



SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

PL17374/1621

Customer: _____	Tested By: <u>R. Combs</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX</u>	Date: <u>12 JULY 2018</u>
Serial No: <u>PL17374/1528</u>	Drawing No: <u>27624282</u> Rev: <u>A1</u>

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
J1 RF Receive Input				
1	Frequency	100MHz-18GHz	100MHz-18GHz	PMI QA 1
2	Input Power Level	-80 dBm to -10 dBm	-80dBm to -10dBm	
J4A IF1 Input				
3	Frequency	100MHz-4GHz	100MHz-4GHz	
4	Input Power Level	0 dBm Typical	0dBm	
J4B IF2 Input				
5	Frequency	100MHz-4GHz	100MHz-4GHz	
6	Input Power Level	0 dBm Typical	0dBm	
J9 LO1 Input				
7	Frequency	4GHz-20GHz	4GHz-20GHz	
8	Input Power Level	+10 dBm Typ.	+10dBm	
J10 LO2 Input				
9	Input Frequency	4GHz-20GHz	4GHz-20GHz	
10	Input Power Level	+10 dBm Typ.	+10dBm	PMI QA 1



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TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC	
J3A IF1 Output					
11	Output Frequency	100MHz - 4GHz	100MHz - 4GHz	PMI QA 1	
12	Output Power Level	-5.0 dBm Maximum for Limited SDLVA channels	-6.5dBm Max		
J3B IF2 Output					
13	Output Frequency	100MHz - 4GHz	100MHz - 4GHz		
14	Output Power Level	-5.0 dBm Maximum for Limited SDLVA channels	-6.5dBm Max		
J6 RF Transmit Output					
15	Output Frequency	100MHz-18GHz	100MHz-18GHz		
16	Output Power Level	-8dBm IF Input Level 0dBm to +10dBm Typical with use of variable attenuator in Down-Converted Channel	+2.6dBm to +7.8dBm See Plots		
Control Logic – TTL					
17	TTL 1 Transmit Path Output Select / Receive Filter Bank Input Select	0 – Output to TX Filter bank, RX-Backplane/Input (J1) 1 – Output to RX Filter bank, RX-Transceiver Input	0 – Output to TX Filter bank, RX Backplane/Input (J1) 1 – Output to RX Filter bank, RX-Transceiver Input		PMI QA 1



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TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
18	TTL 2 RF Receive Filter Select	000 – Thru Channel 001 – Channel 1 010 – Channel 2 011 – Channel 3 100 – Channel 4 101 – Channel 5 110 Not Defined 111 – Not Defined	000 – Thru Channel 001 – Channel 1 010 – Channel 2 011 – Channel 3 100 – Channel 4 101 – Channel 5 110 Not Defined 111 – Not Defined	PMI QA 1
19	TTL 3 Linear or Limited SDLVA RF Output Channel	0 - Limited RF Output Channel 1 - Linear RF Output Channel	0 – Limited RF Output Channel 1 – Linear RF Output Channel	
20	TTL 4 RF Receive Thru Channel Or Down-Converted Channel.	0 - .Thru Channel 1 - Down-Converted Channel	0 - Thru Channel 1 – Down-Converted Channel	
21	TTL 5 IF1 or IF2 Output Select	0 – IF1 Output Channel 1 – IF2 Output Channel	0 – IF1 Output Channel 1 – IF2 Output Channel	
22	TTL 6 IF1 or IF2 Input Select	0 – IF1 Input Chan. 1 – High Freq. Chan.	0 – IF1 Input Channel 1 – IF2 Input Channel	
23	TTL 7 RF Transmit Thru Channel or Down- Converted Channel	0 – Thru Channel 1 – Down-Converted Channel	0 – Thru Channel 1 – Down-Converted Channel	PMI QA 1



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TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
24	TTL 8 RF Transmit Filter Select 3 BIT Control	000 – Thru Channel 001 – Channel 1 010 – Channel 2 011 – Channel 3 100 – Channel 4 101 – Channel 5 110 Not Defined 111 – Not Defined	000 – Thru Channel 001 – Channel 1 010 – Channel 2 011 – Channel 3 100 – Channel 4 101 – Channel 5 110 Not Defined 111 – Not Defined	PMI QA 1
25	TTL9 RF Transmit Down- Converted Channel 5 BIT Attenuation Control	00000 – 0 dB Attenuation 11111 – 31 dB Attenuation	00000 – 0 dB Attenuation 11111 – 31 dB Attenuation	
26	TTL10 LO1 LO2 Select 2 BIT Control	00 M1-LO1 M2-LO1 01 M1-LO1 M2-LO2 10 M1-LO2 M2-LO1 11 M1-LO2 M2-LO2	00 M1-LO1 M2-LO1 01 M1-LO1 M2-LO2 10 M1-LO2 M2-LO1 11 M1-LO2 M2-LO2	
27	TTL11 SDLVA Threshold Adjust 6 BIT Control	000000 – Lowest Threshold Level 111111 – Highest Threshold Level	000000 – Lowest Threshold Level 111111 – Highest Threshold Level	
28	TTL12 SDLVA CTL A (ENABLE)	0 – Internal Comparator Triggered SPST 1 – External Trigger Enable (SW CTL B)	0 – Internal Comparator Triggered SPST 1 – External Trigger Enable (SW CTL B)	
29	TT13 SDLVA CTL B (TRIGGER)	0 - Limited RF Channel SPST Switch ON (Insertion Loss) 1 - Limited RF Channel SPST Switch OFF (Isolation)	0 - Limited RF Channel SPST Switch ON (Insertion Loss) 1 - Limited RF Channel SPST Switch OFF (Isolation)	PMI QA 1



