



# Datasheet

## MCA4.L0304L

### Description:

High Performance mmWave Cable Assembly (Rated to 26.5GHz)  
with 304mm (12") RG-405 and 2 x 2.92(M) Connectors

### Features:

High Performance mmWave Cable Assembly  
Rated from DC to 26.5GHz  
2 x 2.92 (M) ST Connectors  
304mm (12") of RG-405 Cable  
RoHS & Reach Compliant

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# 1. Introduction



Taoglas have developed a range of high frequency millimetre products with the quality and precision required for 5G NR for the millimetre wave spectrum. The diversity of applications and ever changing demands for higher frequency test systems are driving coaxial cable assemblies to the next level. The specification requirements around performance for test cables extend beyond the tight tolerance typically required for lab performance to a wider range of 5G applications.

Rated up to 26.5 GHz, the Taoglas RG-405 range includes cable assemblies terminating in 2.92(M) connectors provided in various standard length configurations.

## Features and Benefits

- High-frequency bands (DC to 26.5 GHz)
- Low-loss cable providing phase stability
- 2.92mm cross-mateable to other industry standards
- RoHS & REACH Compliant

## Typical Applications

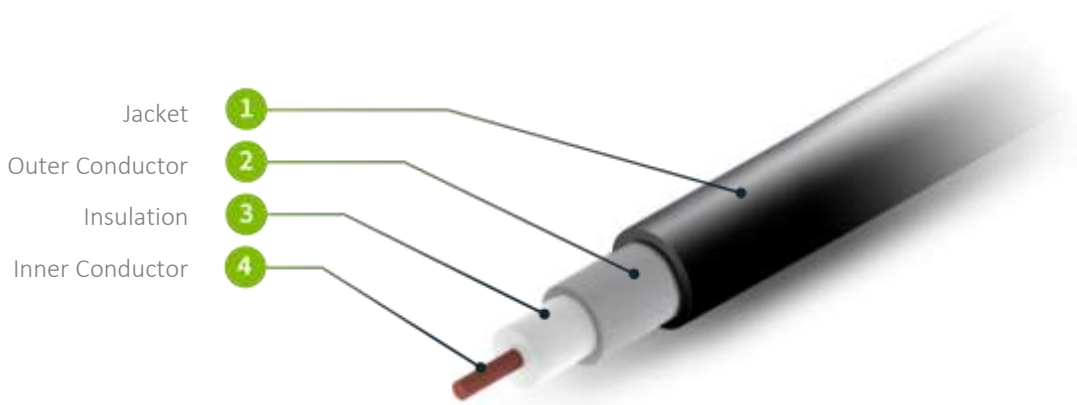
- Communications Infrastructure
  - High-frequency, small cell-based wireless access points
  - MIMO ultra-high-speed outdoor backhaul fixed and moving wireless access points
- Satellite communications
- Military aerospace
- Test and measurement instrumentation

To complement the range, Taoglas also has adaptors and connectors to suit the 2.92mm(M) connector such as industry-standard SMA, 2.4mm, and SMP as well as on-board offerings including vertical and edge mount 2.92mm(F) connectors. Other cable assemblies and connector types are available subject to MOQ and NRE.

For more information or to discuss your mmWave project, contact your regional sales team.

