

SMP-MAX/SMP-MAX Evolution (EVO) 50-Ohm Board-to-Board and Board-to-Filter RF Connectors >

Lowering the risk of assembly error and simplifying design requirements, SMP-MAX and SMP-MAX EVO 50-Ohm Board-to-Board and Board-to-Filter RF Connectors use patented technology to increase mechanical tolerances

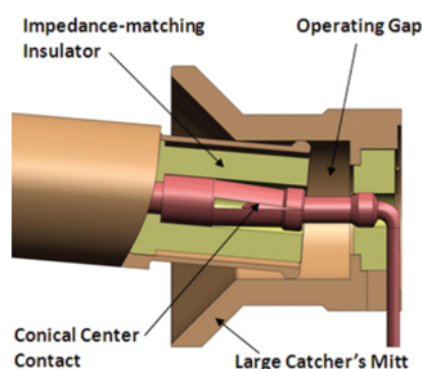
FEATURES AND ADVANTAGES: SMP-MAX

Impedance-matching insulator optimized in case of operating gaps if the adapter is not fully engaged in the receptacle

Ensures signal integrity even with gaps up to 2.00mm (SMP-MAX) and 2.40mm (SMP-MAX EVO) with no significant changes to VSWR

Board-mount receptacle with a conical center contact

Prevents additional stress due to misalignment. Increases reliability



Patented technology accommodates significant misalignment variation and increases board-to-board mechanical tolerances

Eliminates the risk of assembly errors during manufacturing. Reduces manufacturing time and costs by simplifying design efforts

Funnel-shape (catcher's mitt) design in PCB receptacle with up to 3 degrees of angular misalignment allowance

Minimizes stubbing of mating pairs. Facilitates blind mating



SMP-MAX 50-Ohm
Board-to-Board Connectors

SMP-MAX/SMP-MAX Evolution (EVO) 50-Ohm Board-to-Board and Board-to-Filter RF Connectors >

FEATURES AND ADVANTAGES

Features	Advantages
Wide operating frequency range of DC to 10 GHz	Meets wireless communications' required range of 800 MHz to 6 GHz
Optional adapter lengths of 6.20 to 67.45mm	Accommodates a wide range of board-to-board distances
Subminiature connector	Provides space savings and is lightweight for smaller applications
Rugged construction @ 4 GHz	Delivers 100-minimum mating life cycle
Power handling SMP-MAX: <ul style="list-style-type: none"> >300W at 2.7 GHz and 25°C >200W at 2.7 GHz and 85°C SMP-MAX EVO: <ul style="list-style-type: none"> 30W @ 125°C average 150W @ 125°C peak 	Provides ideal performance for RF amplifiers
Push-on and snap coupling options	Offers two levels of retention for design flexibility: high-retention snap for sturdy connections and low-retention push on for applications involving swapping out boards
Through-hole and surface-mount options available	Provides flexibility to meet application requirements

SMP-MAX EVOLUTION (EVO AND EVO 5)

Bullet outer contact developed from deep-drawn technology

Eases blind mating. Prevents damage during mating



SMP-Max Plug



SMP-Max EVO Plug

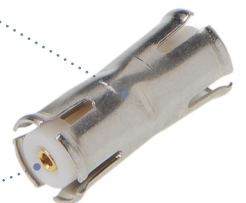


Machined contact via deep-drawn process

Produces larger quantities for faster mass production. Deliver cost efficiencies for bulk orders

Outer contact available with gold or tri-metal plating

Has tri-metal plating provides a cost-saving option by eliminating the need for soldering



Tri-Metal Deep-Drawn Body

The SMP-MAX EVO 5 Bullet has a stamped contact with an injection insulator

An ideal option for cost-effective, high-production programs

Features	Advantages
Frequency up to 10 GHz (Note: dependent upon customer's working frequency)	Meets needs of market trends, such as 5G capabilities and beyond. Provides economical RF connectivity without compromising performance
PCB type body machined brass to black PA	Alternative for less power handling
Less machined brass material used	Reduced metal as well as plating composition

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MARKETS AND APPLICATIONS

Telecommunications/Networking

Base Stations
(Macro RRH/AAU/Antenna/Filter)
Radio Heads
System Modules
Radio Modules
Small Cells
Repeaters
5G Massive MIMO



Radio Heads



5G infrastructure

SPECIFICATIONS

Reference Information

Packaging: Tray, Bulk, Single Bag, Tape and Reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

Mechanical

Center Contact Retention Force: > 7N
Force to Engage/Disengage:
Engagement Force (Typical)
Detent (Snap-On) — 45N
Smooth Bore — 14N
Disengagement Force (Typical)
Detent (Snap-On) — 9 to 45N
Smooth Bore (Slide-On) — 9N
Connector Durability (min.): 100 Cycles

Electrical

Nominal Impedance: 50 Ohms
Voltage (max.): 330V rms
Frequency Rating: DC to 10 GHz
Power (50 Ohm Design):
>300W at 2.7 GHz and 25°C
>200W at 2.7 GHz and 85°C
EVO 30W @ 125°C average, 150W @ 125°C
peak VSWR (max.):
See individual SD or below typical
1.20 — DC to 3 GHz
1.35 — 3 to 6 GHz
Insertion Loss (max.):
See individual SD or below typical
0.12 — DC to 3 GHz
0.25 — 3 to 6 GHz

Physical

Housing: Brass/Beryllium Copper
Male Center Contact: Brass
Female Center Contact: Beryllium Copper
Plating:
Body and Contact — Gold Over High-
Phosphorous Nickel Over Copper
Insulator: PEEK or Teflon
Operating Temperature: -55 to +165°C

www.molex.com/link/smpmax.html