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30	Power Supply	+12V -12V +5V +3.3V	+12V @ 0.85 A -12V @ 785 mA +5V @ 568 mA +3.3V @ 8 mA	PMI QA 1
Receive and Transmit Switched Filter Bank (PL17346, See Appendix A)				
Transceiver Module (PL17353, See Appendix B)				
SDLVA (PL17146, See Appendix C)				

QA/QC Approval:

PMI
QA 1

Date:

7/16/18



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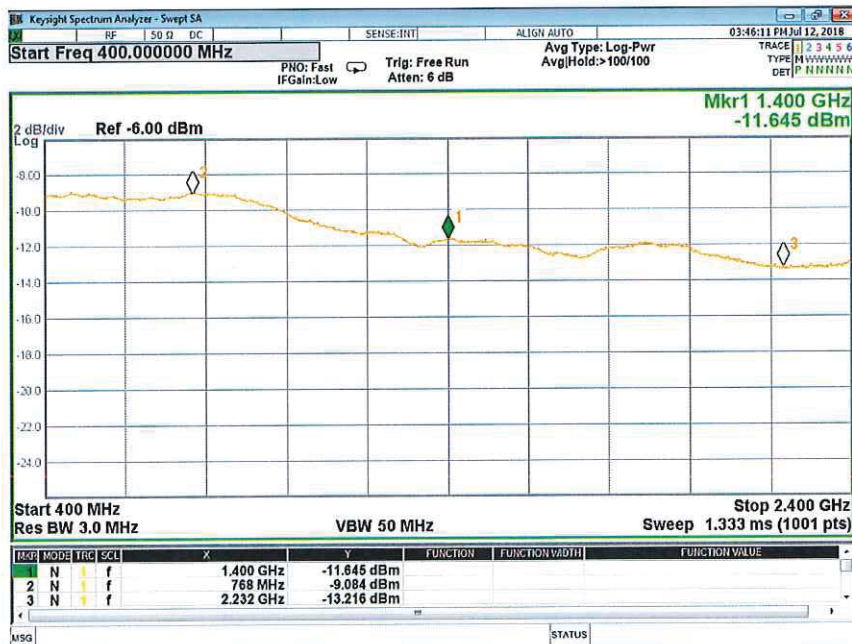
PL17374/1621

RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

RF Receive Input (J1) To IF1 Output (J3A) Thru Channel (-10dBm Input)



RF Receive Input (J1) To IF1 Output (J3A) Thru Channel (-70dBm Input)



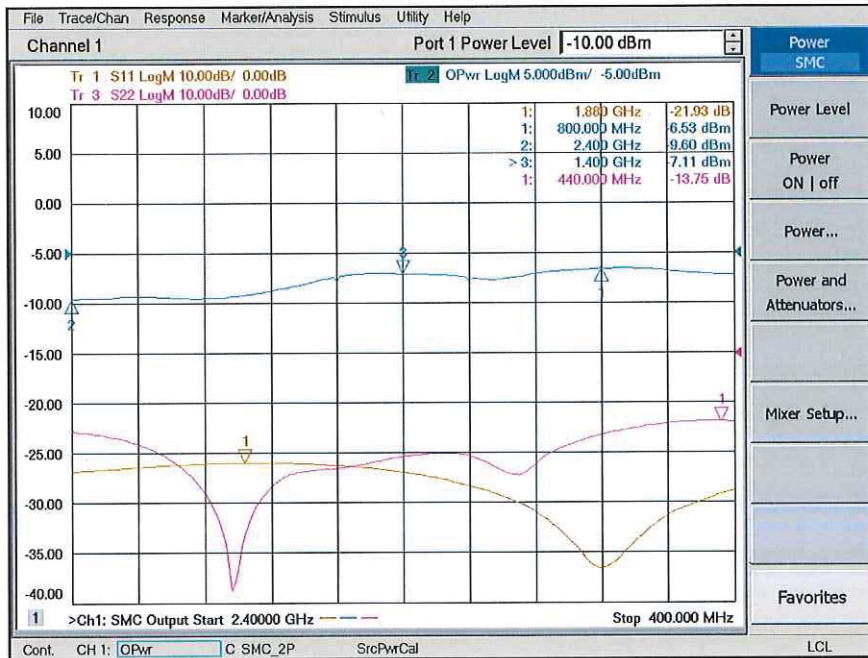


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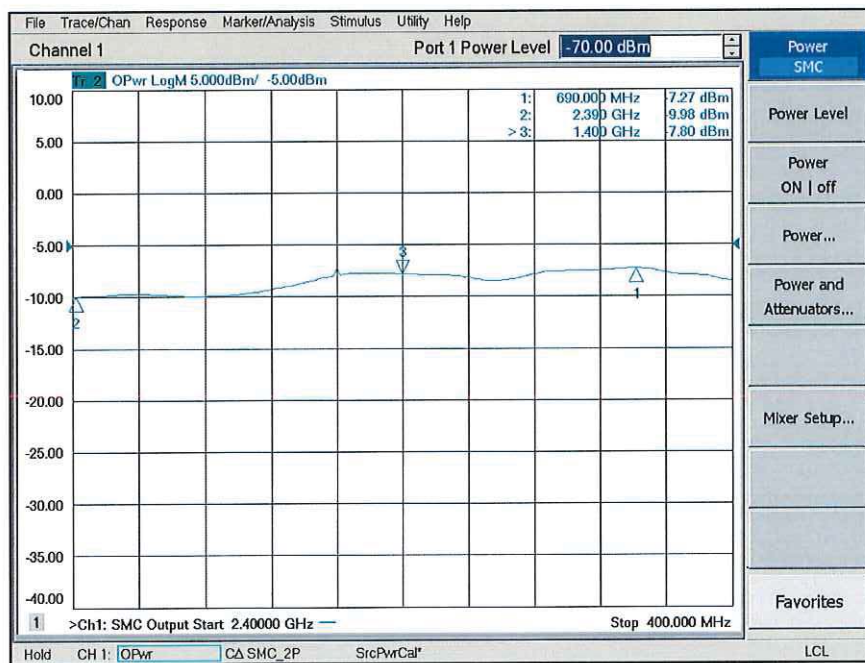
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RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

