E5071C-26

S E R V I C E   N O T E

Supersedes:
NONE

E5071C - ENA Series Network Analyzer, 9 kHz to 8.5 GHz

Serial Numbers: ALL

Phase shifts 180 degree, due to the mixture of RoHS receiver board and non-RoHS receiver board

Parts Required:

P/N	Description	Qty.
NONE		

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:		
MODIFICATION RECOMMENDED		
ACTION [[]] ON SPECIFIED FAILURE CATEGORY: [X] AGREEABLE TIME	STANDARDS LABOR: 0.3 Hours	
LOCATION [X] CUSTOMER INSTALLABLE CATEGORY: [[]] ON-SITE **(active On-site contract required)** [X] SERVICE CENTER [[]] CHANNEL PARTNER	SERVICE [[]] RETURN INVENTORY: [[]] SCRAP [[]] SEE TEXT	USED [[]] RETURN PARTS: [[]] SCRAP [[]] SEE TEXT
AVAILABILITY: PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL: May-2015	
[[]] Calibration Required [X] Calibration NOT Required	PRODUCT LINE: WN AUTHOR: jm	
ADDITIONAL INFORMATION:		

June 6, 2013

Agilent Technologies

Situation:
Phase shifts 180 degree due to the mixture of RoHS receiver board and non-RoHS receiver board.
This issue occurs up to 8.5GHz receiver boards only. 14 GHz and 20 GHz receiver boards do not
have same problem.
<Up to 8.5GHz receiver board part-numbers>

non-RoHS receiver board (Green PC Board)	E5071-62082, E5071-62182 E5071-69082, E5071-69182 E5071-62092, E5071-62192 E5071-69092, E5071-69192
RoHS receiver board (Blue PC Board)	E5071-62282, E5071-62382, E5071-62482, E5071-62292, E5071-62392, E5071-62492

If one of the following service notes (Replace all the receiver boards with RoHS receiver boards) is
applied, this issue does not occurs.

Service note number
E5071C-16x
E5071C-17x
E5071C-20x
E5071C-21x

Solution/Action:
If there is a mixture of RoHS receiver board(s) and non-RoHS receiver board(s), update Firmware to
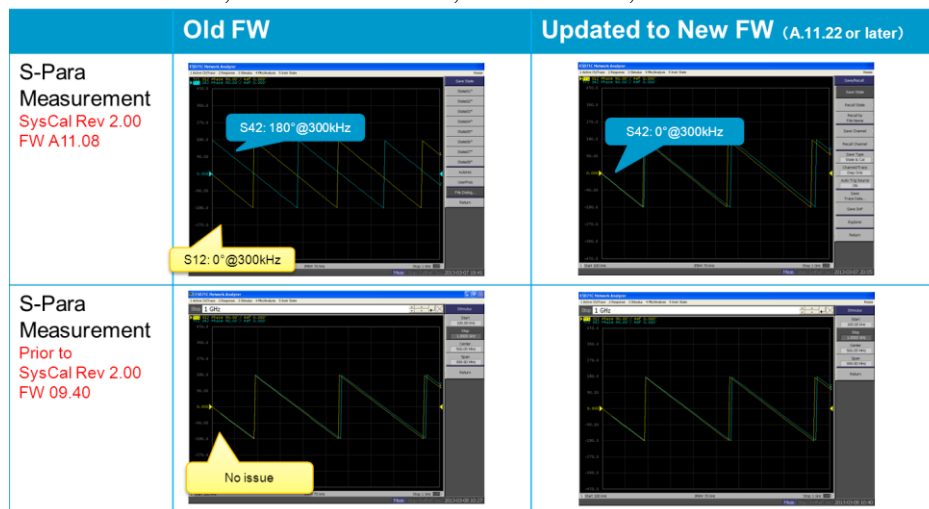A.11.22 or later

Appendix

How to check Symptom-1(at S-Parameter Measurement)
1. Identify RoHS receiver port(s) and non-RoHS receiver port(s).
2. Connect Thru cable between one of RoHS receiver port and one of non-RoHS receiver port.
3. After preset, select transmission measurement on the test ports and measurement format phase.
4. If phase is around 180° at the lowest frequency, it's faulty

Example-1

Port-1: non-RoHS, Port-2: non-RoHS, Port-3: RoHS, Port-4: RoHS

How to check symptom-2 (at Absolute Measurement)
1. Identify RoHS receiver port(s) and non-RoHS receiver port(s).
2. Connect Thru cable between one of RoHS receiver port and one of non-RoHS receiver port.
3. After preset, show 3 traces.
4. Set measurement parameter and format as below;
   Trace1: Absolute measurement R-ch of non-RoHS Receiver port
   Trace2: Absolute measurement T-ch of RoHS Receiver port
   Trace3: Trace2/Trace1 with Equation editor function, set format Phase.
5. If phase is around 180° at the lowest frequency, it's faulty

Emample-2

Port-1: non-RoHS, Port-2: non-RoHS, Port-3: RoHS, Port-4: RoHS
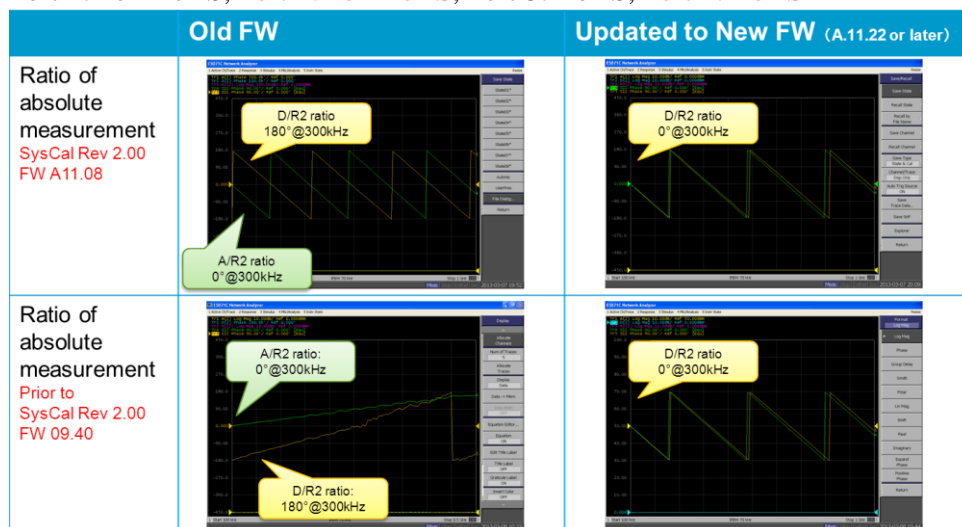
Revision History:

Revision Number	Date	Author	Reason For Change
E5071C-26	20-May-2013	jm	As published