

# TYPE F42 TRANSDUCER (Models A, B, C, and D)

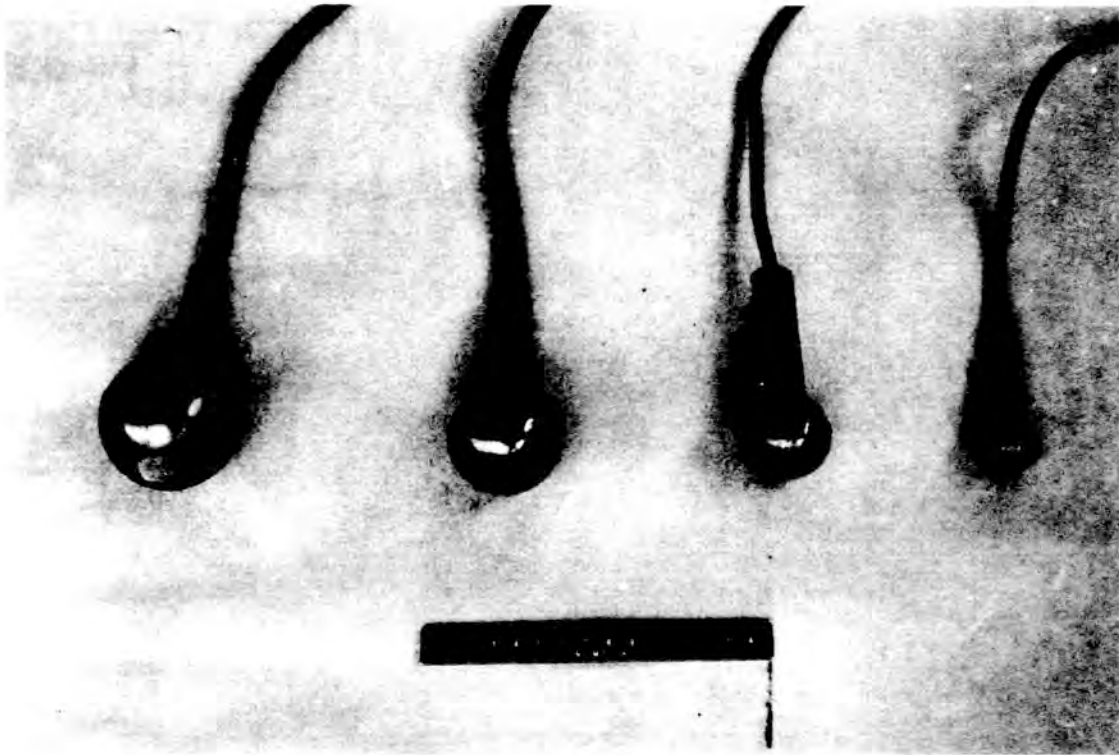


Fig. F42-1 - Type F42 transducers (Models A, B, C, and D).

**FUNCTION:** A set of four general-purpose, omnidirectional, reversible and reciprocal transducers.

**DESIGN:** PZT spherical shells encapsulated in polyurethane with o.d. of the spheres at 5.0 cm for Model A, 3.81 cm for Model B, 2.54 cm for Model C, and 1.27 cm for Model D.

	MODELS			
	A	B	C	D
<b>FREQUENCY RANGE (kHz)</b>	1-40	1-50	1-90	1-150
<b>TVR</b>	Fig. F42-2			
<b>FFVS</b>	Fig. F42-3			
<b>MAXIMUM DEPTH (m)</b>	690	1030	3500	3500
<b>TEMPERATURE RANGE (°C)</b>	0-30	0-30	0-30	0-30

	MODELS			
	A	B	C	D
<b>MAXIMUM DRIVING (V rms)</b>	400	400	200	100
<b>ELECTRICAL IMPEDANCE</b>	FIG. F42-4	FIG. F42-5	FIG. F42-6	FIG. F42-7
<b>DIRECTIVITY</b>	Omnidirectional in the horizontal (XY) plane and omnidirectional within $\pm 2$ dB in the vertical (XZ) plane			
<b>SHIPPING WEIGHT (kg)</b>	7	6	5.5	4.5
<b>(lbs)</b>	15	13	12	10
<b>NORMAL CABLE LENGTH</b>	30 m			
<b>CABLE CODE</b>	White Black & Shield		High Signal Low Signal & Ground	

**INSTRUCTIONS FOR THE USER** See Appendix D for preparation for use  
 Acoustic center is the center of sphere (see Fig. F42-8)  
 Clamp hanger on cylindrical cable gland