RF Receive Input (J1) To IF1 Output (J3A) Channel 1 (-10dBm Input)



RF Receive Input (J1) To IF1 Output (J3A) Channel 1 (-70dBm Input)



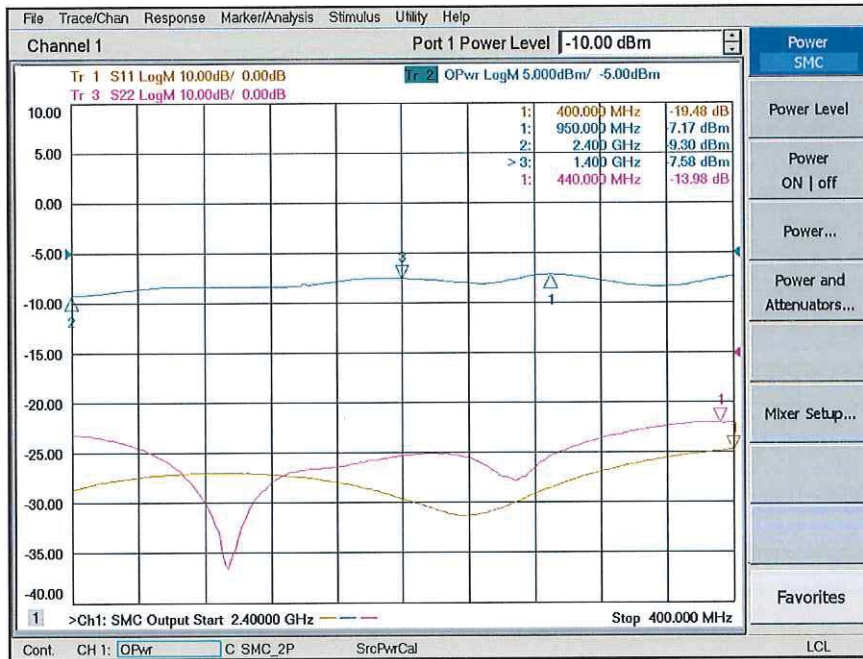


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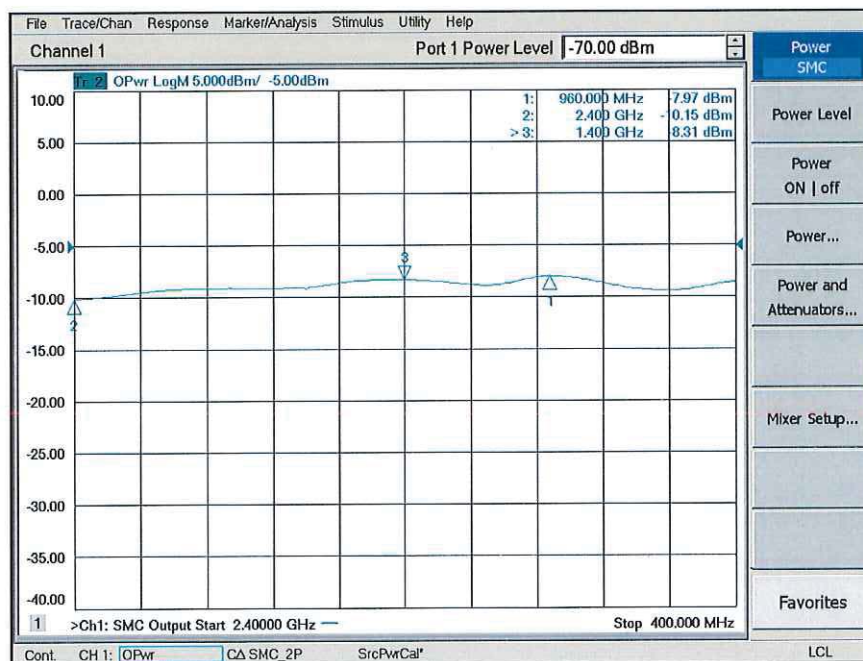
PL17374/1621

RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

RF Receive Input (J1) To IF1 Output (J3A) Channel 2 (-10dBm Input)



RF Receive Input (J1) To IF1 Output (J3A) Channel 2 (-70dBm Input)



