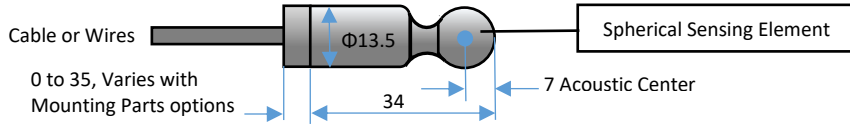


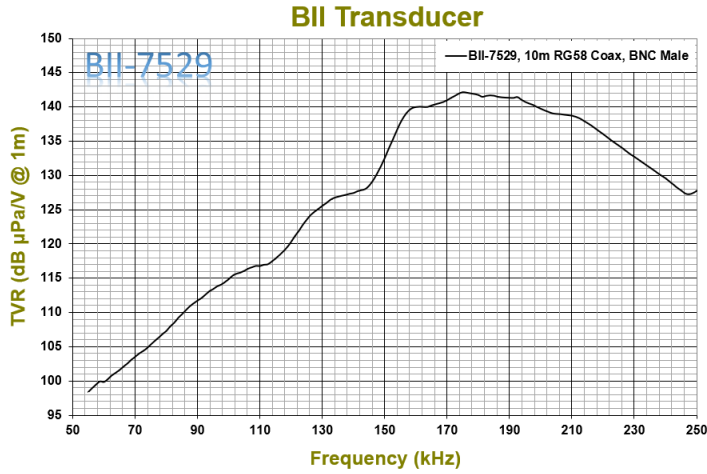
Transducer Specification

Part Number:	BII-7529			
Signal Type:	Pulsed SINE, Chirp, PSK, FSK, etc.; Pulsed Square Waveform			
Resonant Frequency f_s:	170 kHz \pm 5%			
Quality Factor:	3.32			
TVR:	143.0 dB μ Pa/V@1m, Transmitting Voltage Response.			
FFVS:	Free-field Voltage Sensitivity: -209.7 dB V/ μ Pa @ f_s and -210.1 dB V/ μ Pa @ $f \leq 50$ kHz.			
-3dB Beam Width:	Refer to Directivity Response .			
Beam Pattern:	Omnidirectional			
Side Lobe Level:	No side lobes			
Free Capacitance:	3.0 nF \pm 10% @ 1 kHz, 10 m cable.			
Dissipation:	0.004 @ 1 kHz, 10 m cable.			
Admittance:	Gmax = 3.2 mS; B = 3.6 mS at f_s			
Driving Voltage	300 V _{rms} , Maximum.			
MIPP at f_s:	100 Watts, Maximum Input Pulse Power.			
MPW at MIPP and f_s:	6 Seconds, Maximum Pulse Width.			
MCIP at f_s:	17 Watts, Maximum Continuous Input Power.			
Operating Depth:	Maximum 800 m and Limited by the cable length if the cable has wire leads or a non-waterproof connector.			
Mounting Options:	<ol style="list-style-type: none"> 1. Default: Free Hanging (FH) 2. Thru-hole Mounting with Single O-ring (THSO) 3. Thru-hole Mounting with Double O-ring (THDO) 4. Bolt Fastening Mounting (Stainless Steel): (BFMSS) 5. End-face Mounting: (EFM) 6. Flange Mounting: (FGM) Please refer to online document AcousticSystem.pdf for a complete list of Mounting Options and more details.			
Cable:	<ol style="list-style-type: none"> 1. Two Conductor Shielded Cable (SC) 2. 50 Ω RG58 Coax (RG58) 			
Cable Length:	<ol style="list-style-type: none"> 1. Default: 1 m 2. Custom 			
Connector:	<ol style="list-style-type: none"> 1. Default: Wire Leads (WL) 2. 50 Ω BNC Male (BNC) 3. Underwater Mateable Connector (UMC) 4. MIL-5015 Style (5015) 5. Custom (custom) Note: Underwater Mateable Connector is for underwater uses. Other connectors and wire leads are for dry uses and are non-waterproof.			
Physical Size:	Φ 13.5 x 34 mm with Free Hanging. Refer to Mechanical Drawing.			
Weight in Air:	406 grams with 10 m cable and Free Hanging.			
Operation Temperature:	<ol style="list-style-type: none"> 1. Default: -10°C to +60°C or 14°F to 140°F. 2. Bespoke High Temperature Transducer: -10°C to 120°C, or 14°F to 248°F. Append HT to part number. 			
Storage Temperature:	-20°C to +60°C or -4°F to 140°F.			
How to determine pulse width, duty cycle and off-time with input pulse power (peak power):				
<ol style="list-style-type: none"> 1. Determine the input pulse power (IPP, peak power) with sound intensity required by the project. IPP MUST be less than MIPP. 2. Pulse Width $\leq (MIPP * MPW * (120^\circ c - T) / 103^\circ c) / IPP$. T: Water Temperature in °c. 3. Duty Cycle $D \leq MCIP * (120^\circ c - T) / 103^\circ c / IPP$. 4. Off-time $\geq PW * (1 - D) / D$. 				
WARNING: DANGER — HIGH VOLTAGE on wires. Wires shall be insulated for safety. DO NOT TOUCH THE WIRES BEFORE THE DRIVING SIGNAL IS SHUT DOWN. Cable shield must be grounded firmly for safety.				
for 50 Ω BNC Male connector, it is buyer's sole responsibility to make sure that the (female) BNC shield of the signal source is firmly grounded for operating safety before hooking up transducer/hydrophone to the signal source. Coax with BNC is not intended for hand-held use at voltages above 30Vac/60Vdc.				
Transducer Wiring:	Two Conductor Shielded Cable	Coax/BNC	Underwater Connector	MIL-5015 Connector
Signal	White or Red	Center Contact	Contact 2	Contact C
Signal Common	Black	Shield	Contact 1	Contact B
Shielding and Grounding	Shield	Shield	Contact 3	Contact A

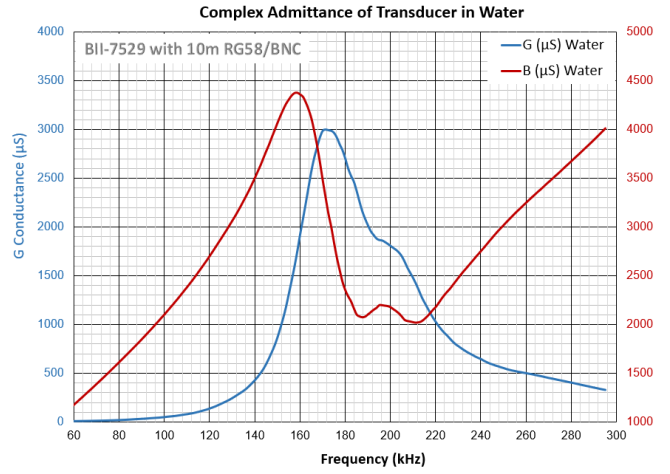
Physical Size (unit: mm):



Transmitting Voltage Response (TVR):



Admittance



Directivity Response:

