



DELTA
Electronics Mfg. Corp.



Fidelity+
High Performance
IEM Interconnects



From Concept to Production, Delta's
In-Ear Monitor (IEM) Interconnects Rock.

High Performance IEM Interconnects

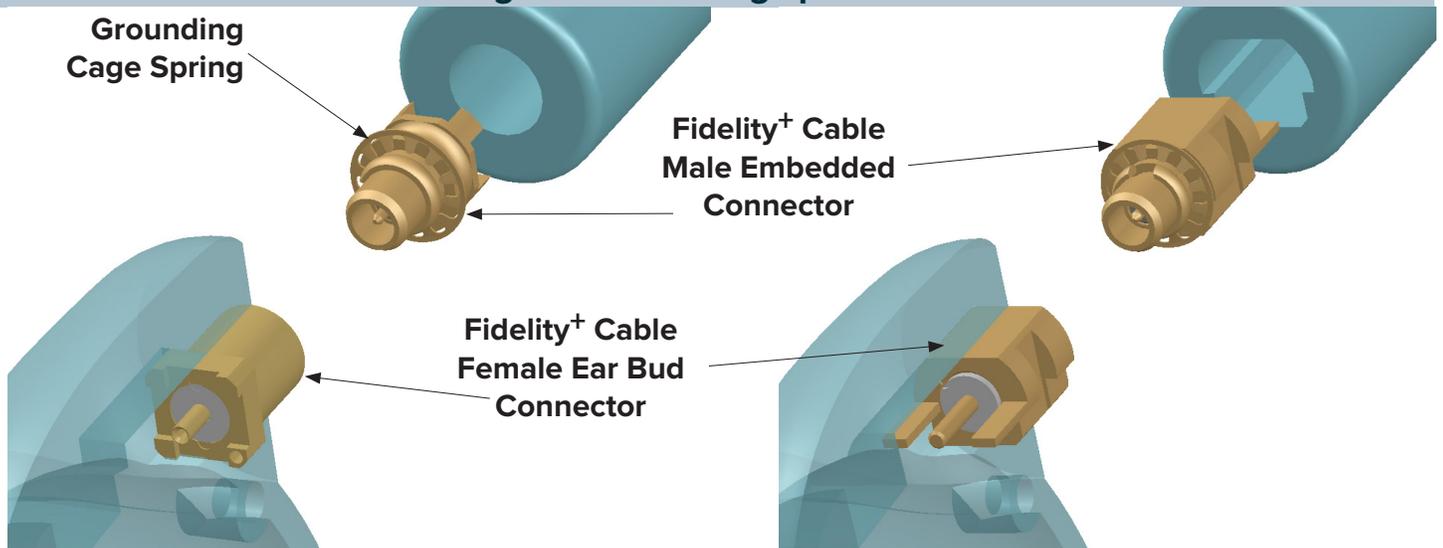


“The MMCX interface has been accepted as the interface for a variety of IEM interconnects. Our Fidelity⁺ series of products has kept the MMCX interface, but addressed the concerns of the experienced performer and listener. Gone are the intermittent issues and poor overall connections. Delta’s Fidelity⁺ is the new industry benchmark.”

Fidelity⁺ (Flex with Integrity)

Fidelity⁺ provides a connection system with its focus on the consumer experience. Our IEM product design innovations have been created to support the rigors of the user and the environment. “Flex with Integrity” into tomorrow. With Delta’s performance enhanced custom IEM designs, innovators will enjoy reliable engineered connection solutions that contribute to signal clarity, with repeatability.

Diagram or drawing specification



Mechanical Specifications

- Durability:** 500 mates without mechanical degradation / electrical intermittency.
- Rotational Durability:** 5000 rotations - 360° turns without mechanical degradation / electrical intermittency
- Contact Captivation:** – Axial – 4 lbs min. / Radial 1.5 in-oz min.
- Insertion Force:** 4 – 6 lbs typical / 3 lbs min - 8 lbs max.
- Withdrawal Force:** 4 – 6 lbs typical / 3 lbs min - 8 lbs max.

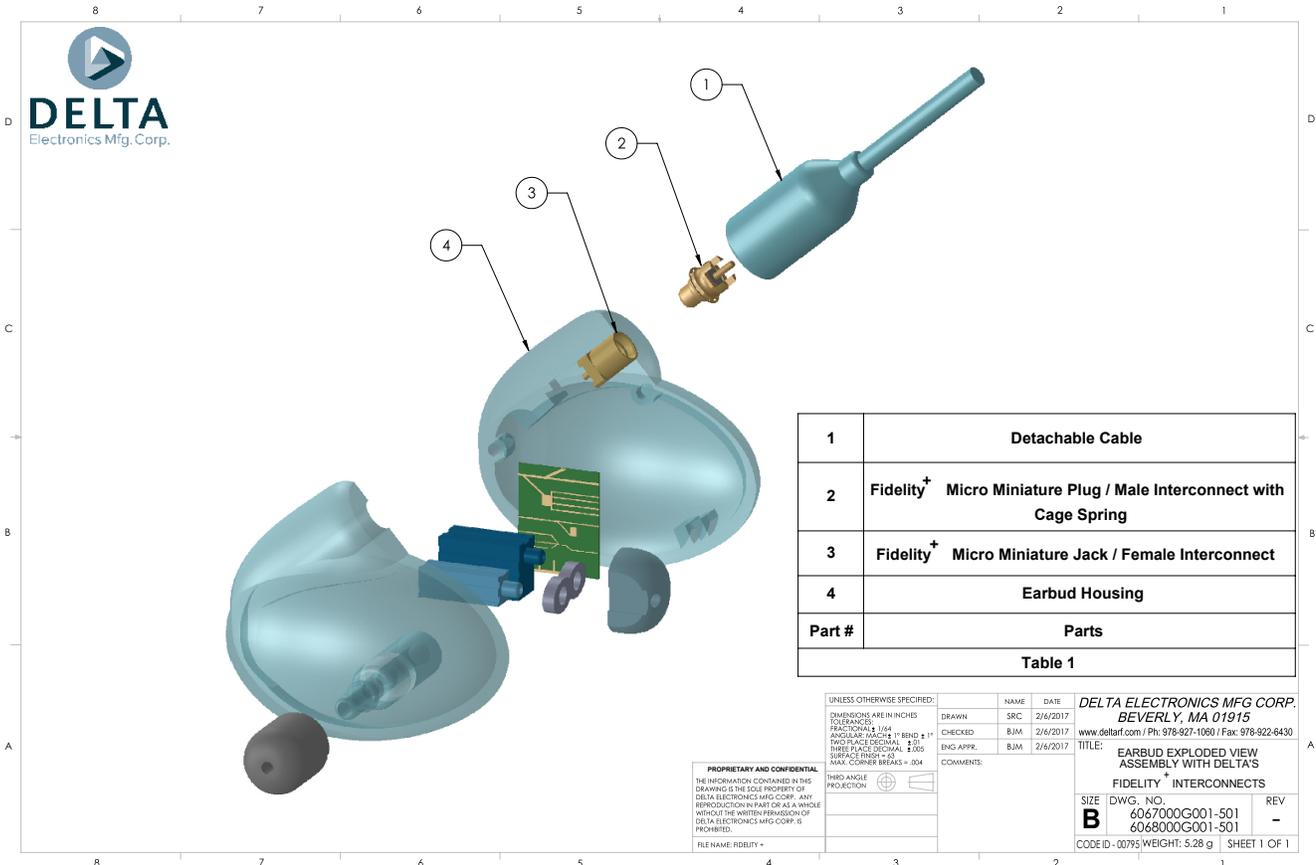
Environmental Specifications

- Salt Fog:** per MIL-STD-810G, Method 509.5 Procedure I - No evidence of corrosion / intermittency.
- Temperature Range:** -45 to +165°C
- Moisture Resistance:** Per MIL-STD-202, Method 106

Fidelity+ is Delta's reliable, industry proven Interconnect Solution optimized for IEM (In-Ear Monitor Applications)

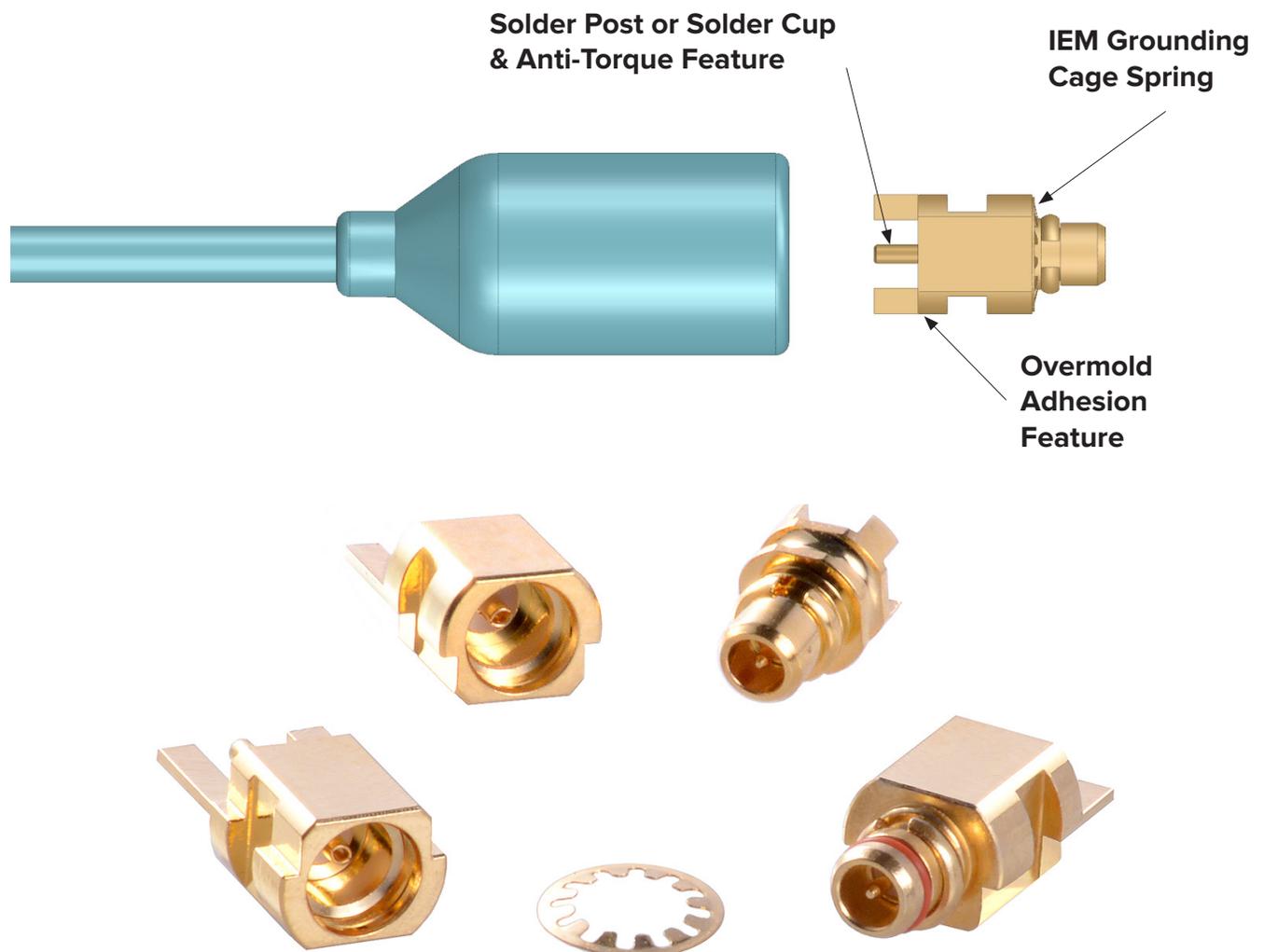
Fidelity+ - Proven Market Leader

- Over 8 million connections in use today - count on Delta's design and manufacturing experience to provide the most reliable IEM interconnect solution.
- Eliminates industry-wide intermittency issues, by tightly controlling critical interface dimensions and by providing our exclusive IEM grounding feature.
- Provides a 360 degree rotatable connection, preventing wire kinking and increasing durability.
- Available with gold or nickel plated body designs.
- Accommodates cable diameters ranging from .070" to .120".
- Optimal performance using Delta male and female Fidelity+ connectors. Don't just settle for another industry standard MMCX – Choose Fidelity+.

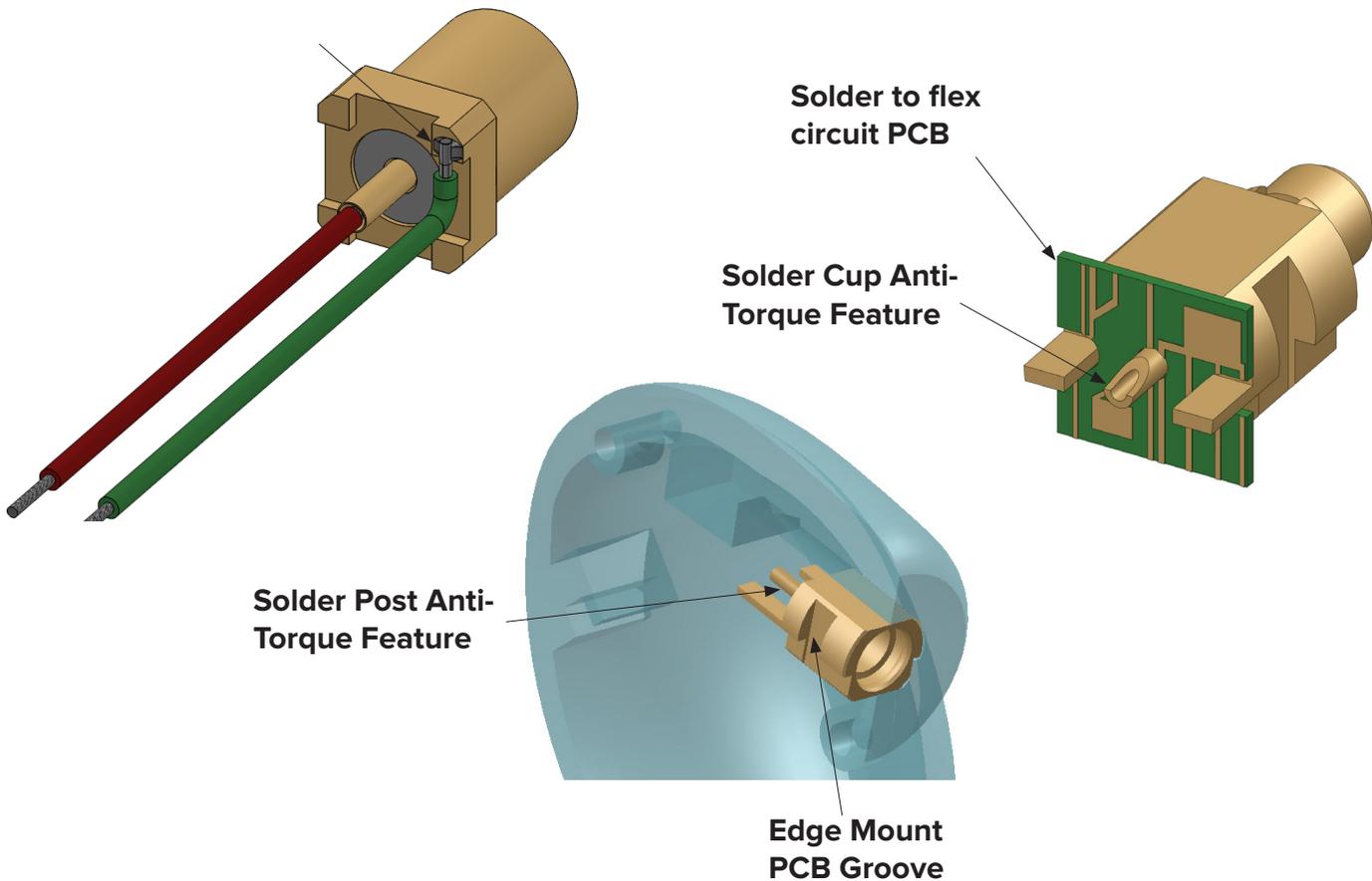


Fidelity⁺ Male (Cable Side) – Design Features

- Secondary IEM Grounding Cage Spring prevents intermittent signal.
- Anti-torque design feature prevents wire twisting of center contact, while allowing for outside body to rotate 360 degrees. Recommended for applications without overmolding, potting, or soldering to PCB.
- Overmold adhesion feature on connector body improves retention of pre-mold and overmold.
- Center contact available with solder post or solder cup to optimize assembly process. Accommodates 36 to 22 AWG wires.
- Low Profile designs with overall lengths less than .220”.

