



GT-24-113

COAX CONTACT, SMPM VITA 67.3, 50 OHMS
CONTACTS 852-304 and 852-305
RF Signal Integrity Report



Revision History

Rev	Date	Issued	Approved	Description
1	6/14/2024	L. Blackwell, W. Lewis	G. Hunziker	Initial Release



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1. Introduction

This document contains results from testing that was performed to evaluate the high-frequency electrical performance of the Glenair VITA 67.3 SMPM RF contacts. This report outlines the frequency domain performances of Insertion Loss (IL), Return Loss (RL), Voltage Standing Wave Ratio (VSWR) as well as the time-domain characteristic impedance performance.

3. Test Information

3.1. Test Samples

Three test samples consisting of the direct attach pin 852-304 and socket 852-305 contacts were assembled to six inches of Glenair 962-025-047 cable with 2.92 mm connectors for test equipment attachment. A mated sample is shown in Figure 1.



Figure 1. Mated Connection

3.2. Test Setup

All measurements were taken using a Keysight N1000A DCA-X wide-bandwidth oscilloscope and a Keysight N5227B PNA network analyzer. No test fixturing was required as the test samples are directly connected to the test equipment. A 2x thru measurement was made to remove the lead in coax effects. The test data was saved in a touchstone (.s2p) format for the s-parameters and in a .txt format for the impedance data.

