



# SUHNER® QMA SUBMINIATURE CONNECTORS

## Description

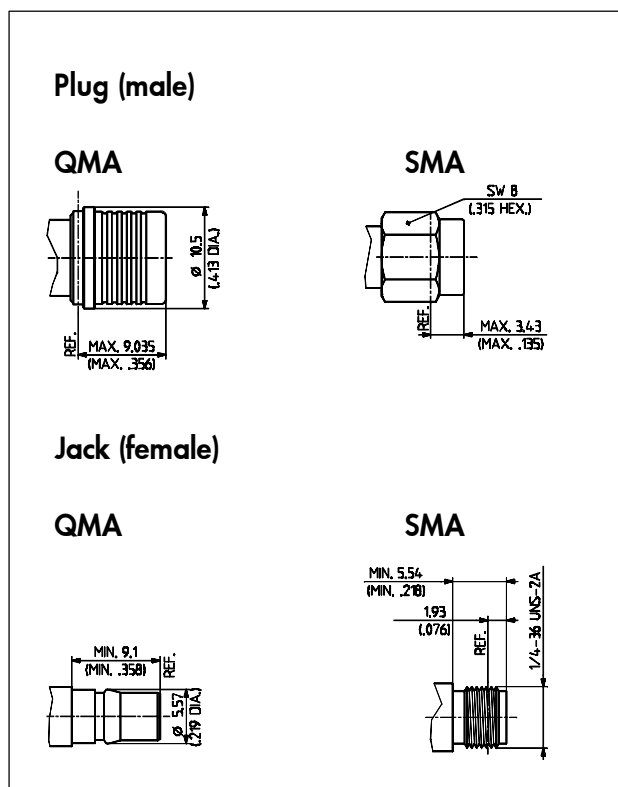
SUHNER QMA coaxial connectors are available with 50 Ω impedance. The frequency range extends to 11 GHz, depending on the connector and cable type, however most of the QMA connectors are Return Loss optimised for frequencies up to 6 GHz. The interface is based on the SMA dimension, but, instead of a threaded coupling mechanism, a new snap-lock mechanism is used.

The QMA interface has a very similar performance to the SMA, but in addition it offers an easier, faster and safer coupling operation, helping the customers to save significantly time during production of their systems.

The packaging density of QMA is increased compared to SMA connectors thanks to the fact that no torque spanner is required to fasten the coupling nut.

QMA is not intermateable with SMA.

## Interface Dimensions



## Features of QMA connectors

- > Cycle time improvement for making RF connections (10 times faster to mount than threaded connectors)
- > No torque required
- > Higher packaging density
- > Free-rotating connection when mated
- > Eliminates loosening problems associated with threaded connectors
- > Same performance as SMA up to 6 GHz

**SUHNER QMA - the cost effective solution for advanced RF interconnections!**

## Technical Data

ELECTRICAL DATA	REQUIREMENTS
Impedance	50 $\Omega$
Frequency range	DC to 6 GHz optimized DC to 11 GHz working range [cut-off frequency: 18 GHz]
Return loss (typical)	DC - 3 GHz $\geq$ 32 dB; 3 to 6 GHz $\geq$ 25 dB; 6 to 11 GHz $\geq$ 20 dB
Dielectric withstanding voltage (at sea level, in V rms, 50 Hz)	1000
Working voltage (at sea level, in V rms, 50 Hz)	$\leq$ 335
Insulation resistance	$\geq 5 \cdot 10^3$ M $\Omega$
Contact resistance - centre contact - outer contact	$\leq$ 3 m $\Omega$ $\leq$ 2.5 m $\Omega$

MECHANICAL DATA	REQUIREMENTS
Engagement force (typical)	25 N
Disengagement force (typical)	20 N
Retention force for interface	$\geq$ 60 N
Durability (matings)	100 cycles
Distance between connectors	12.4 mm / .49 in. minimum

ENVIRONMENTAL DATA	MIL TEST CONDITIONS
Temperature range	- 40°C ... + 85°C / - 40°F ... + 185°F
Corrosion	IEC 60169-1 16.7 (48 hrs)
Vibration	IEC-68-2-64 (random, 5-20 Hz: 1.29m <sup>2</sup> /s <sup>3</sup> / 20-500 Hz: -3dB/octave)
Damp heat - steady state	IEC 60169-1 16.3 (96 hrs)
Thermal shock	IEC 60169-1 16.4 (-40° C / + 85° C)

MATERIAL DATA		
CONNECTOR PART	MATERIAL	PLATING
Bodies	brass	SUCOPLATE®
Solder bodies	brass	SUCOPRO
Pin contact	brass	SUCOPRO
Socket contact	spring bronze	SUCOPRO
Outer contact	spring bronze	SUCOPLATE®
Insulators	PTFE or PFA	
Crimp ferrule	copper	SUCOPLATE®

Some connectors may have a specification that differs from the above mentioned data.