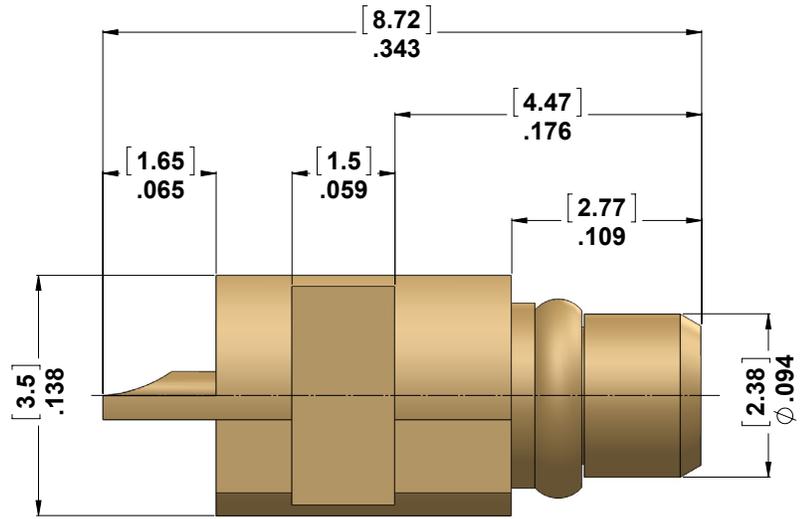
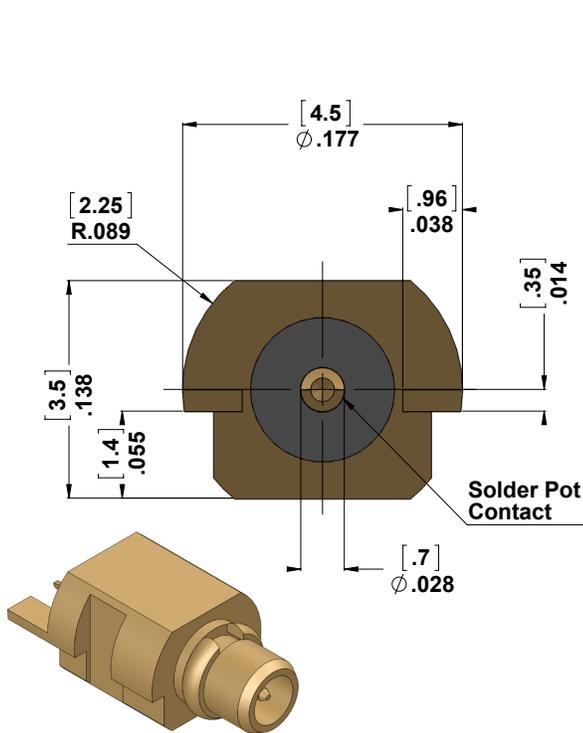


Fidelity⁺ Female (Ear Bud Side) – Design Features

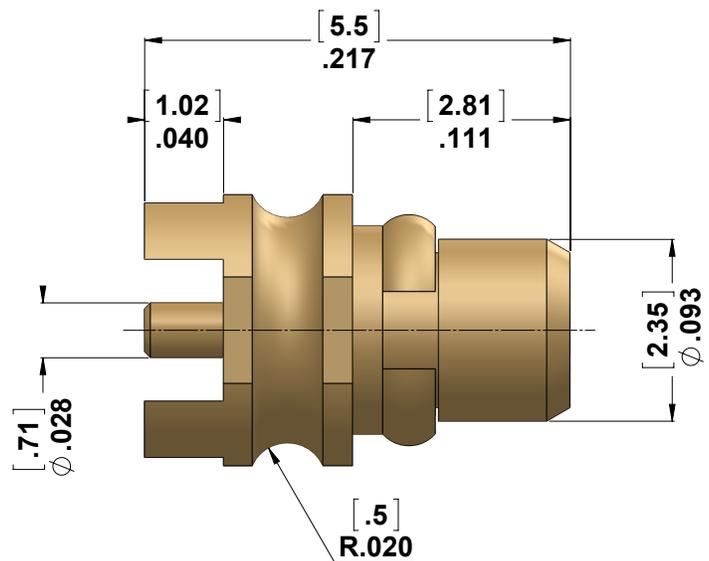
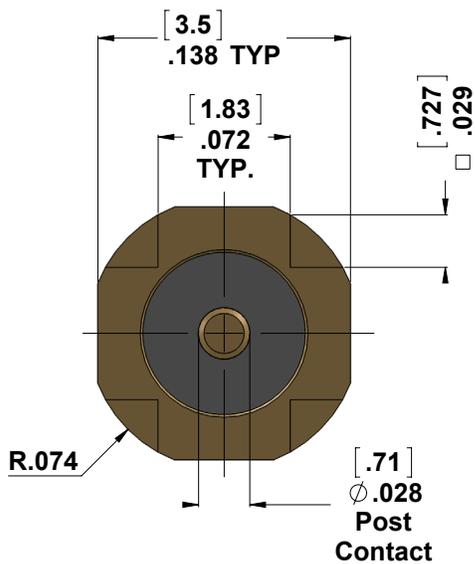


- Edge mount bodies designed to accommodate PCB's with varying thicknesses.
- Adhesion grooves on connector body improve retention of pre-mold and overmold.
- Center contact available with solder post or solder cup to optimize assembly process. Accommodates 36 to 22 AWG wires.
- Suitable for soldering to flex-circuit, PCB or wire.
- Anti-torque design feature prevents wire twisting of center contact while allowing for outside body to rotate 360 degrees. Recommended for applications without overmolding, potting, or soldering to PCB.

Fidelity+ Plug Interconnects

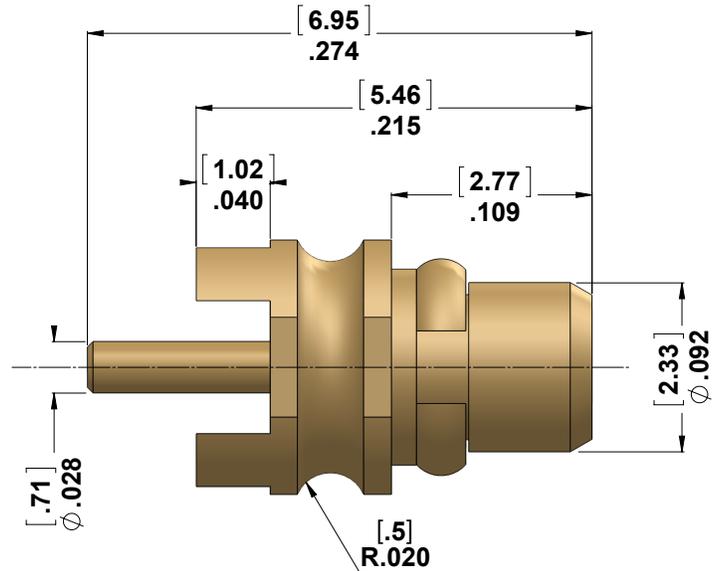
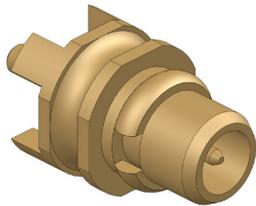
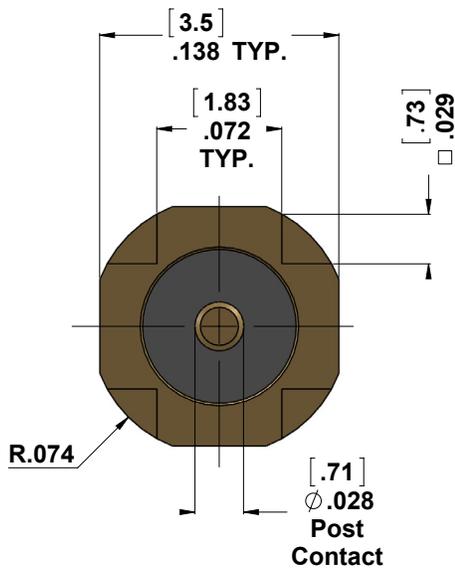


