



ACP PCB Stripline Connector for the 047 Semi-Rigid Cable

Technical Data Sheet

ACP-047-J-PCB Stripline

Description

The ACP Connector assembly is designed for use with the 047 Semi-Rigid Cable. This solderless, compression fit connector is reusable and field replaceable. Operating at a maximum frequency of 110 GHz, while having a rise time of ≤ 1 ps, the ACP connector sets a new standard in performance, longevity and value in the coaxial connector industry.

Features

Max. Operating Frequency 110 GHz
Rise Time ≤ 1 ps
Insertion Loss (s21) < 1 dB to 98 GHz
Return Loss (s11) > -15 dB to 85 GHz
 $> 100,000$ Mating Cycle Life
Small Footprint ($\varnothing 9.91$ mm x 4.57 mm)

Configuration

047 Semi-Rigid Cable
50 Ohms
Straight Body Connector Assembly
2 Hole PCB Mount
Solderless, Compression Contact
Field Replaceable

Applications

General Purpose Test
PCB Applications
Signal Integrity Measurements

Chip Evaluation
Test Fixtures
Transmissions Systems

Performance by Frequency Band

| Frequency (GHz) | Return Loss, Max. (dB) | VSWR, Max. | Insertion Loss, Max. (dB) |
|--------------------|---------------------------|------------|------------------------------|
| DC to 18 | -29.50 | 1.06:1 | 0.052 |
| 18 to 27 | -26.01 | 1.10:1 | 0.082 |
| 27 to 40 | -22.83 | 1.11:1 | 0.067 |
| 40 to 50 | -20.94 | 1.19:1 | 0.098 |
| 50 to 67 | -18.65 | 1.26:1 | 0.161 |
| 67 to 85 | -15.22 | 1.41:1 | 0.408 |
| 85 to 99 | -11.23 | 1.83:1 | 0.946 |

Mechanical Specifications

| | |
|---------------------------------|-------------|
| Size (Full Assembly): | |
| Length (MM) | 9.91 |
| Width (MM) | 4.57 |
| Height (MM) | 4.95 |
| Weight (G) | 0.49 |
| Mounting Screw Spacing (MM) | 7.16 |
| Mounting Screw Type | #0-80 |
| Mating Cycles (Interposer Only) | $> 100,000$ |