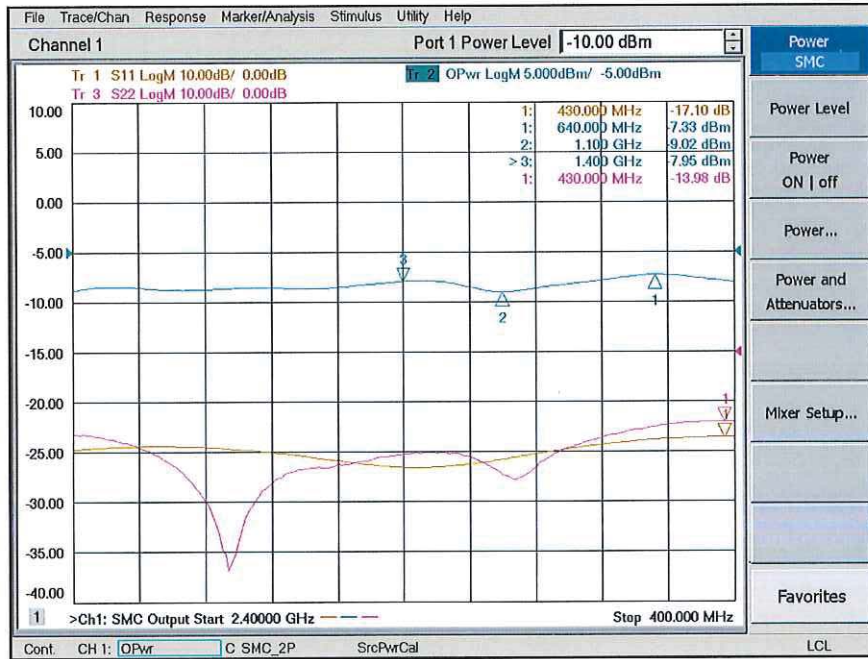


SUMMARY TEST DATA
ON
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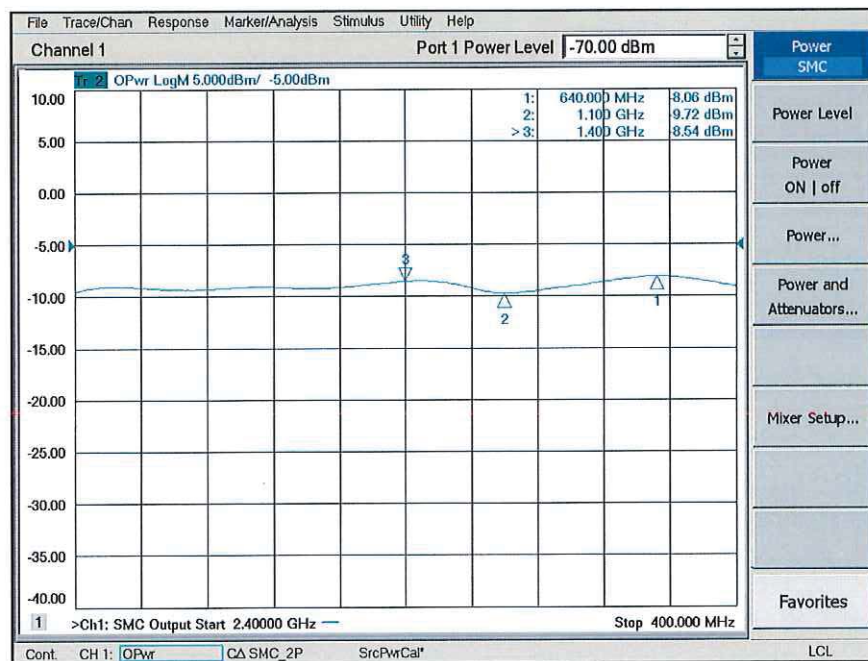
PL17374/1621

RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

RF Receive Input (J1) To IF1 Output (J3A) Channel 3 (-10dBm Input)



RF Receive Input (J1) To IF1 Output (J3A) Channel 3 (-70dBm Input)



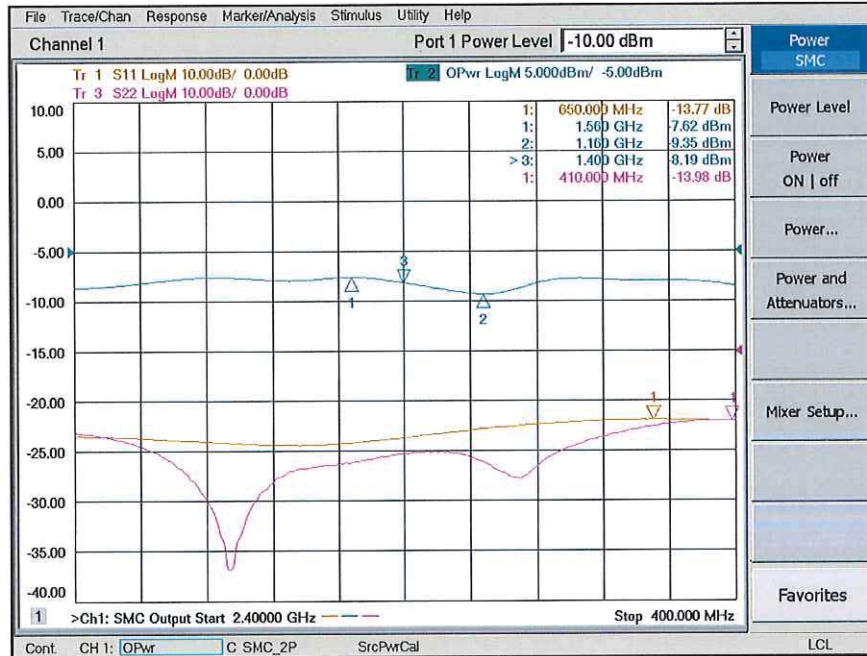


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ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

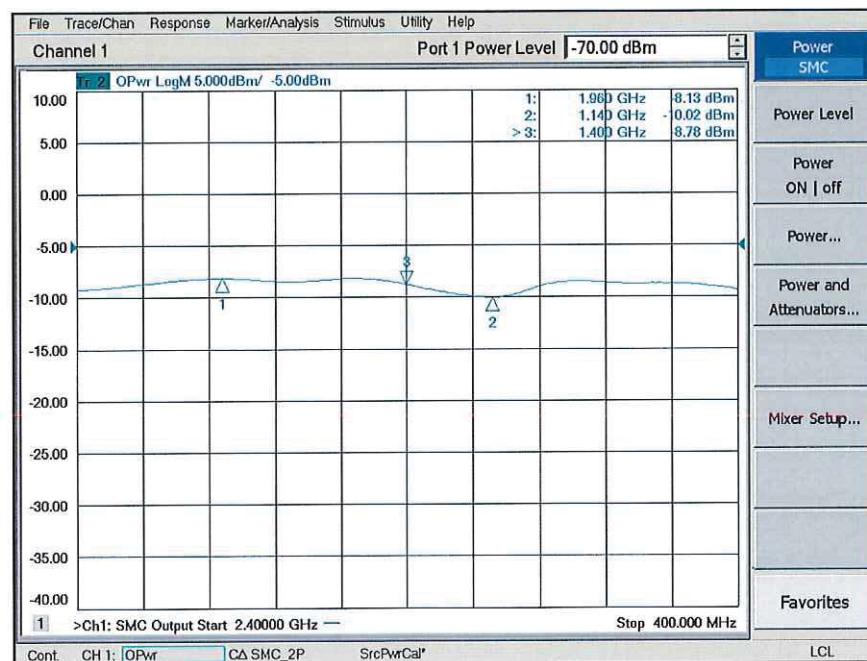
PL17374/1621

RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

RF Receive Input (J1) To IF1 Output (J3A) Channel 4 (-10dBm Input)



RF Receive Input (J1) To IF1 Output (J3A) Channel 4 (-70dBm Input)



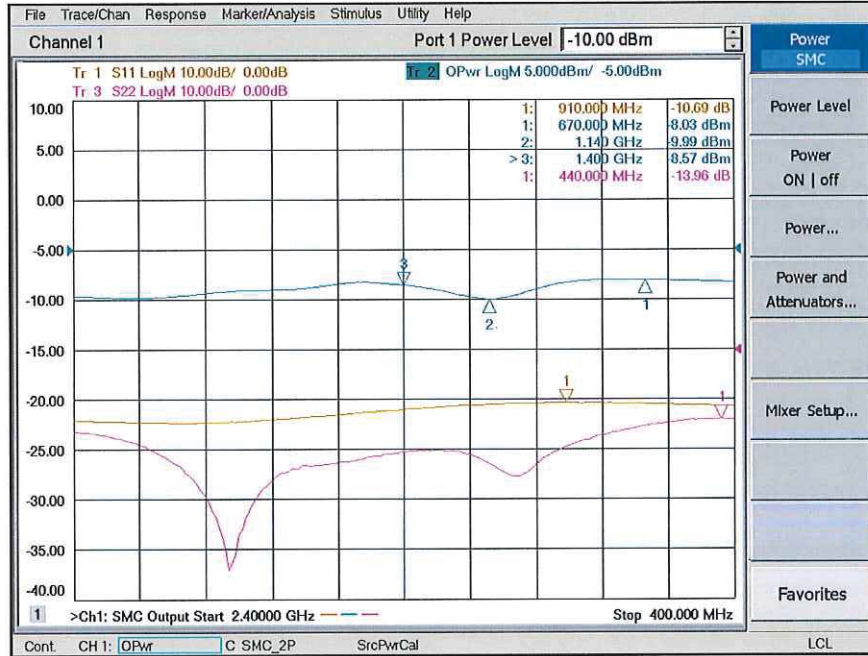


SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

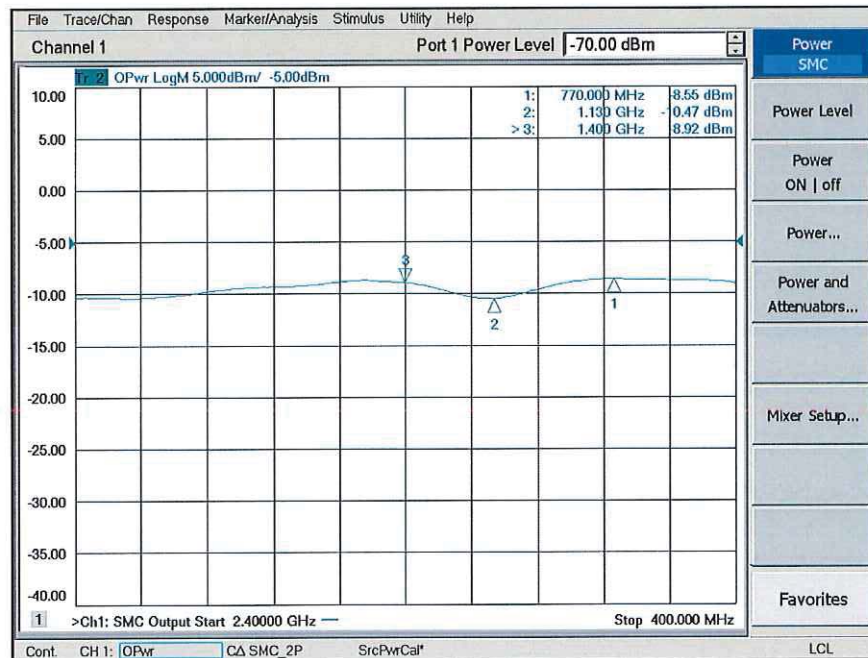
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RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

RF Receive Input (J1) To IF1 Output (J3A) Channel 5 (-10dBm Input)



RF Receive Input (J1) To IF1 Output (J3A) Channel 5 (-70dBm Input)



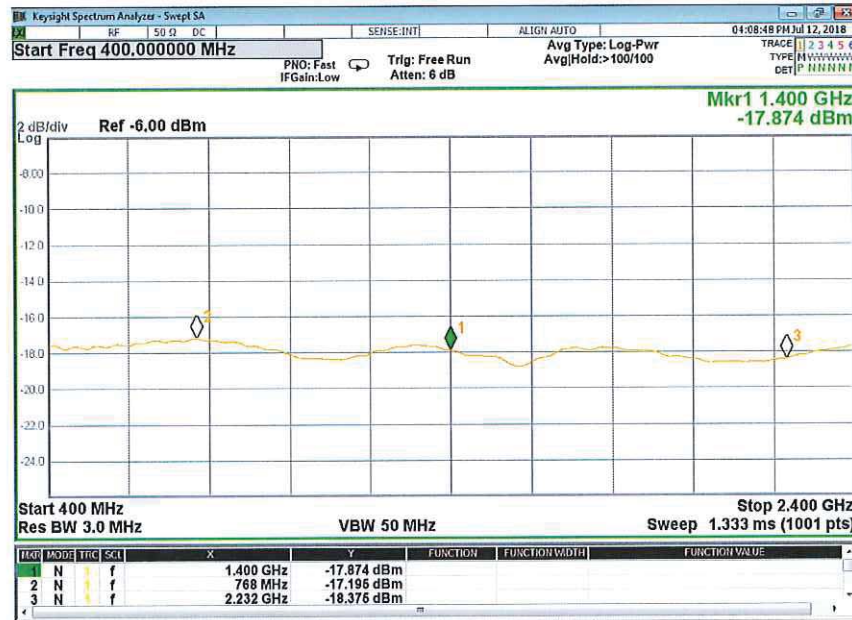


SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

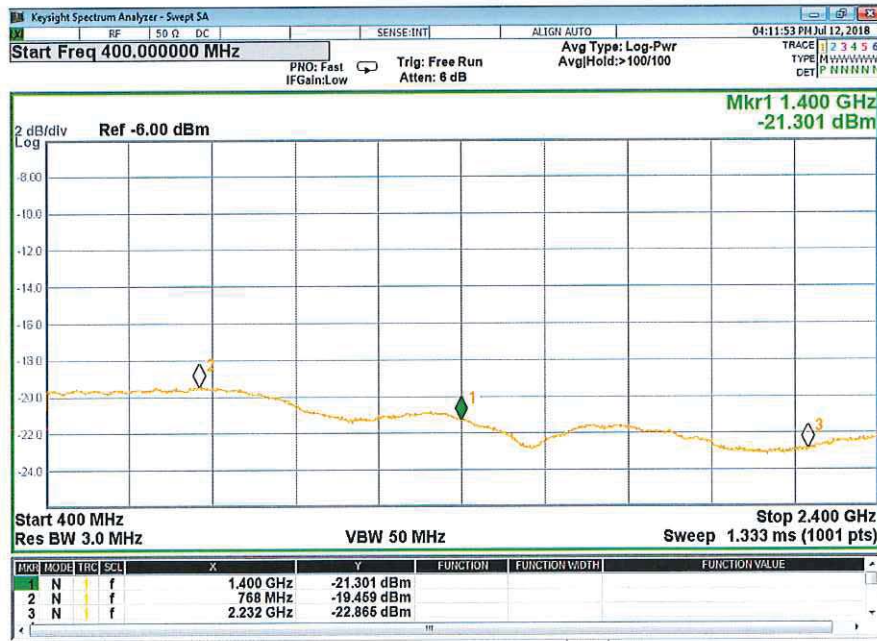
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RECEIVE INPUT to IF OUTPUT PLOTS - Linear RF Channel

RF Receive Input (J1) To IF1 Output (J3A) Thru Channel (-10dBm Input) Linear Channel



RF Receive Input (J1) To IF1 Output (J3A) Thru Channel (-70dBm Input) Linear Channel