6068000G001-500
Fidelity+ Plug
(Gold Plating)

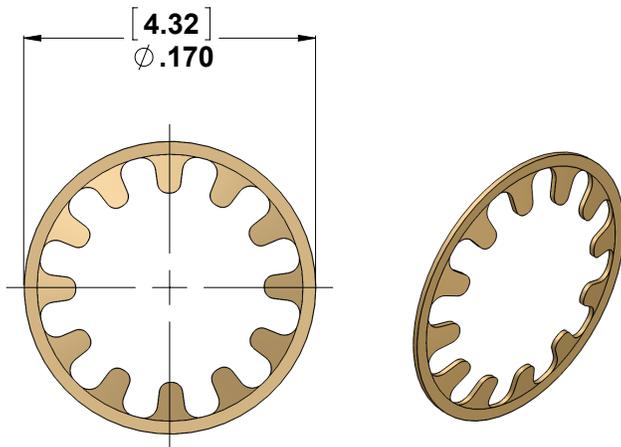


6068000G001-501
Fidelity+ Plug
Low Profile Configuration
(Gold Plating)

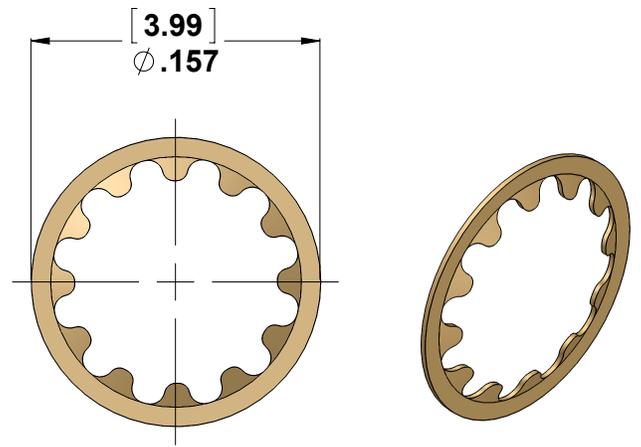
Fidelity+ Plug Interconnects



6068000G001-502
Fidelity+ Plug
Low Profile Configuration
(Gold Plating)