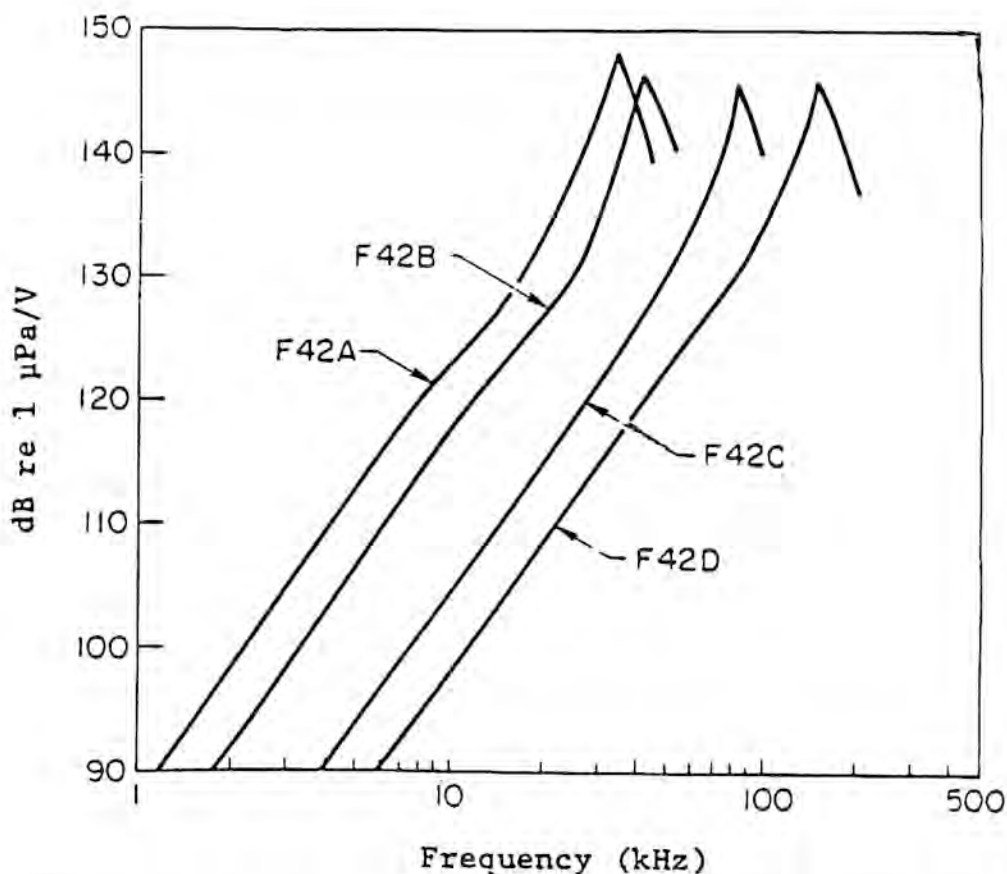


Fig. F42-2 - Typical TVR (black lead and shield grounded) at end of 30-m cable.