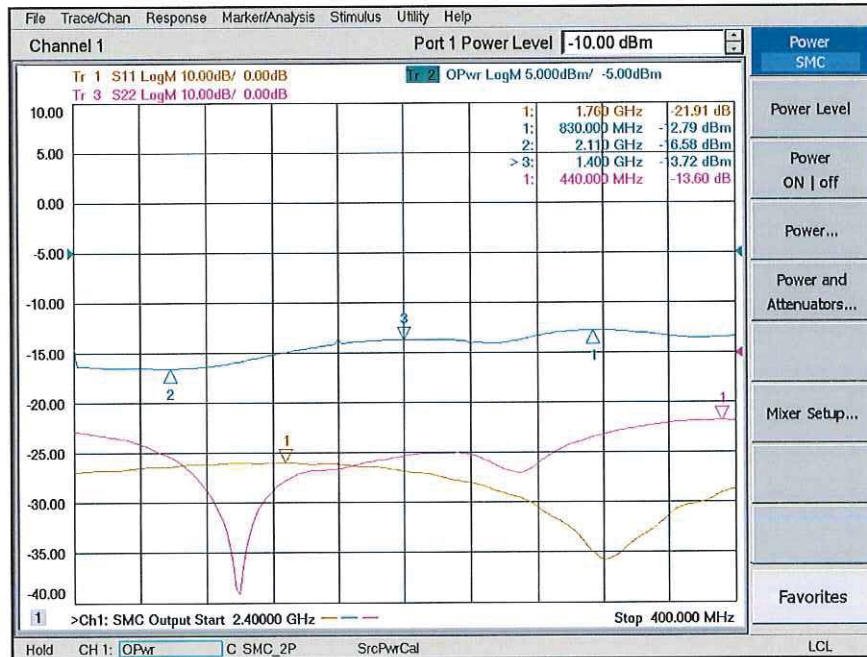




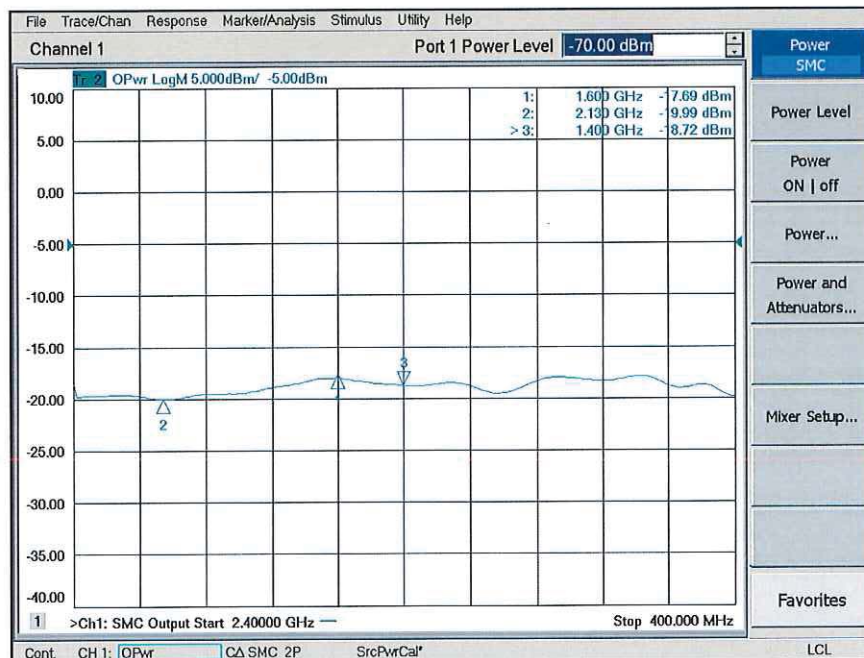
SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

PL17374/1621

RF Receive Input (J1) To IF1 Output (J3A) Channel 1 (-10dBm Input) Linear Channel



RF Receive Input (J1) To IF1 Output (J3A) Channel 1 (-70dBm Input) Linear Channel

