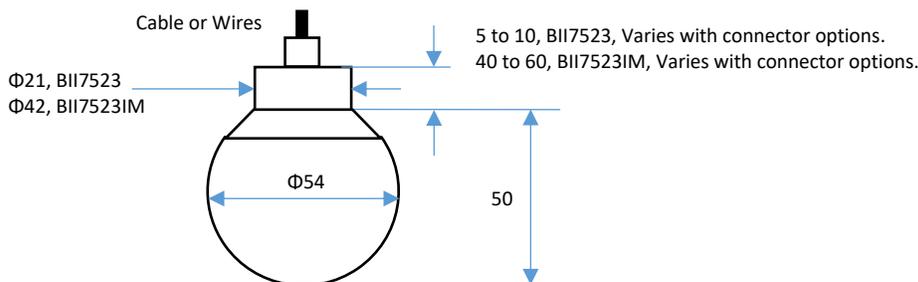


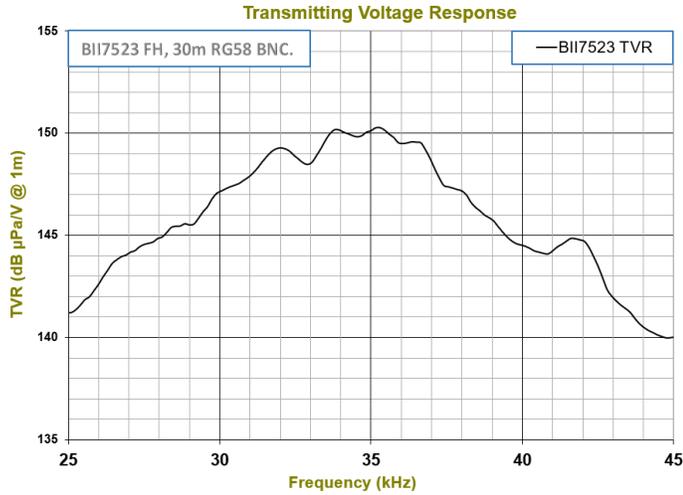
Transducer Specification

Part Number:	BII7523	BII7523IM		
Signal Type:	Pulsed SINE, Chirp, PSK, FSK, etc.; Pulsed Square Waveform			
Resonant Frequency f_s :	35 kHz \pm 5%			
Quality Factor:	2.5	2.5		
TVR:	Refer to TVR Graph, Transmitting Voltage Response.			
FFVS:	-193.0 at $f \leq 10$ kHz; -197.0 dB V/ μ Pa @ f_s .	-198.0 at $f \leq 10$ kHz; -202.0 dB V/ μ Pa @ f_s		
-3dB Beam Width:	Refer to Directivity Response .			
Beam Pattern:	Refer to Beam Pattern Graph			
Side Lobe Level:	No side lobes			
Free Capacitance:	39.0 nF \pm 10% @ 1kHz, 1m cable.	N/A		
Dissipation:	0.004 @ 1kHz, 1m cable.	N/A		
Admittance or Impedance:	Refer to G-B Graph .	50 Ω at f_s .		
Driving Voltage	400 V _{rms} , Maximum.			
MIPP at f_s :	590 Watts, Maximum Input Pulse Power.			
MPW at MIPP and f_s :	35 Seconds, Maximum Pulse Width.			
MCIP at f_s :	230 Watts, Maximum Continuous Input Power.			
Operating Depth:	Maximum, 400 m.	Maximum, 300 m.		
	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) 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).			
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:	310 grams, 1m cable.	590 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.			
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 $\leq (MIPP * MPW * (120^\circ\text{C}-T)/103^\circ\text{C})/IPP$; T: Water Temperature in °C. 3. Duty Cycle $D \leq MCIP * (120^\circ\text{C}-T)/103^\circ\text{C}/IPP$; 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.				
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 System Grounding	Shield	Shield	Contact 3	Contact A

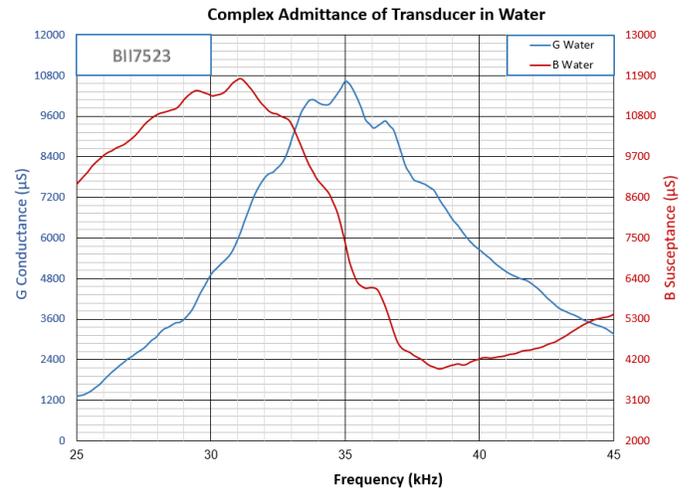
Physical Size (unit: mm):



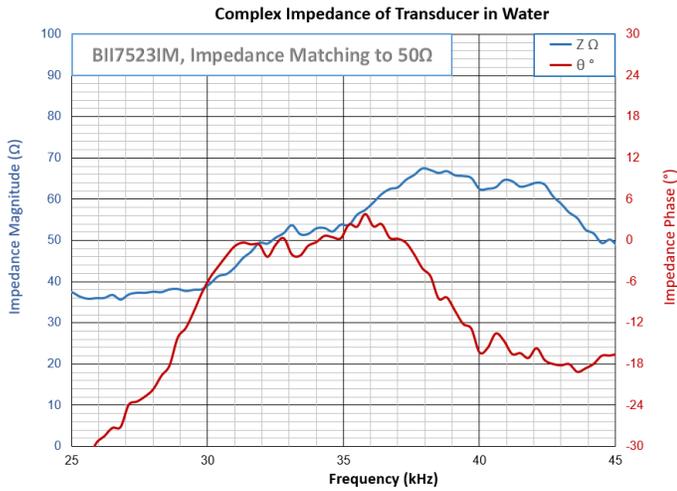
TVR (Transmitting Voltage Response):



Admittance



BII7523IM with Impedance Matching for 50Ω Power Amplifiers:



Directivity Response:

