

Ultrasonic piezoelectric transducer S0807

DATA SHEET

Intended use

The S0807 transducer is designed to perform a nondestructive ultrasonic testing of objects made of cast-in concrete and as a part of ultrasonic monitoring systems used to inspect solid concrete structures. The transducer is embedded into the concrete structures at the stage of their construction.

Specifications:

Nominal operation frequency	0.07 ± 0.01 MHz
Piezoceramic barrel diameter	18.5 mm
Electric capacity of the piezoelectric cell	17,000±1,000 pF.
Operating pulse driving voltage	±200 V
Maximal pulse driving voltage	±400 V
Cable length	up to 10 meters
Operating temperature range	from -30° to +130° C
Overall dimensions (diameter/height)	20 x72 mm.
Weight (with the cable)	124 g.
The warranty period:	6 months from the date of shipping



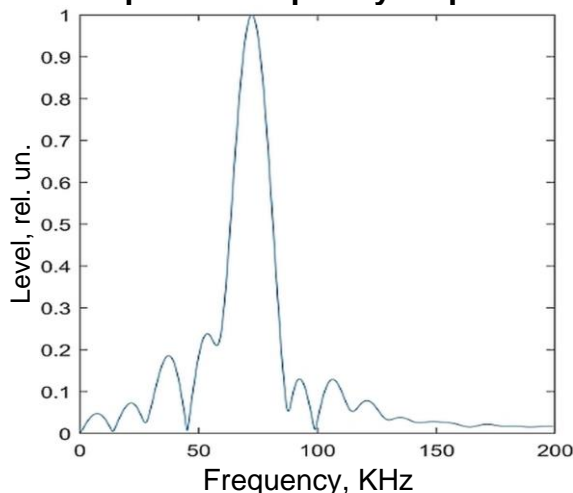
Measurement conditions and equipment used

Temperature 25°C, Immersion technique

Generator transmitting signal: square pulse with 200 V amplitude, duration 10 μs

Receiving path parameters: integrating amplifier bandwidth 0.001 – 40 MHz, noise 0.7 μV / √Hz, input resistance 4 kΩ. Two transducers – the tested and the reference – are immersed in water and located 150 to each other.

Amplitude frequency response



Pulse duration:	164.4 μs	Operating AFR frequency f_c :	68.9 kHz
Maximum AFR frequency f_p :	69.8 kHz	Nominal double conversion ratio S_{rel} :	-60 dB
Lower AFR frequency f_l :	49.3 kHz	Absolute transmission band P :	18.4 kHz
Upper AFR frequency f_u :	88.3 kHz	Relative transmission band B_w :	28.3 %