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## Piezo Evaluation Kits

SensComp's Piezoelectric Ultrasonic Sensor Evaluation Kits provide the Ultrasonic Sensors for prototype development.

### Features

- Specially Intended for Operation in Air at Ultrasonic Frequencies
- Beam Angles from 10° to 125°
- K Series Closed-Face:
  - Environmentally Rugged, Durable, Sealed Construction Protects Against Water, Heat, Humidity and Other Elements
- L Series Open-Face:
  - Increased Sensitivity
  - Reduced Ringing Characteristics
- Pulse Transceivers:
  - Closed Face (KPT) and Open Face (LPT)
  - One Ultrasonic Sensor Transmits and Receives
- High Frequency Transceivers
  - Closed-Face Construction
  - Coated with a Special Acoustic Material for Optimum Efficiency and Impedance Matching in Air



### Part No.

- PID# 606786 – Standard Piezo Evaluation Kit, 40 kHz
- PID# 606787 – Premium Piezo Evaluation Kit, 40 kHz and High Frequency

### Kit Contents

- The Standard Evaluation Kit contains one each of:
- K Series 40KT08, 40KT18, 40KT25 Transmitters
  - K Series 40KR08, 40KR18, 40KR25 Receivers
  - K Series 40KPT18A, 40KPT25 Transceivers
  - L Series 40LT10, 40LT12, 40LT16 Transmitters
  - L Series 40LR10, 40LR12, 40LR16 Receivers
  - L Series 40LPT16 Transceivers
- The Premium Kit, in addition to the above, contains:
- 1 - K Series 125KHF25 Transceiver, 125 kHz
  - 1 - K Series 200KHF18 Transceiver, 210 kHz

### Description

The **Piezoelectric Evaluation Kit** is a great building block for exploring the characteristics of our piezoelectric ultrasonic sensors for inclusion into your prototype designs. The kit contains a representative sample of our economical ultrasonic sensor products.

Included in the package are our K Series Closed-Face ultrasonic sensors, our L-Series Open Face Ultrasonic sensors, and also our Pulse Transceivers (Both Closed-Face and Open Faced).

The 'K' Series Piezo ultrasonic sensors are designed to be environmentally rugged, with durable, sealed construction that resists and protects against water, heat, humidity and other elements.

The 'L' Series Ultrasonic sensors offer the design engineer a unique blend of size and acoustical performance when developing their ultrasonic sensor product. All use screen mesh open face construction housed in a metal case, offering increased sensitivity for non-hostile environments.

## Piezoelectric Comparison Chart

Description	Diameter (mm)	Center Freq (KHz)	Beam Angle (-6dB)	SPL (dB) (Transmit)	Sensitivity (dB) (Receive)	Bandwidth (kHz) (-6dB)	Capacitance at 1kHz (pf)	Nominal Impedance	Ringing (ms)	Max Continuous Drive Voltage
40KT08	8	40 ± 3.0	125°	100		1.5	1700			15 V rms
40KR08	8	40 ± 3.0	125°		-80	2.0	1700			
40KT18	18	40 ± 1.0	30°	115		1.5	2400			15 V rms
40KR18	18	40 ± 1.0	30°		-70	1.5	2400			
40KT25	25	40 ± 1.0	30°	115		1.0	2400			20 V rms
40KR25	25	40 ± 1.0	30°		-70	1.0	2400			
40KPT18A	18	40 ± 1.0	85°	108	-75	1.5	1900	500	1.2	20 V rms; 100Vpp*
40KPT25	25	40 ± 1.0	30°	113	-72	4.0	2400	2400	1.2	20 V rms; 100Vpp*
125KHF25	25	125 ± 10.0	14.5°	**	-58 **	10.0	1250	1200		100 Vpp*
200KHF18	18	200 ± 10.0	10°	20	-75	10.0	580	600		50 Vpp*
40LT10	9.7	40 ± 1.0	72°	112		2.5	1900			10 V rms
40LR10	9.7	40 ± 1.0	72°		-70	3.0	1900			
40LT12	12.7	40 ± 1.0	85°	115		2.0	2400			20 V rms
40LR12	12.7	40 ± 1.0	85°		-67	2.0	2400			
40LT16	16	40 ± 1.0	55°	120		2.0	2400			20 V rms
40LR16	16	40 ± 1.0	55°		-65	2.5	2400			
40LPT16	16	40 ± 1.0	55°	117	-65	2.0	2400	1000		20 V rms, 100Vpp*

\*\* Echo Sensitivity (0dB = 20 Vpp @ 25 cm)

\* 10% duty cycle; 20 pulses maximum

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