4. Test Results

4.1. Insertion Loss

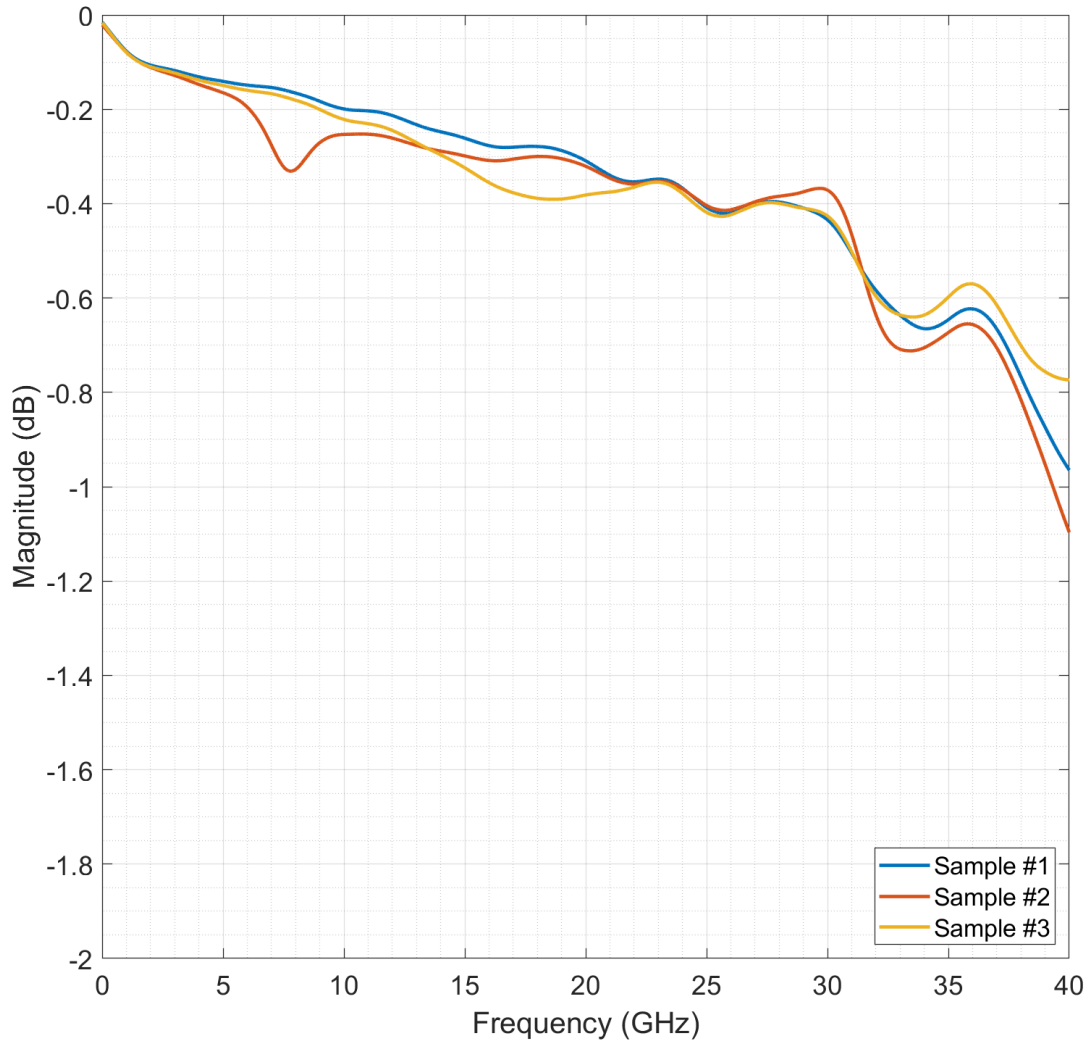


Figure 2. Insertion Loss

4.2. Return Loss

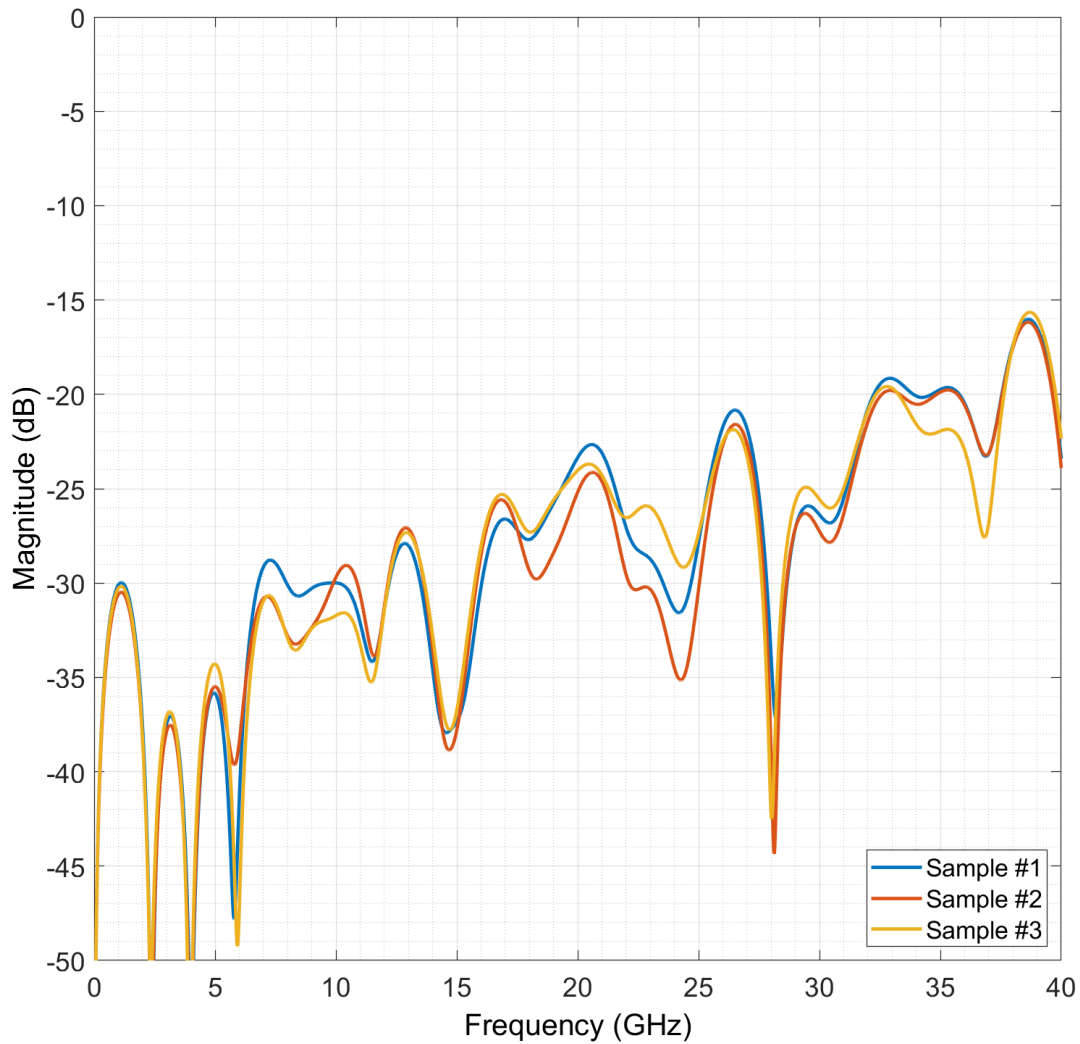