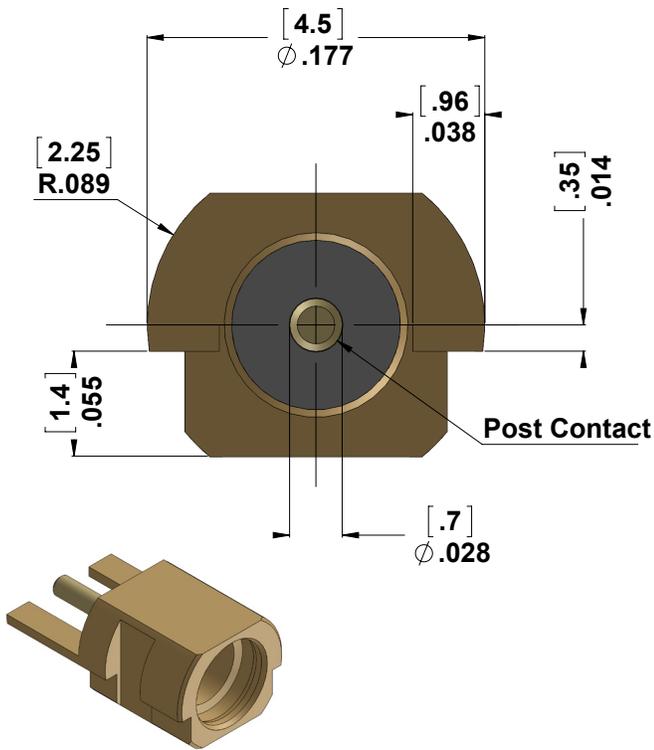


50-10019-01-AU
Grounding Cage Spring
Used on Fidelity+ Plugs/Males

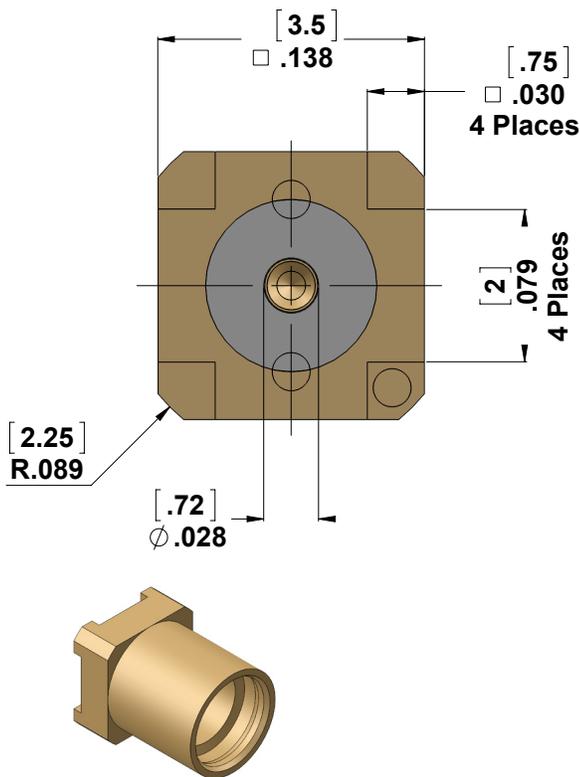


50-10020-01-AU
Grounding Cage Spring
Used on Fidelity+ Plugs/Males

Fidelity+ Jack Interconnects

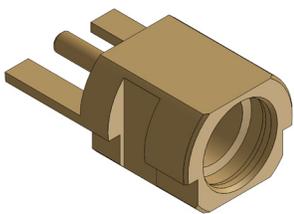
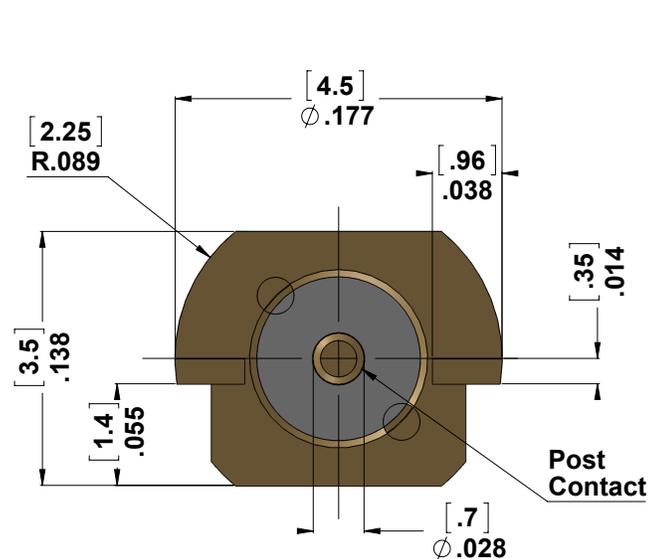


6067000G001-500
Fidelity+ Jack
(Gold Plating)

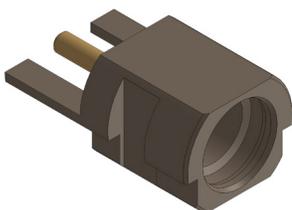
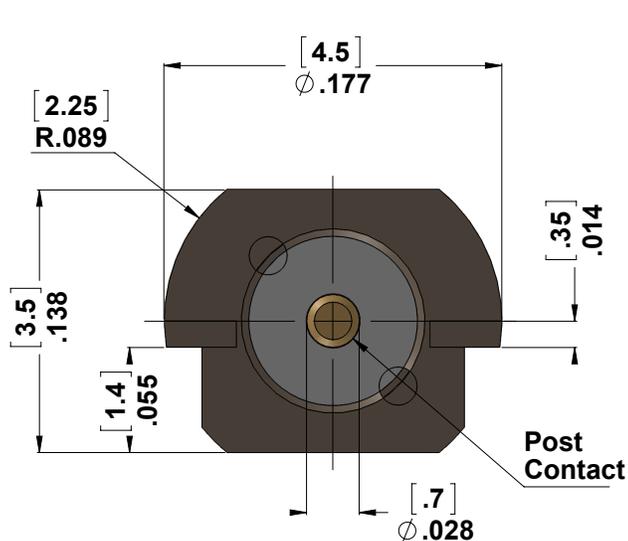


6067000G001-501
Fidelity+ Jack
(Gold Plating)

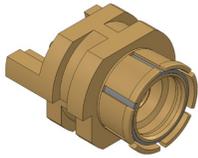
Fidelity+ Jack Interconnects



6067000G001-502
Fidelity+ Jack
(Gold Plating)



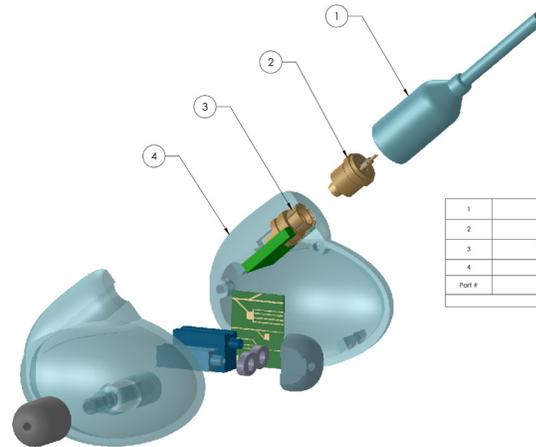
6067000N001-503
Fidelity+ Jack
(Nickel Plating)



Fidelity+ Quadrax Series

“Built on the technology of the Fidelity+ interface, the Fidelity+ Quadrax interface has been specifically developed for IEM applications that require multiple conductive lines to the IEM. In today’s ever changing IEM market, more elements are being added to the IEM than the traditional drivers.

Microphones are now being integrated into IEM’s that allow users the ability to switch to ambient sounds. The Fidelity+ Quadrax connector was developed to provide an interconnect that will allow for a seamless transition from the IEM cable to the IEM. Previously, 4-pin connector interfaces were utilized, but these have numerous disadvantages. Package size of the 4-pin connector interfaces made the IEM bulky, and limited how the IEM could be fitted into an ear. The 4-pin also has no rotational ability, which is key for IEM interconnects to prevent wire kinking when installed. Fidelity+ Quadrax mechanical properties are identical to the Fidelity+ interface. It provides the 360° rotational feature and a high retention force that is incorporated into today’s Fidelity+. Its low outer profile package size (< 5.75mm) is ideal for any IEM mold and allows IEM designers the flexibility to design-in the connector interface rather than have to design around it. Both the male and female Fidelity+ Quadrax interconnects come in standard configurations that allow termination to either a PCB or wires. These terminations, as well as the outer profile, can easily be modified to fit any IEM application. Delta’s Fidelity+ Quadrax is the next generation of IEM interconnects.”