Material Specifications

Component Description

Interposer
Connector Assembly

Construction Material

Copper
Brass

Surface Finish

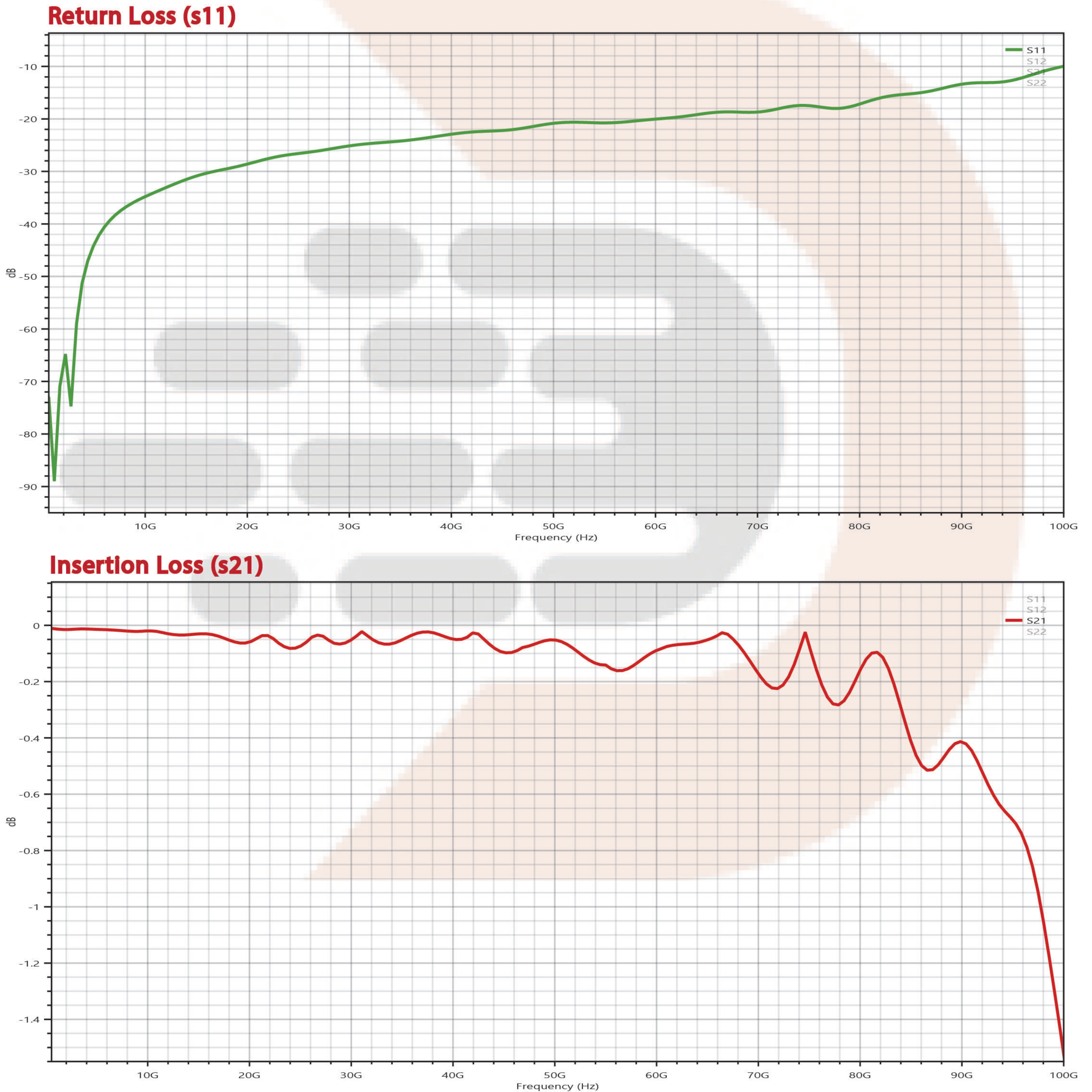
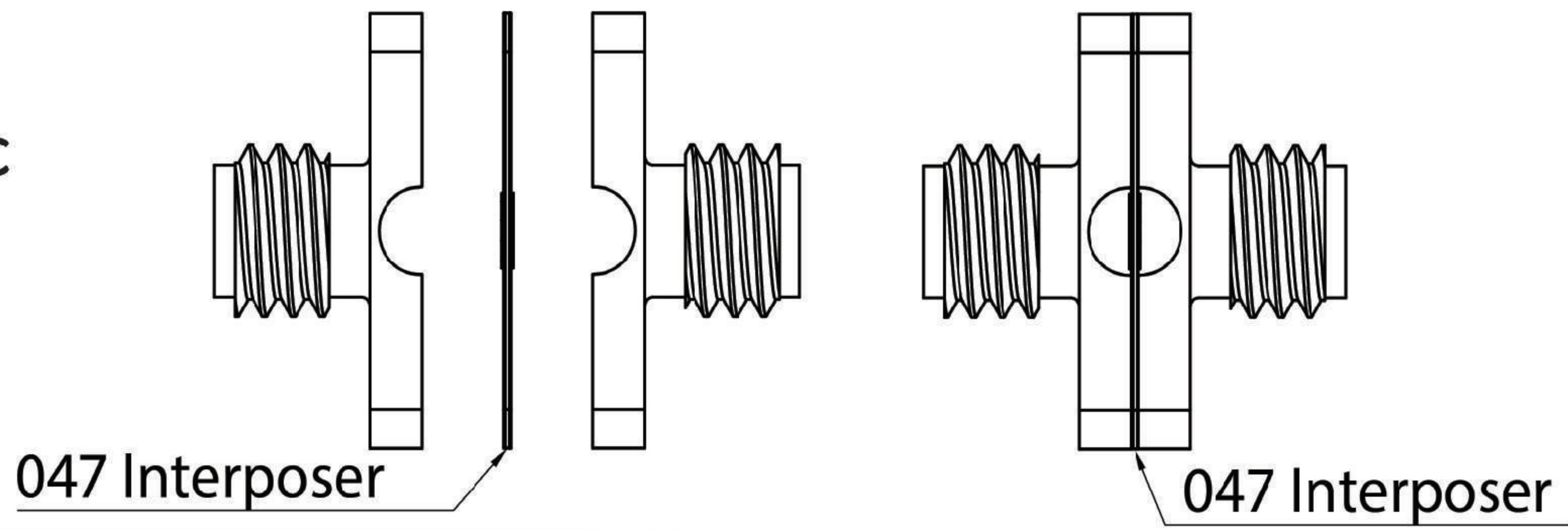
Nickel
ENIG

