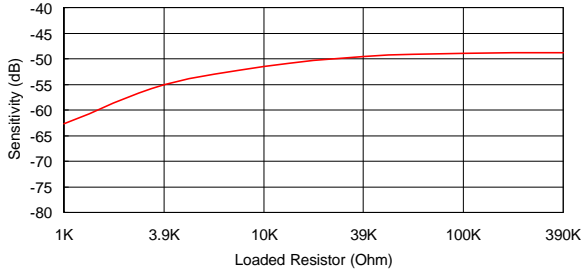
**Beam Angle:** Tested at 25.0Khz frequency



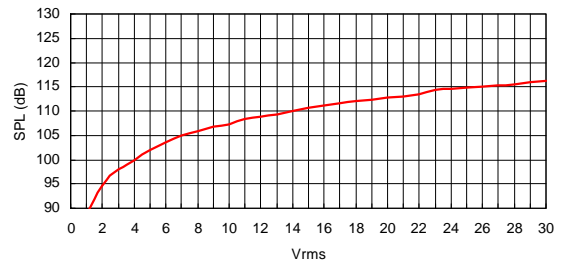
250SR160 Receiver

250ST160 Transmitter

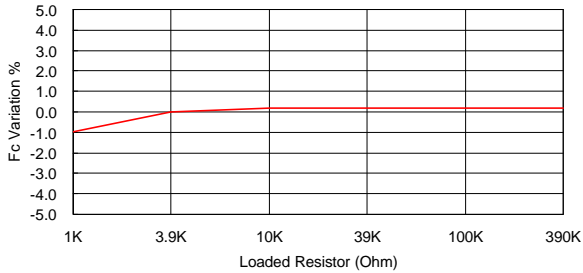
Sensitivity Variation vs. Loaded Resistor



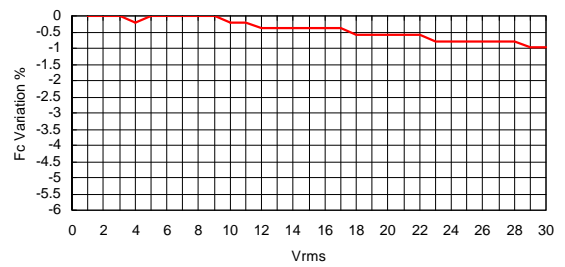
SPL Variation vs. Driving Voltage



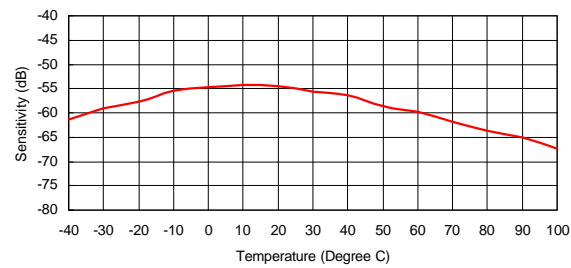
Center Frequency Shift vs. Loaded Resistor



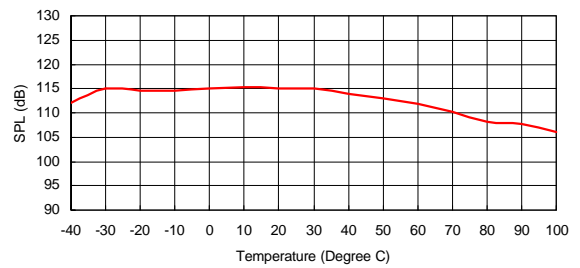
Center Frequency Shift vs. Driving Voltage



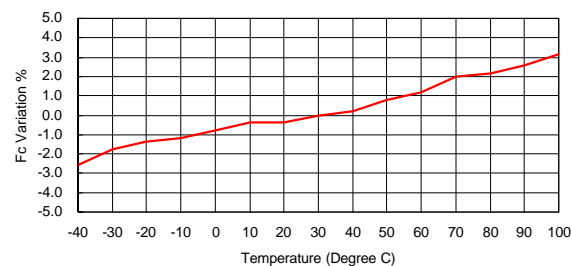
Sensitivity Variation vs. Temperature



SPL Variation vs. Temperature



Center Frequency Shift vs. Temperature



Center Frequency Shift vs. Temperature