1	Detachable Cable
2	Fidelity+ Quadrax Plug / Male Interconnect
3	Fidelity+ Quadrax Jack / Female Interconnect
4	Earbud Housing
Part #	Part #
Table 1	

Mechanical Specifications

Durability: 500 mates without mechanical degradation / electrical intermittency.

Rotational Durability: 5000 rotations - 360° turns without mechanical degradation / electrical intermittency

Contact Captivation: – Axial – 4 lbs min. / Radial 1.5 in-oz min.

Insertion Force: 4 – 6 lbs typical / 3 lbs min - 8 lbs max.

Withdrawal Force: 4 – 6 lbs typical / 3 lbs min - 8 lbs max.

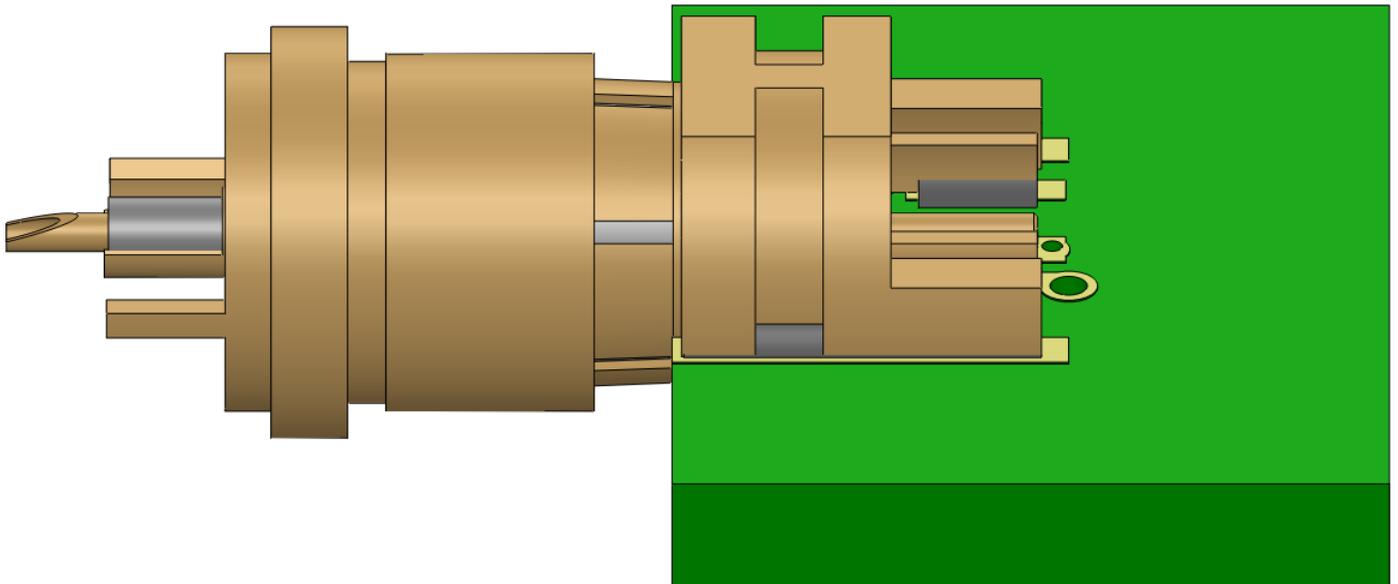
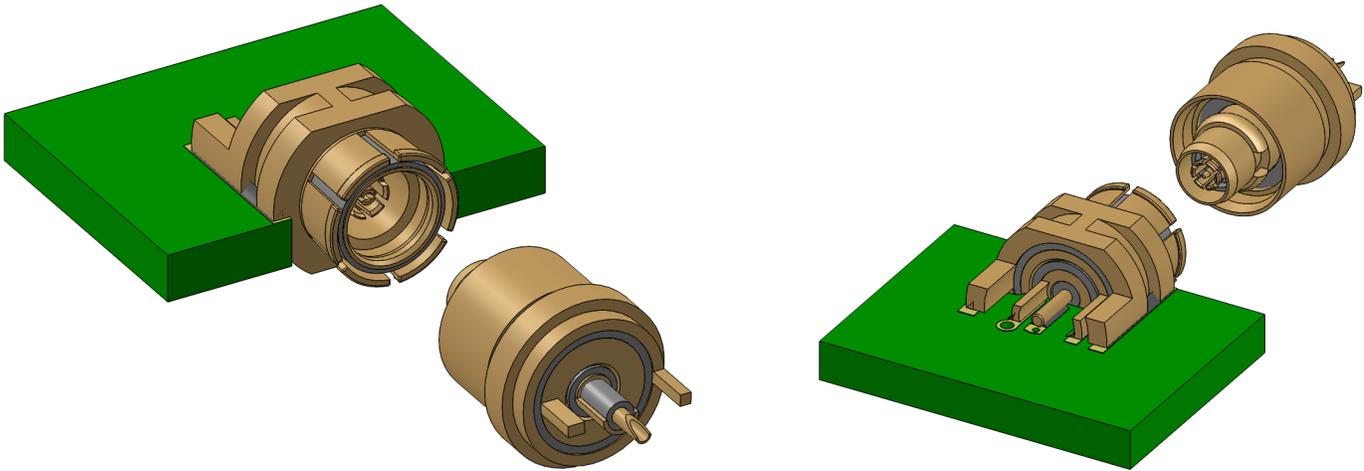
Environmental Specifications

Salt Fog: per MIL-STD-810G, Method 509.5 Procedure I - No evidence of corrosion / intermittency.