Environmental Specifications

-55 to 140 °C (Continuous Operating Temperature)

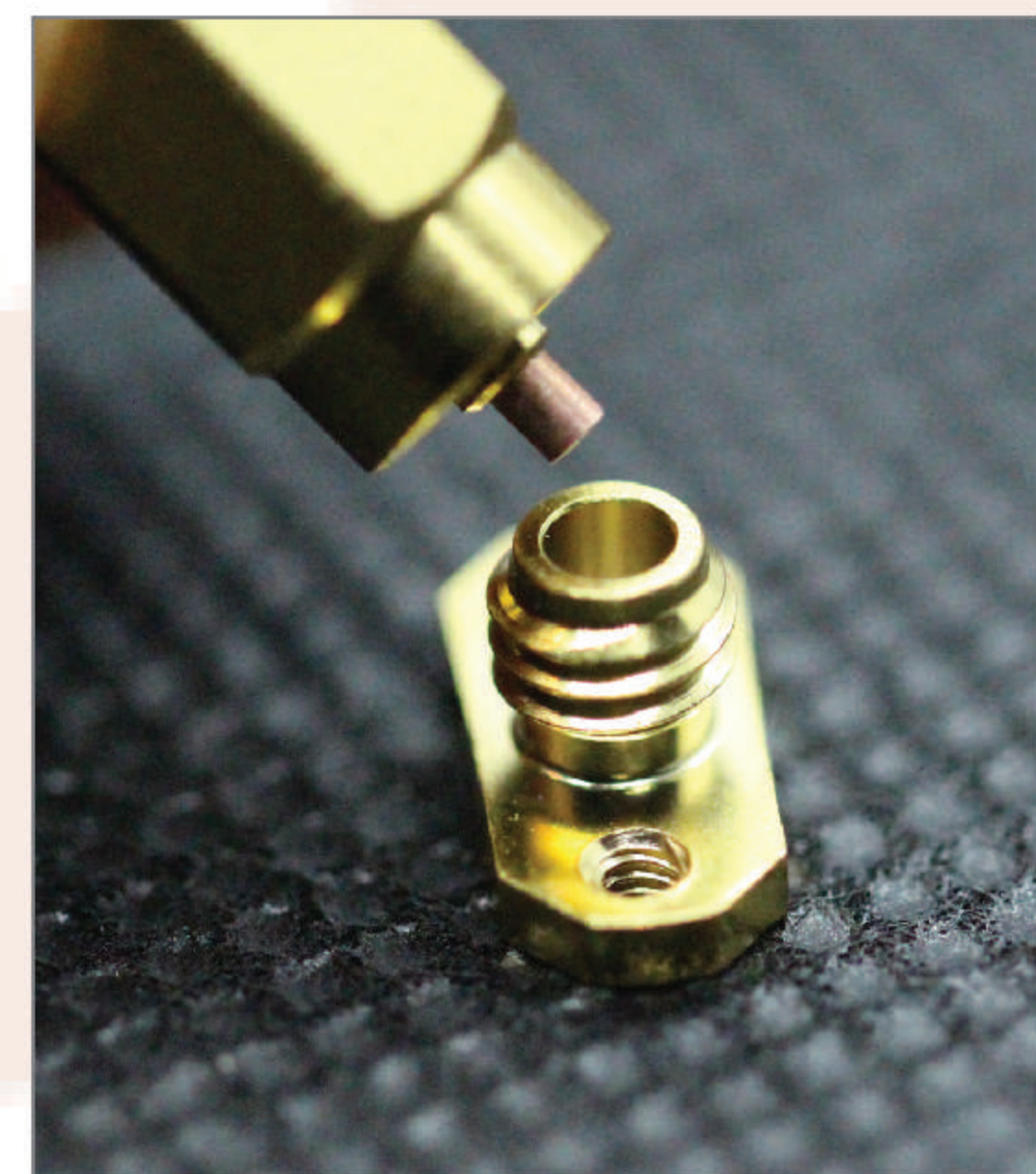
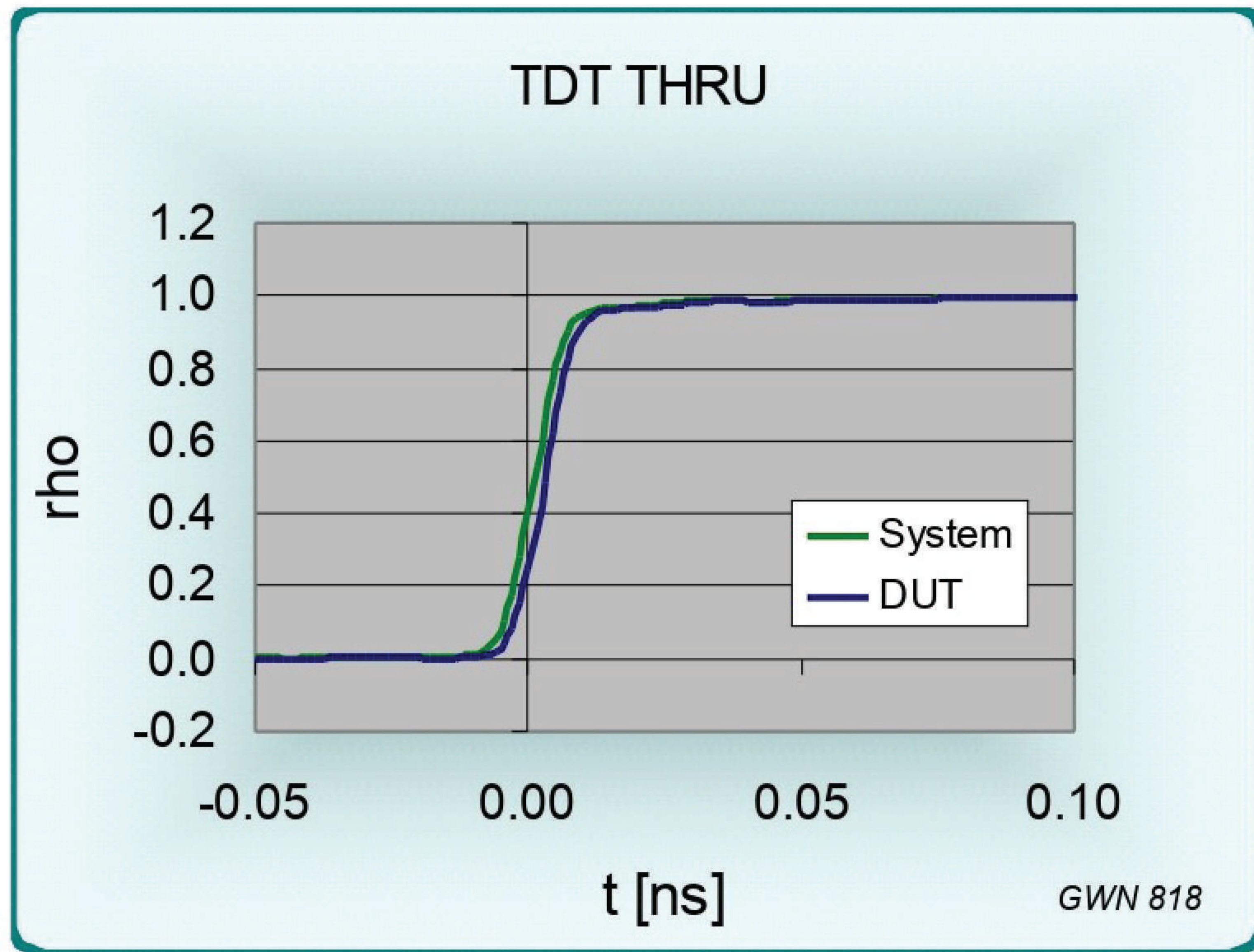
Typical Back-to-Back Test Data to 100 GHz

*3rd party Cycling, DC Current Capacity
and RF Characterization reports (including
s2p files) are available upon request



Time Domain Transmission

The TDT measurements for transmission show an identical risetime from the Interposer as the system itself (10-90% RT = 12.0 ps, system risetime is 12.0 ps). The added delay at the 50% point is 2.0 ps. There is no signal distortion. If the 20%-80% values are extracted, the risetime is only 7.5 ps



The data contained in this document is, to the best of our knowledge, accurate and representative of the described assembly. All specifications presented in this datasheet are nominal, unless otherwise noted. DUT Electronics Inc. does not make any representation or warranty in regards to the suitability of the described assembly for any specific purpose. DUT Electronics Inc. does not assume any liability arising out of the use, or misuse, of any assembly or datasheet. DUT Electronics Inc. reserves the right to make any changes to the datasheet or assembly as required, without notification.