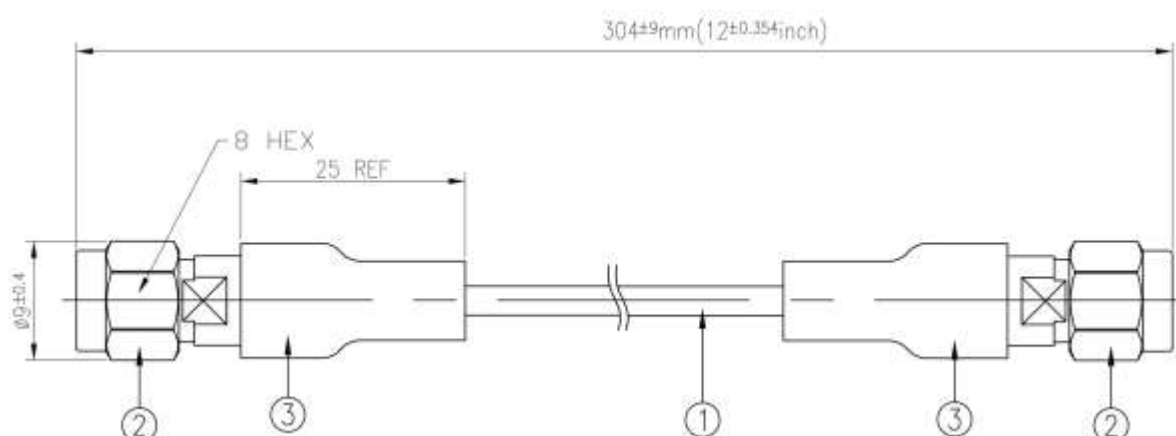
## 2. Cable Specifications – RG-405

### 2.1 Cable Construction



Part Designation	Material	Outer Diameter
1 Jacket	PVC	2.2mm±0.05mm
2 Inner Conductor	Silver plated copper	0.51mm±0.01mm
3 Insulation	PTFE	1.68mm±0.05mm
4 Outer Conductor	Seamless copper tube	2.20mm±0.05mm

### 2.2 Mechanical Drawing



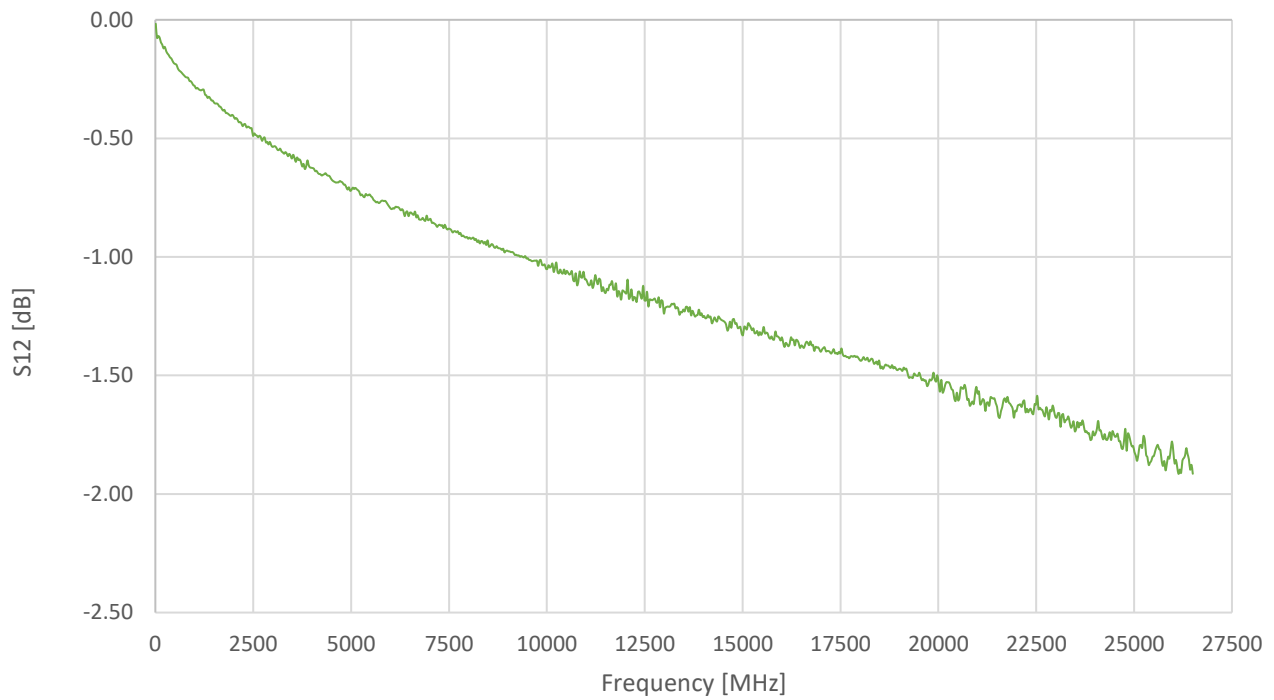
Part Designation	Material	Finish	QTY
1 RG-405 Coaxial cable	PVC	Black	1
2 2.92(M) Connector for RG-405	303F	Passivation	2
3 Insulation	PTFE	Black	2

