



# NEXT GENERATION SPEAKER TECHNOLOGY

## ENHANCED TECHNOLOGY

COMBINED BENEFITS OF ALTERNATIVE FORM FACTORS

## CRYSTAL CLEAR SOUND

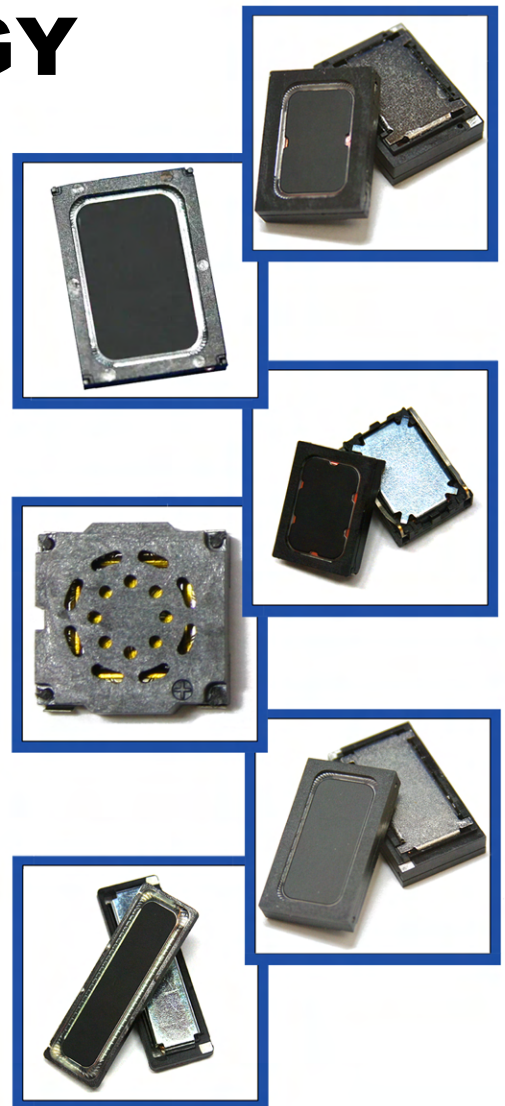
FLATTER RESPONSE & LOWER DISTORTION

## GREATER POWER HANDLING

INCREASED SOUND PRESSURE

## LOW PROFILE

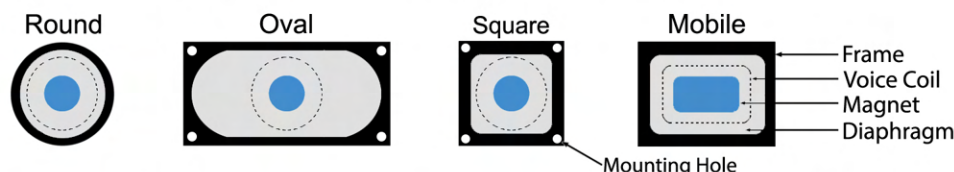
THINNER MODELS / SMALLER FOOTPRINTS



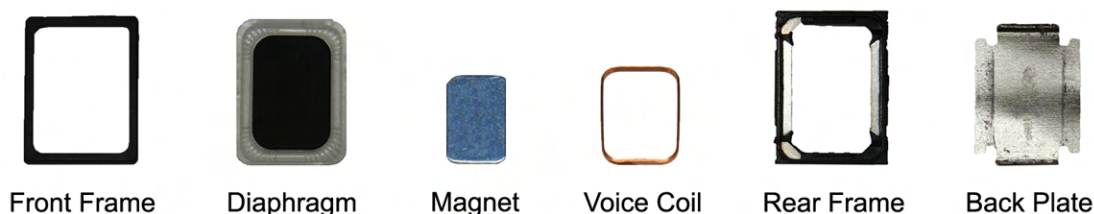
# MOBILE ARCHITECTURE

By incorporating next generation mobile architecture, our mobile speaker line combines the benefits of established speaker designs with cutting-edge manufacturing technologies into one practical solution perfect for hi-fidelity voice and music reproduction where space is limited.

Every speaker contains four main components, the frame, magnet, voice coil and diaphragm. The **voice coil** passes alternating current and interacts with the **magnet's** magnetic field to create physical motion. This movement in turn causes the **diaphragm**, which is glued to the voice coil, to vibrate and generate acoustic waveforms by pushing and pulling air. All these components are housed within a sturdy, compact **frame**.



With the components so closely coupled, how they physically interact is critically important and dictates the speaker's performance. Various styles of speakers, including round, square, and oval speakers, incorporate different architectures and reinforce different acoustic profiles. **Round** and **Square** speakers have a round frame, magnet, voice coil and diaphragm with square speakers including 4 mounting holes. **Oval** speakers have a rectangular frame, round magnet and voice coil, an oval diaphragm, and mounting holes. When the speaker's building blocks are symmetric, such as with round and square speakers, they interact in a straightforward fashion allowing for low distortion and a flat response. Rectangular speakers, however, lack the symmetry but have larger air volumes behind the diaphragm to move more physical air and create higher loudness with lower resonant frequencies at the expense of a flatter response or lower distortion.



The Challenge Electronics **Mobile** speaker technology was developed to be the balance between the various design types. Mobile speakers have an oval magnet, voice coil and diaphragm, the symmetry of which allows for a flat response and low distortion, inside a rectangular frame which increases the air volume behind the diaphragm for a louder response and lower resonant frequency.

NO.	PART NUMBER	DIMENSIONS (MM)	F0 (HZ)	SPL AT RATED POWER (DB)	BENEFITS*
1.	CS15-01R95-03-2X	15 x 11 x 3.5	950	99	IP67
2.	CS17-01P100-03-1X	17 x 12 x 3.3	1000	99	IP67
3.	CS18-01P95-04-1X	18 x 13 x 4.5	950	100	IP67
4.	CS18-01S100-05-1	18 x 18 x 5.1	1000	97	SMT
5.	CS18-02P110-03-1X	18 x 16 x 3.7	1100	104	IP67
6.	CS23-01P100-03-1X	23 x 11 x 3.7	1000	103	IP67
7.	CS25-02P95-05-1X	25 x 14 x 5.0	950	103	IP67
8.	CS34-01P70-03-1	34 x 11 x 3.8	700	97	IP67
9.	CS40-01P50-04-1X	40 x 13 x 4.0	500	98	IP67

\*For full details, see Challenge Electronics product specification.

  
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AVAILABLE ON  