Figure 3. Return Loss

4.3.VSWR

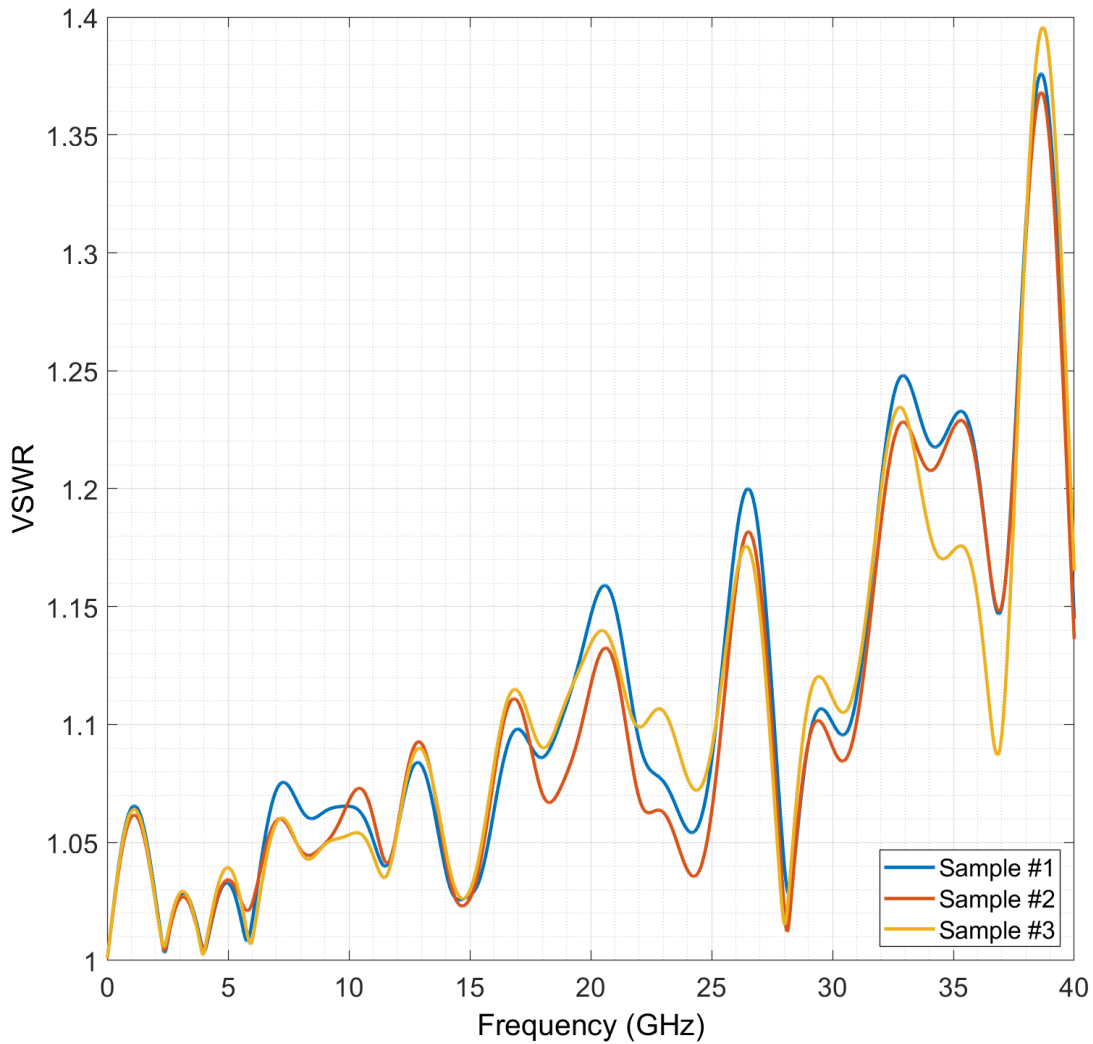


Figure 4. VSWR

4.4.TDR

Figure 5 depicts the impedance profile resulting from a 10 ps rise time input signal.