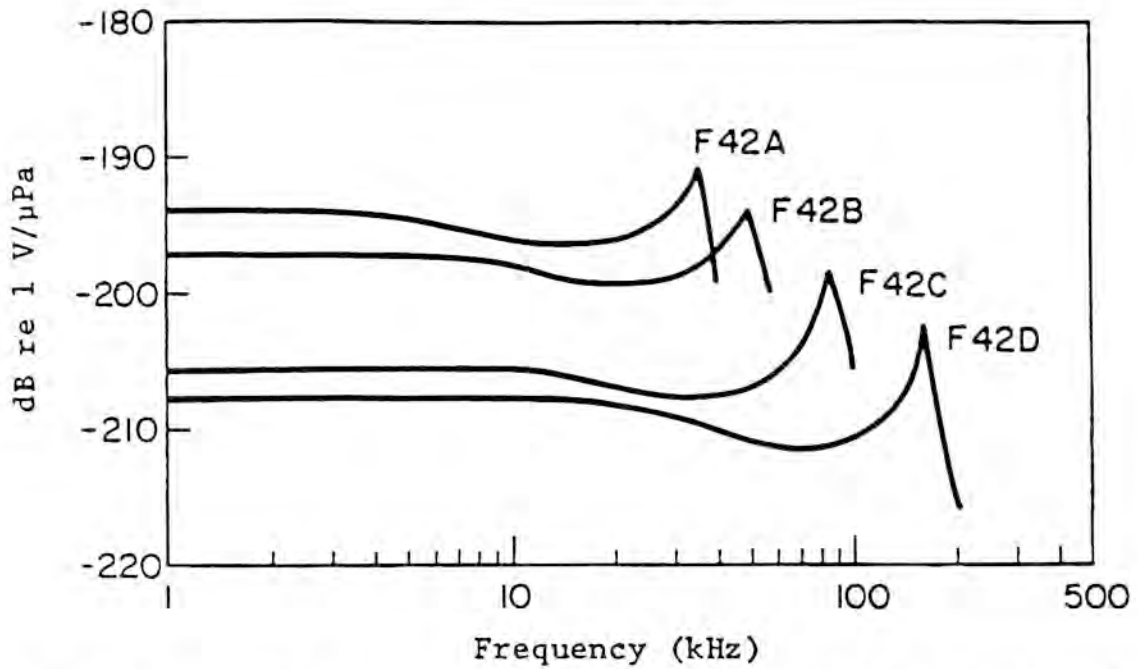


Fig. F42-3 - Typical FFVS at end of 30-m cable (unbalanced, black lead, and shield grounded).

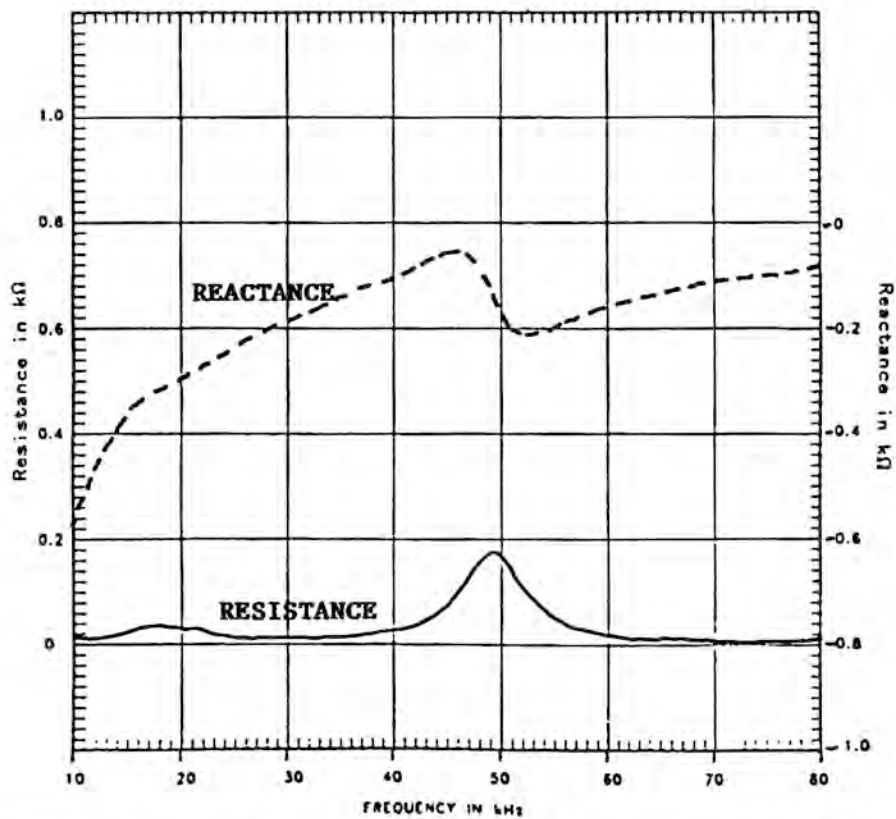


Fig. F42-4 - Typical series impedance for Type F42A transducer at end of 30-m cable.

