

8 GHz 3<sup>rd</sup> channel option for HP 53131A, HP 53132A and HP 53181A.

## Features

- 0.1 to 8 GHz operation window.
- High sensitivity.
- Input protection (20 dBm max).
- AC coupled (max 35 V to GND).

## Description

The Cojotech HPO-080 is a replacement kit for the original 3<sup>rd</sup> channel option, for the HP/Agilent 53131A, 53132A and 53181A, which have been discontinued.

This option adds 0.1 to 8 GHz counting ability to counters which were not fitted with a 3<sup>rd</sup> channel option from the factory, or had the original 3 GHz option installed. Please check the [selection guide](#) to decide which option is right for you.

## Package contents

- HPO-080 board.
- One panel mount connector-cable assembly (SMA, TNC or BNC).
- IDC cable.
- Mounting screws.

## Warranty

This product benefits from a 2-year warranty against defects in materials and workmanship.

# Absolute Maximums

Parameter	Ratings
Input Power	20 dBm
DC Voltage	± 35 V

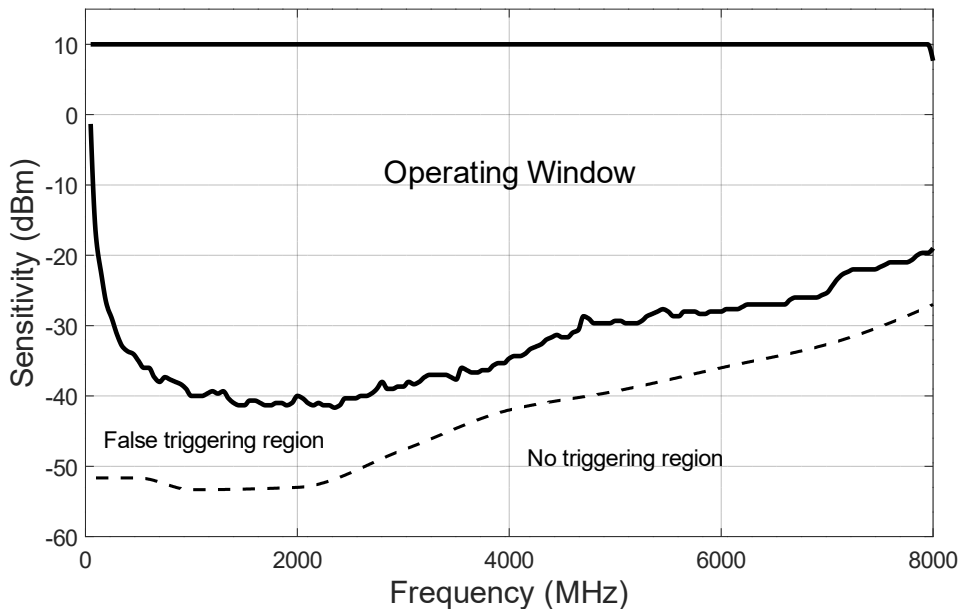
# Sensitivity

The required amplitude for a reading with an accuracy of 0.1 ppm.

Correct operation tested up to +10 dBm, limited by signal generator.

Frequency (MHz)	Typical (dBm)	Worst (dBm)
100	-17	-12
200	-27	-24
500	-35	-32
1,000	-40	-37
2,000	-40	-37
3,000	-38	-36
4,000	-34	-32
5,000	-29	-26
6,000	-28	-26
7,000	-25	-23
8,000	-19	-17