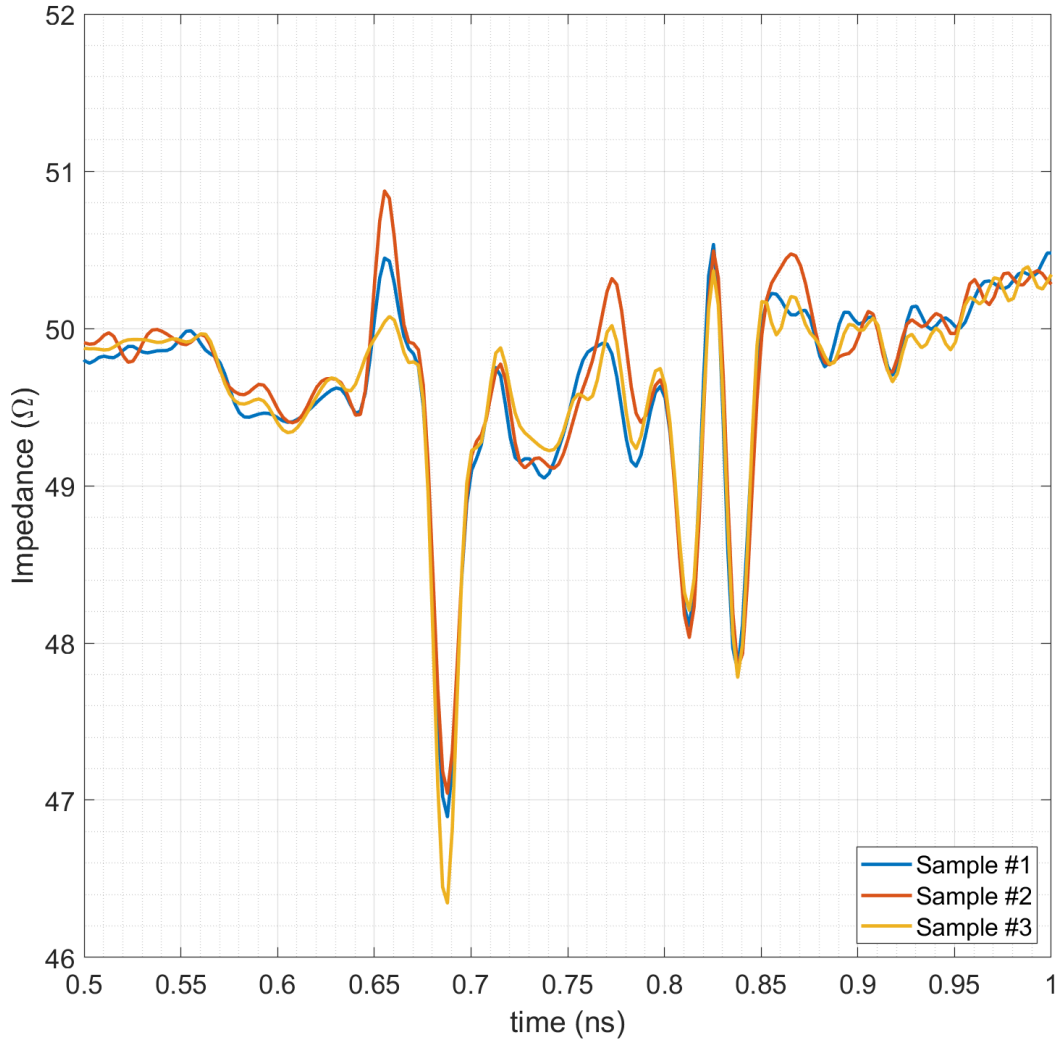


Figure 5. TDR