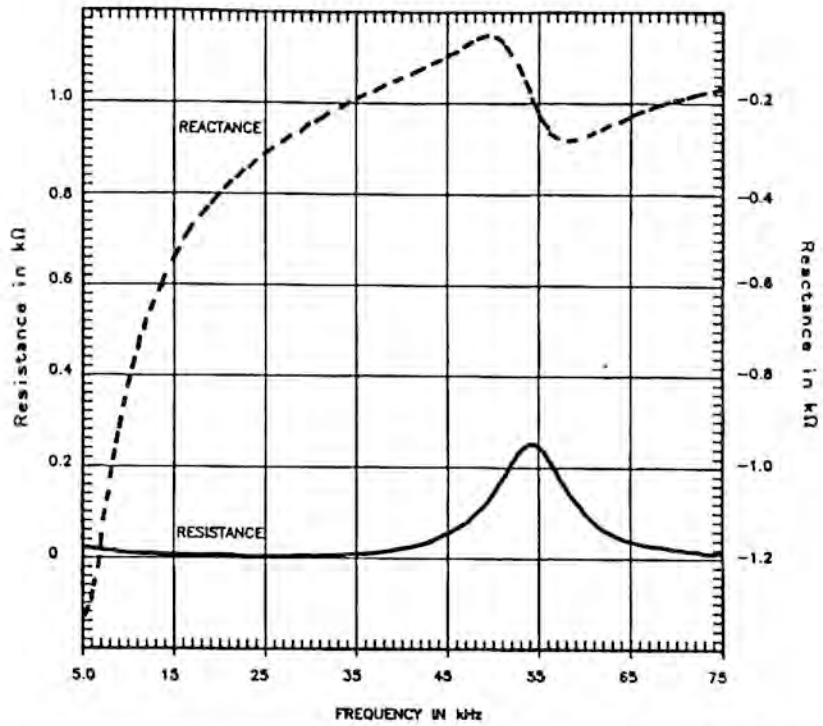


Fig. F42-5 - Typical series impedance for Type F42B transducer at end of 30-m cable.

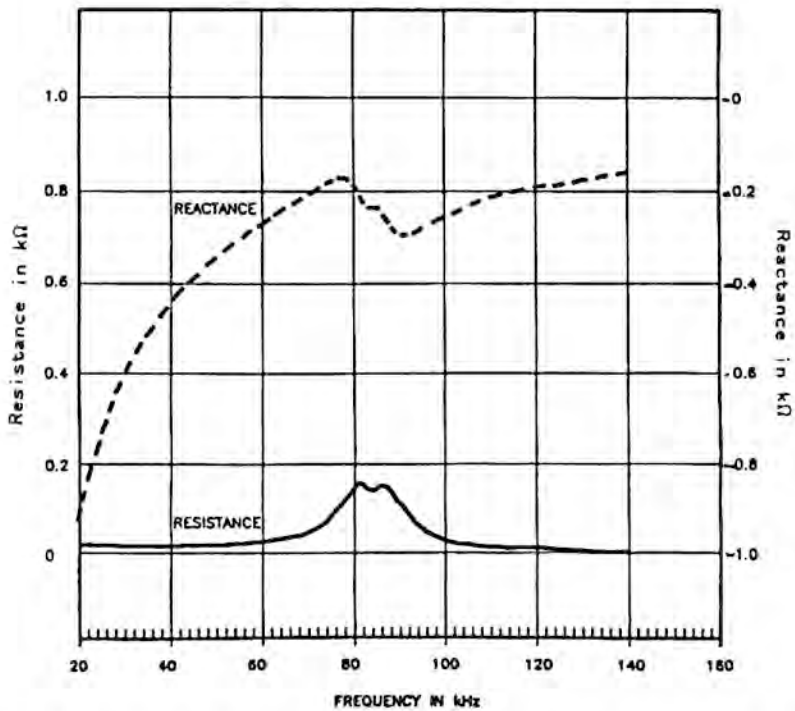


Fig. F42-6 - Typical series impedance for Type F42C transducer at end of 30-m cable.

