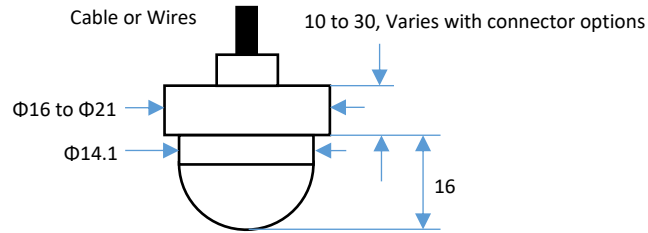


Transducer Specification

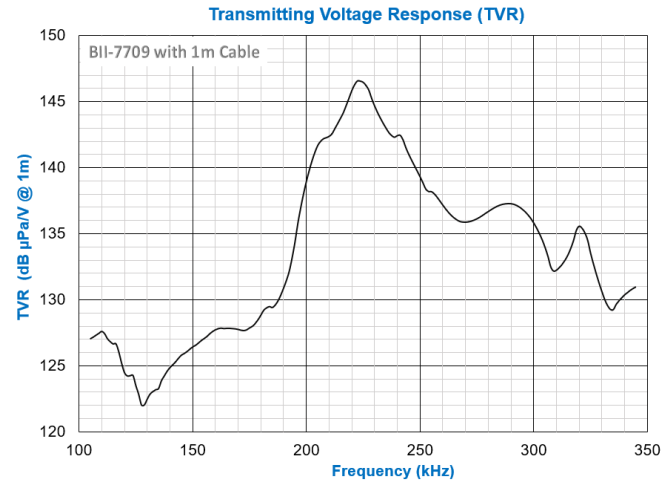
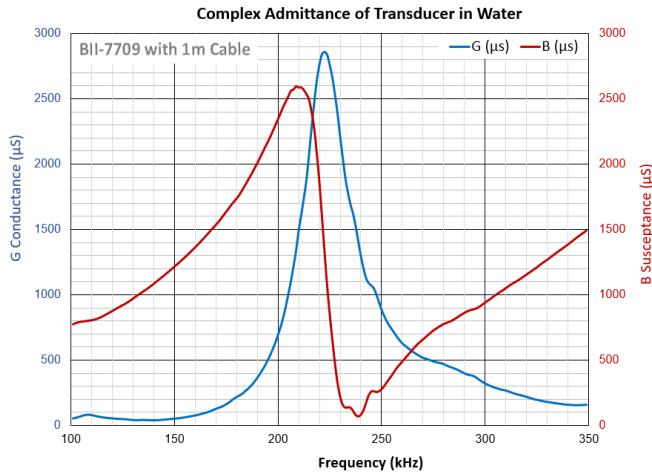
Part Number:	BII-7709			
Signal Type:	Spike (Negative or Positive), pulsed SINE/Square/Chirp, FSK, PSK, Frequency Hopping DSSS, CDMA/DSSS, etc.			
Resonant Frequency fs:	230 kHz \pm 5%			
Quality Factor:	7			
TVR:	Refer to TVR Graph , Transmitting Voltage Response.			
FFVS:	-208.0 dB V/ μ Pa @ f \leq 100kHz; -210.8 dB V/ μ Pa @ fs, Free-field Voltage Sensitivity.			
-3dB Beam Width:	Horizontal x Vertical = Omnidirectional x 60°			
Beam Pattern:	Hemispherical			
Side Lobe Level:	No side lobes			
Free Capacitance:	1.0 nF \pm 10% @ 1kHz, 1m cable.			
Dissipation:	0.005 @ 1kHz, 1m cable.			
Admittance or Impedance:	Refer to Admittance Graph .			
MIPP:	50 Watts, Maximum Input Pulse Power.			
MPW @ MIPP:	6 Seconds, Maximum Pulse Width.			
MCIP:	8 Watts, Maximum Continuous Input Power.			
Operating Depth:	Maximum, 500 m and Limited by the cable length if the cable has wire leads or a non-waterproof connector.			
Mounting Options:	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:	1. Two Conductor Shielded Cable (SC) 2. 50 Ω RG58 Coax (RG58) 3. Coax RG174/U (RG174) 4. Coax RG178/U (RG178)			
Cable Length:	1. Default: 1m 2. Custom			
Connector:	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:	Refer to Mechanical Drawing.			
Weight in Air:	100 grams, 1m cable.			
Operation Temperature:	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.			
Wiring:	Two Conductor Shielded Cable	Coax/BNC	Underwater Connector	MIL-5015 Connector
Transmitting Signal	White or Red	Center Contact	Contact 2	Contact C
Transmitting Common	Black	Shield	Contact 1	Contact B
Shielding and System Grounding	Shield	Shield	Contact 3	Contact A
How to determine pulse width, duty cycle and off-time with input pulse power (peak power): 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°C-T)/103°C)/IPP. T: Water Temperature in °C. 3. Duty Cycle D \leq MCIP*(120°C-T)/103°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 50Ω 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.				

Physical Size (unit: mm):



Transmitting Voltage Response (TVR)

Admittance



Directivity response