## 2.3 Cable Specifications – Rated to 26.5GHz

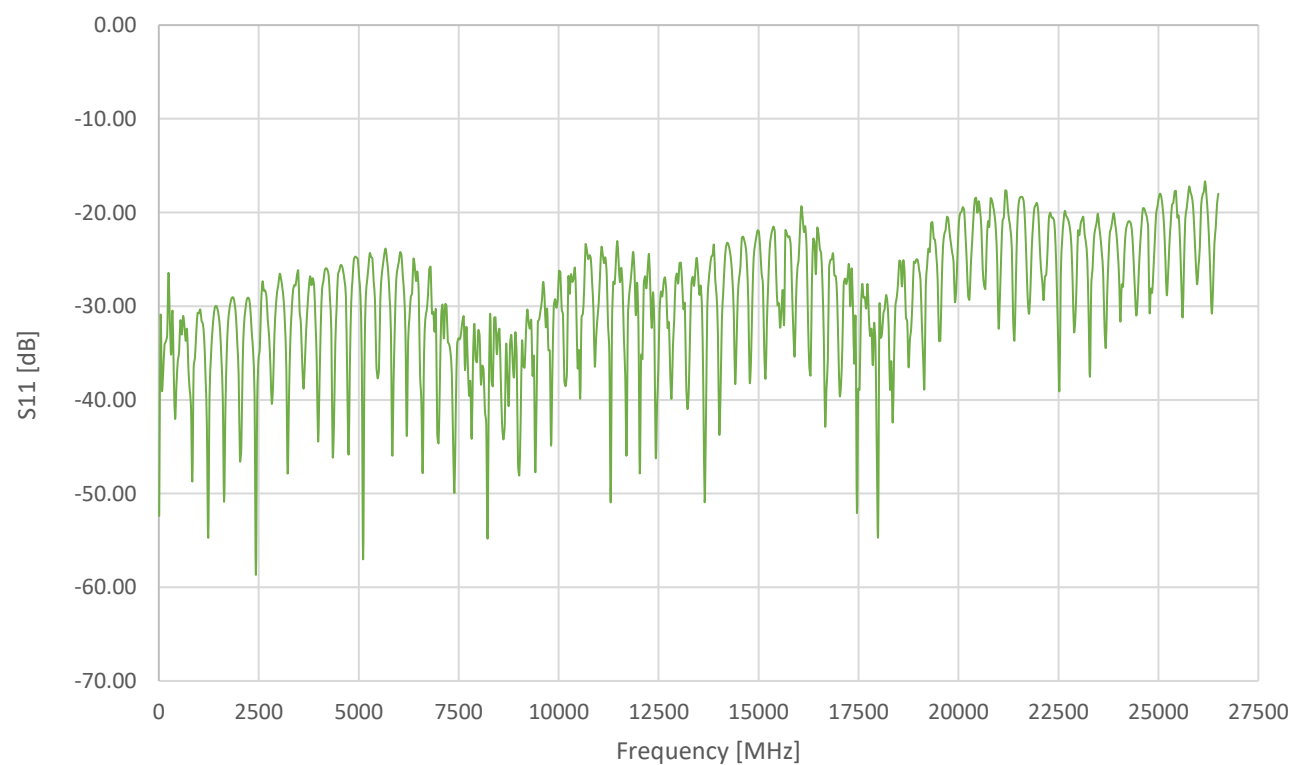
Inner Conductor Diameter	0.51mm		
Insulation	1.68mm		
Outer Connector Diameter	2.2mm		
Capacitance	Nom. 95.1pF/m		
Insulation Resistance	≥5000 MΩ.km		
Voltage withstanding	3.5 (KVrms 50Hz/1 min)		
Velocity (%)	69.5%		
Cut Off Frequency	61GHz		
Max. operating voltage	1.5 (KVrms)		
Bend Radius	7.63mm		
Temperature	-55°C ~ +125°C		
Attenuation Performance (GHz)	0.5	1	5
dB/ m	0.45	0.64	1.51