Temperature Range: -45 to +165°C

Moisture Resistance: Per MIL-STD-202, Method 106

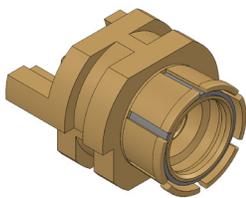
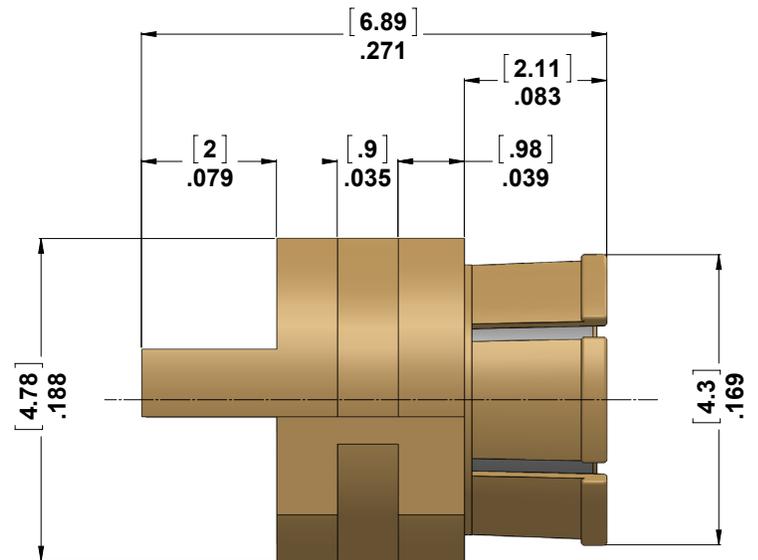
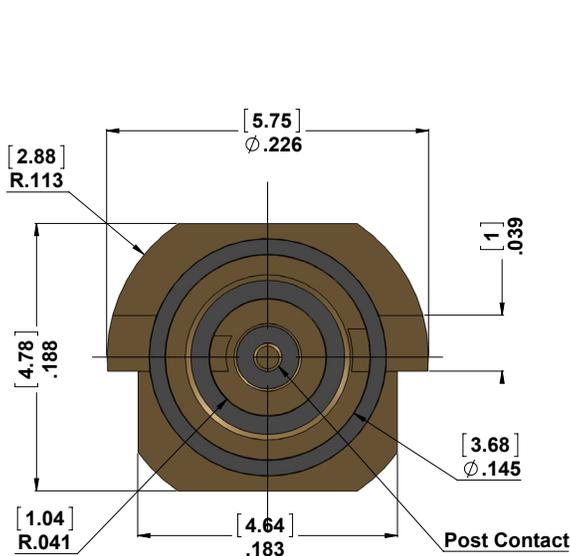
Fidelity+ Quadrax Mating



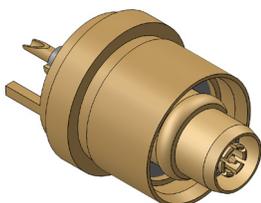
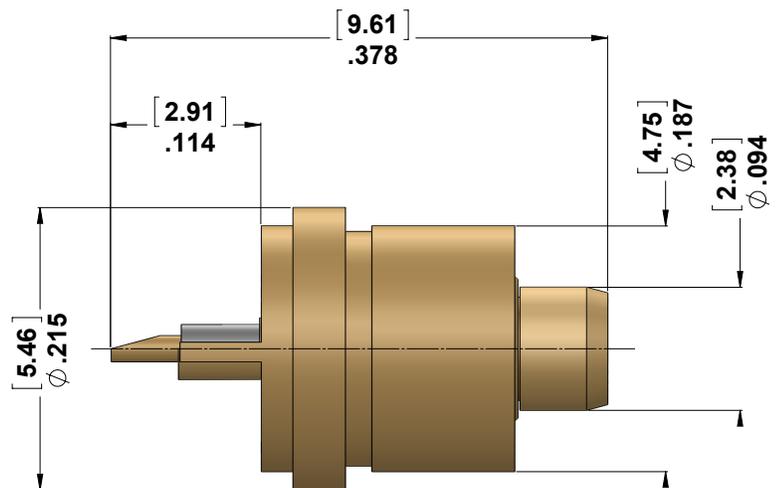
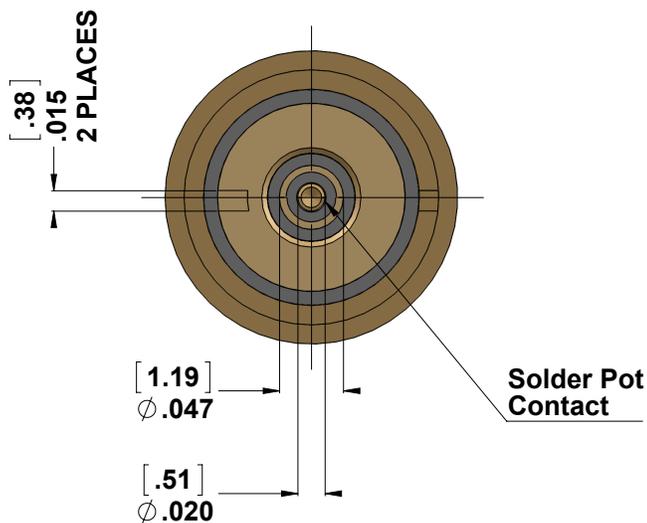
Quadrax Mating



Fidelity+ Quadrax Edge Mount



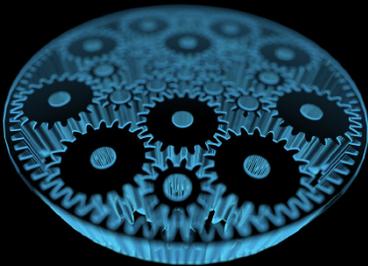
6067000G001-504
Fidelity+ Jack
Quadrax Body Style (Gold Plating)



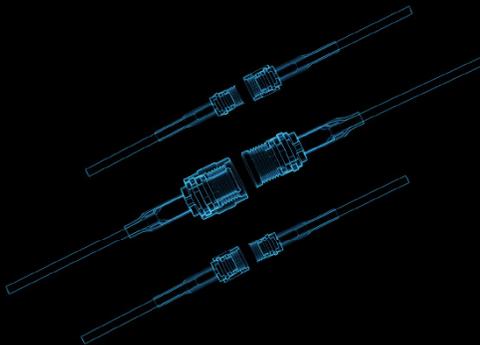
6068000G001-505
Fidelity+ Plug
Quadrax Body Style (Gold Plating)



CREATE



COLLABORATE



CONNECT



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