



Model TR-2465/150 Narrow Beam Ultrasonic Transducer

The MassaSonic™ Model TR-2465 is a small ultrasonic air transducer that operates in the 150 kHz frequency region. A unique design feature results in the transducers having a narrow directional pattern completely free of all side lobes.

The transducer is typically used in non-contact echo ranging applications where a single TR-2465/150 is used to first transmit a short duration acoustic signal, and it then detects the echo reflected from a target; or two separate transducers are used, one to transmit and one to receive. The axis of maximum system response is along the line perpendicular to the face of the transducer. The electroacoustic response specifications of the transducer are shown on Page 2 of this datasheet.

Transducer responses are the electroacoustic characteristics of the sound pressure field transmitted by a transducer when an electrical signal is connected to it, or the voltages produced by a transducer when it is located within a sound pressure field. System responses are the electroacoustic characteristics of the transducer when it transmits a sound pulse and then receives the reflected echo from a target.

The Transducer Directional Response on Page 2 of this datasheet shows the relative reduction in sound pressure at different angles produced by a TR-2465 when it is transmitting, or the relative reduction in received voltage produced by the transducer as it rotates to different bearing angles relative to the position of an acoustic source of constant sound pressure. The System Directional Response on Page 2 shows the relative reduction in received voltage produced by the echo as the TR-2465 rotates to different bearing angles relative to the reflecting target.

For more information on ultrasonics, visit us at www.massa.com, write to sales@massa.com, or call an Applications Engineer at 781-749-4800.



GENERATIONS AHEAD IN SONAR & ULTRASONIC TECHNOLOGY

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Photograph Showing the
TR-2465/150 Transducer

FEATURES

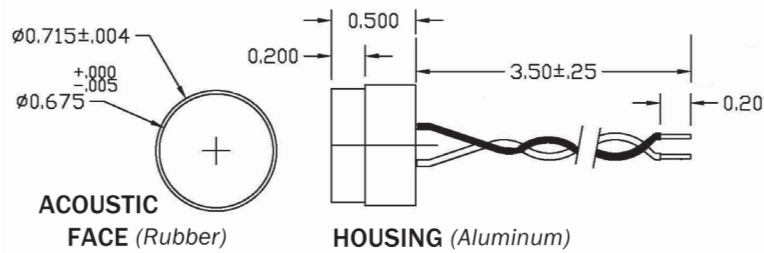
- Low Cost
- High Frequency Operation
- Narrow Beam
- Small Size
- No Side Lobes

APPLICATIONS

- Proximity Detection
- Robotics
- Level Measurement
- Mechanical Positioning
- Roll Diameter Measurement
- Web Loop Monitoring
- High Speed Counting
- Thickness Control
- Short Range Measurement

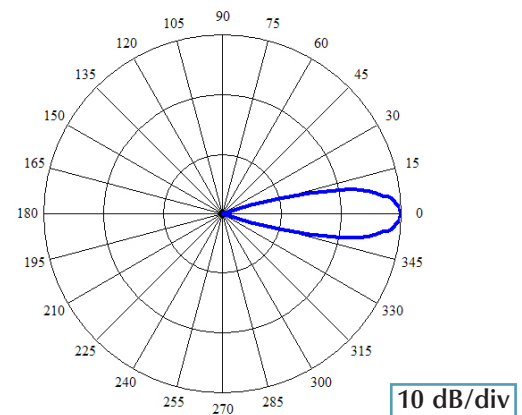
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OUTLINE DIMENSIONS



TR-2465/150

Transducer Directional Response (150 kHz)



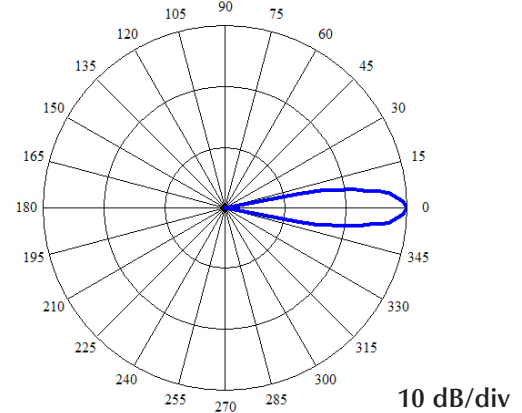
SPECIFICATIONS

(Nominal at Frequency of Peak Response,
22° C, and 50% RH)

Frequency of Peak Response:	150 kHz
Peak System Sensitivity: (Voltage of echo from flat target at 30 cm, 1 V drive pulse.)	-60 dBV
Transducer Total Beam Angle:	-3 dB 12° -6 dB 18°
System Total Beam Angle:	-3 dB 10° -6 dB 12°
Transmitting Sensitivity: (dB re 1 μPa/V at 30 cm)	120 dB
Receiving Sensitivity: (dB re 1 V/μPa)	-174 dB
Impedance Magnitude:	1,000 Ω
Operating Temperature:	-40° to 85°C
Relative Humidity:	0% to 90% (non-condensing)
Wires:	black and red (red+), each #24 AWG tinned copper, PVC Jacket 0.04" diameter min.

All Specifications subject to change without notice.

System Directional Response (150 kHz)



ORDERING INFORMATION:

P/N 200733-501 ~ TR-2465/150

MASSA

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