## 3. Cable Performance

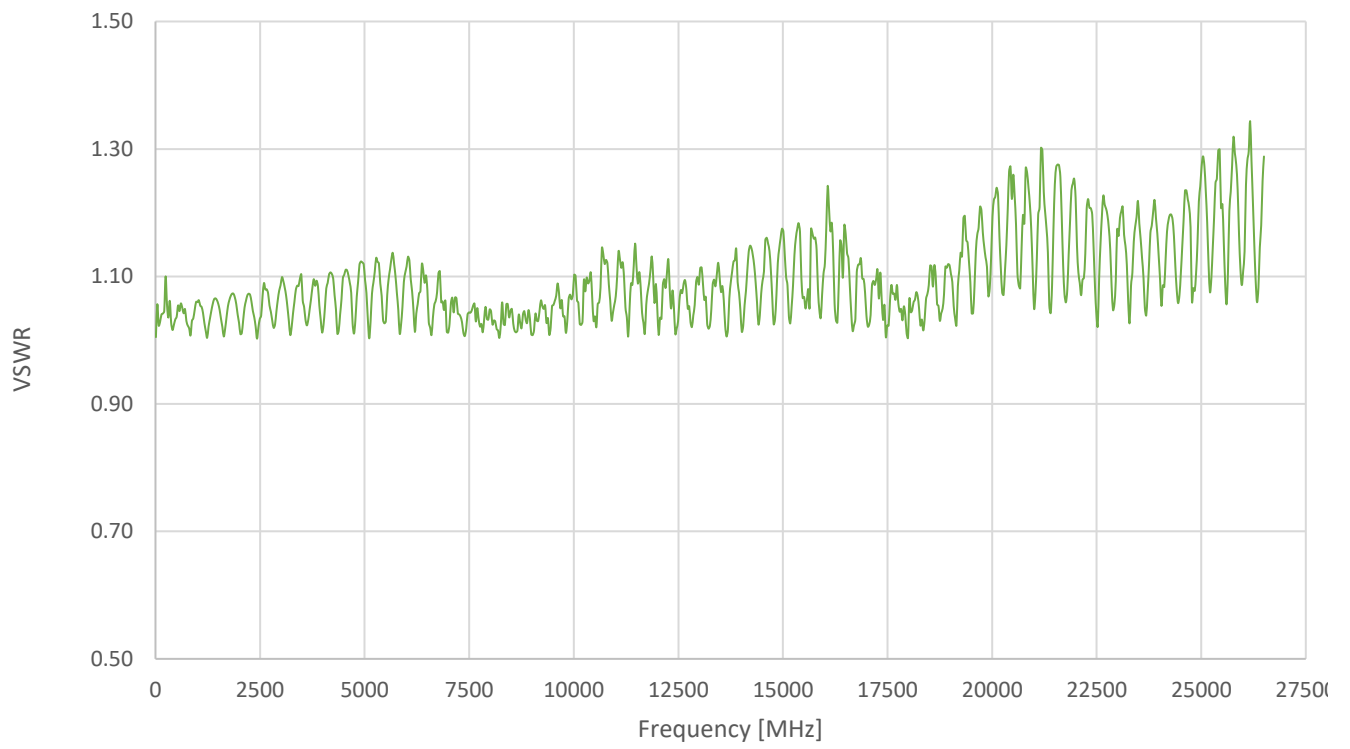
### 3.1 Insertion Loss



### 3.2 Return Loss



3.3 VSWR



Changelog for the datasheet

SPE-20-8-120 – MCA4.L0304L

<b>Revision: A (Original First Release)</b>	
Date:	2020-11-13
Notes:	
Author:	Jack Conroy

Previous Revisions






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