

To: Cc: Mike Leffel/RSA@RSA, Nick Lalic/RSA@RSA,

Всс:

Subject: Re: error in Dunsmore book

From: Mathieu Caillet/RSC@RSC - Friday 02/14/2014 10:09 AM

## Hi Mike,

Thank you very much for doing this analysis. I'm happy to see that both you and I have consistent results now.

Does your LabVIEW algorithms allow to save the s2p file of each "probe"?

Regards,

Mathieu

Mike Leffel From: Mike Leffel/RSA@RSA To: Mathieu Ca... 02/13/2014 04:42:57 PM

From: Mike Leffel/RSA@RSA
To: Mathieu Caillet/RSC@RSC
Cc: Nick Lalic/RSA@RSA
Date: 02/13/2014 04:42 PM
Subject: error in Dunsmore book

## HI Mathieu,

I did some very careful measurements, and I agree that the S22 equation needs to have a subtraction vs an addition.

The S22 phase is very ragged when using addition, and follows the expected smooth response with subtraction..

My "Test Probe" is (port 1 of "probe") a 100 ohm transmission line followed by a 2 dB attenuator leading to (port 2 of "probe").

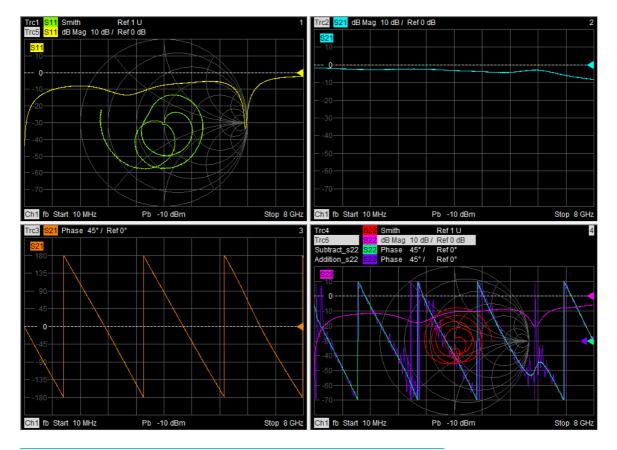
So I expect S22 to be better than S11 in magnitude by a few dB, which is what I see.

I think my algorithms are finished.

Here is a link to a large LabVIEW installer, if you want to try it.

## Mike

https://www.dropbox.com/s/0bk0u19blu1w62a/Probe%20Tip%20Calc%20Complete%20Installer%2C%20v0p1.zip



## Mike Leffel

Senior VNA Hardware and Software Engineer Aerospace & Defense Strategic Planning Team ROHDE & SCHWARZ, Inc. PHONE: 815.861.6787 EMAIL: mike.leftel@rsa.rohde-schwarz.com