**Sensitivity vs Frequency**

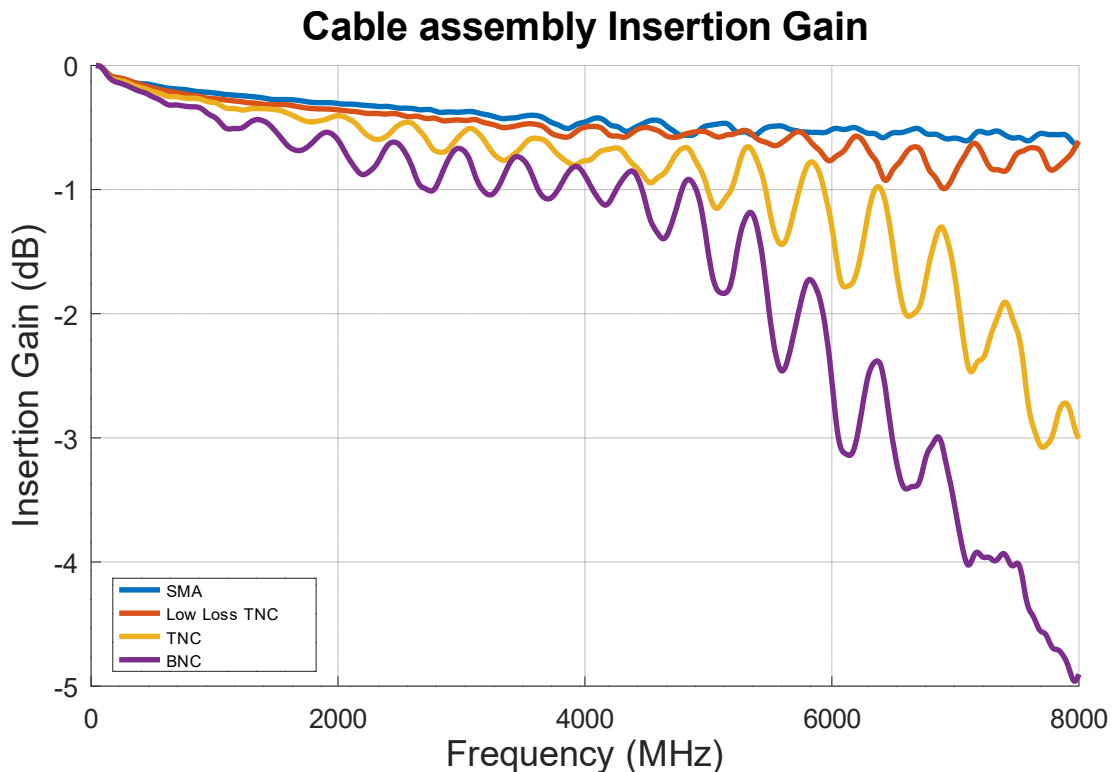


## Connector selection

Because of the wide bandwidth of the HPO-080, it requires special connectors to reach the maximum sensitivity across the entire range. The preferred connector would be an N-type connector, which is only available with the HPO-080-E, since it only fits frequency counters that came with the 5 or 12 GHz option from the factory.

The next best thing is either the SMA or the TNC connector, with the TNC connector favored for mechanical strength, and the SMA connector for frequency response.

Finally, the BNC connector is still a valid and practical choice, however its frequency response in the high ranges is not ideal, so sensitivity at those frequencies will be affected.



# Mechanical properties of the connectors

## BNC & TNC base assemblies

Description	Material	Finish
Body	Brass	Nickel plated
Contact	Brass	
Dielectric	PTFE	

## BNC-2 (SMA-M-BNC-BF-F405-20)

Description	Material	Finish
Body	Brass	Nickel Plated
Contact	Beryllium copper	Gold plated
Dielectric	PTFE	

## SMA (SMA-BBLK-2)

Description	Material	Finish
Jacket	Stainless steel	
Body	Stainless steel	
Contact	Beryllium copper	Gold plated
Dielectric	PTFE	

## Low Loss TNC

Description	Material	Finish
Body	Brass	Nickel plated
Contact	Beryllium copper	Gold plated
Dielectric	PTFE	

Notes:

- 1). Unless otherwise stated, all specifications are nominal.
- 2). The information contained in this document is accurate to the best of our knowledge. We reserve the right to update it, with new information or corrections, without notice.