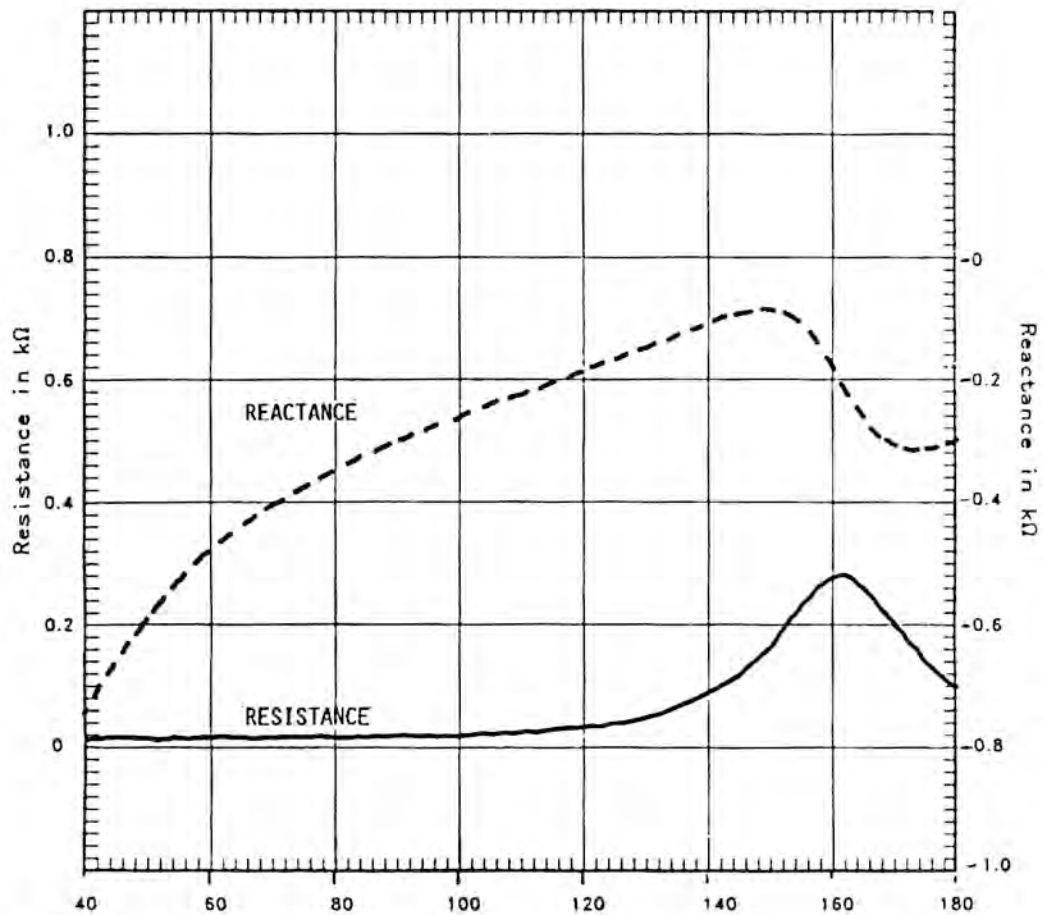
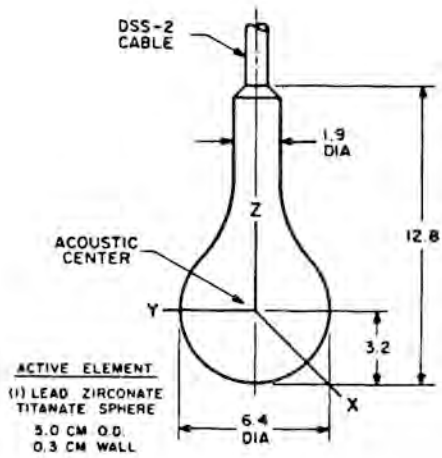
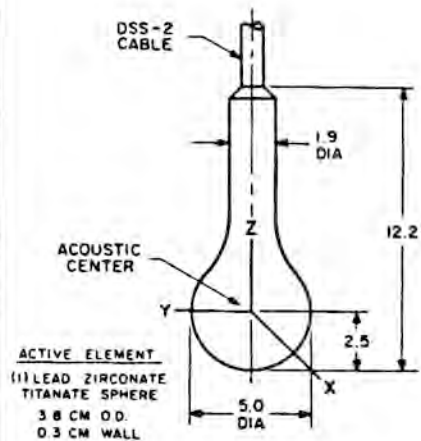


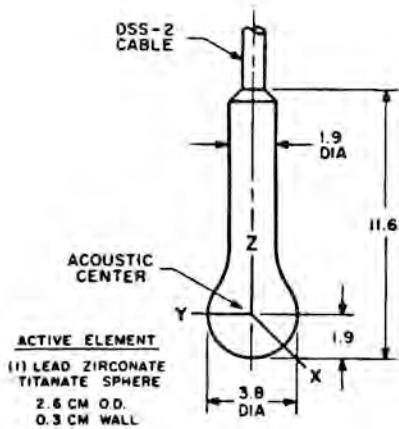
Fig. F42-7 - Typical series impedance for Type F42D transducer at end of 30-m transducer.



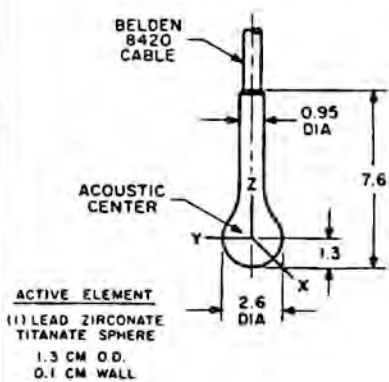
**USRD F42A TRANSDUCER**  
 ALL DIMENSIONS IN CENTIMETERS



**USRD F42B TRANSDUCER**  
 ALL DIMENSIONS IN CENTIMETERS



**USRD F42C TRANSDUCER**  
 ALL DIMENSIONS IN CENTIMETERS



**USRD F42D TRANSDUCER**  
 ALL DIMENSIONS IN CENTIMETERS

Fig. F42-8 - Dimensions (in cm) of Type F42 transducers.