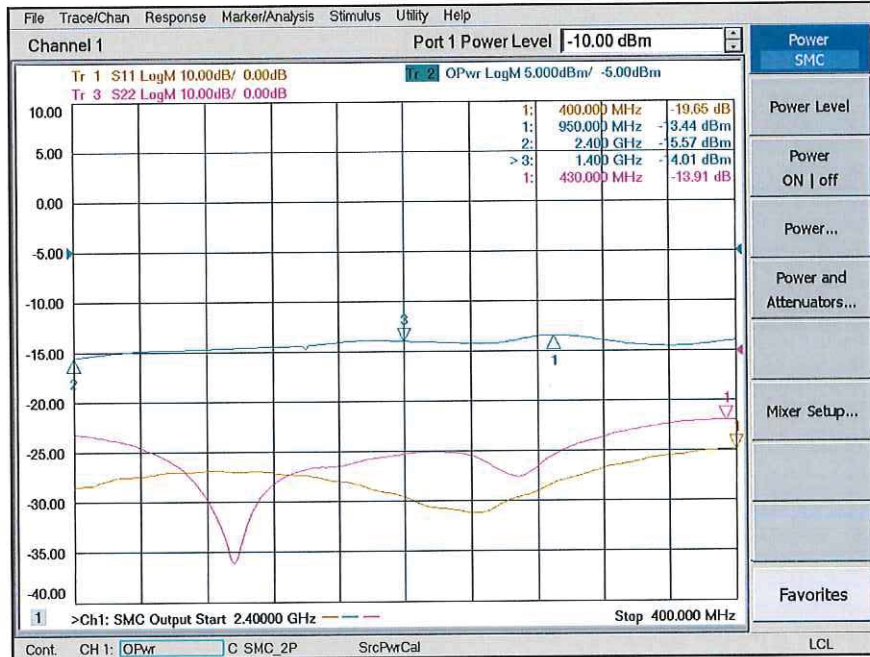




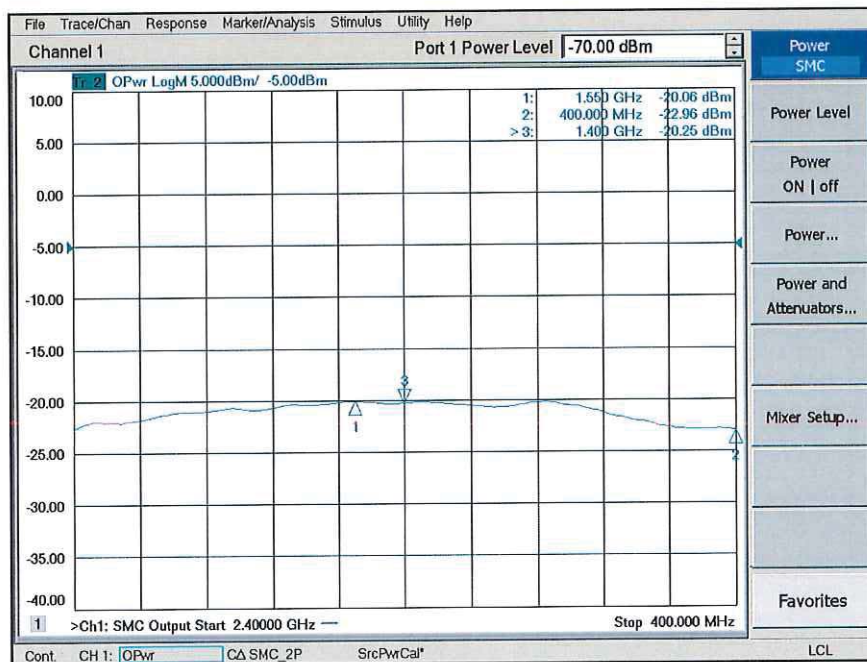
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RF Receive Input (J1) To IF1 Output (J3A) Channel 2 (-10dBm Input) Linear Channel



RF Receive Input (J1) To IF1 Output (J3A) Channel 2 (-70dBm Input) Linear Channel

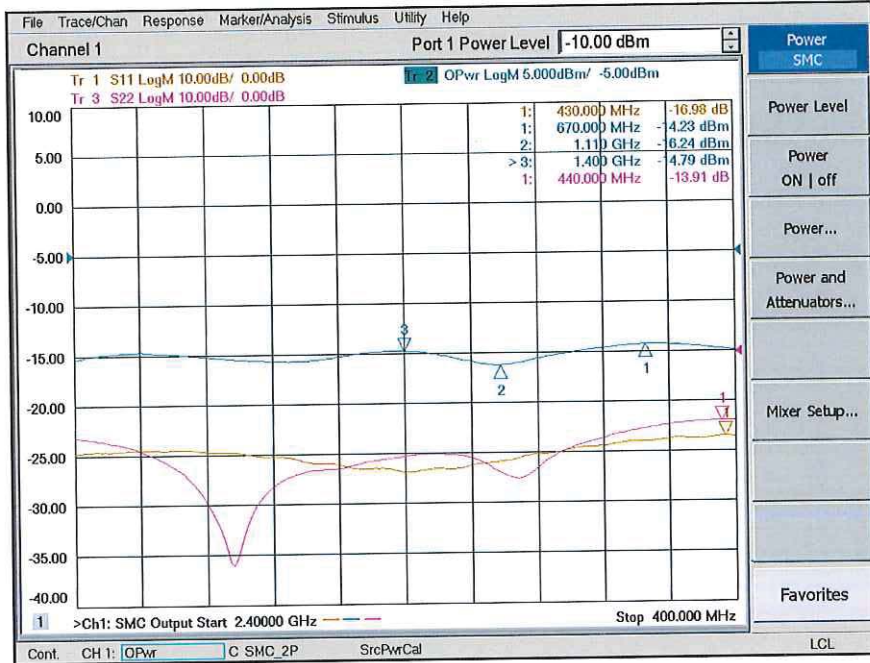




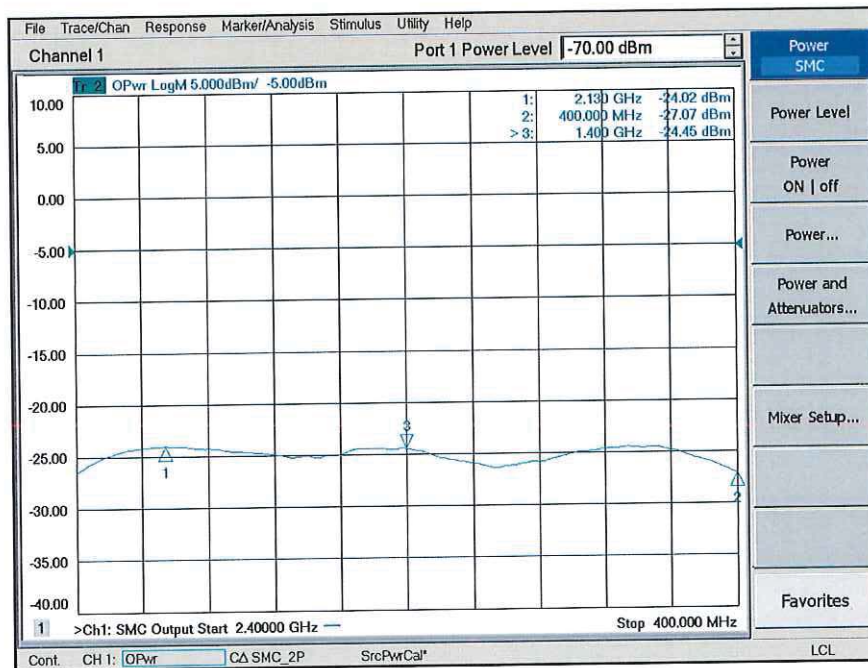
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RF Receive Input (J1) To IF1 Output (J3A) Channel 3 (-10dBm Input) Linear Channel



RF Receive Input (J1) To IF1 Output (J3A) Channel 3 (-70dBm Input) Linear Channel



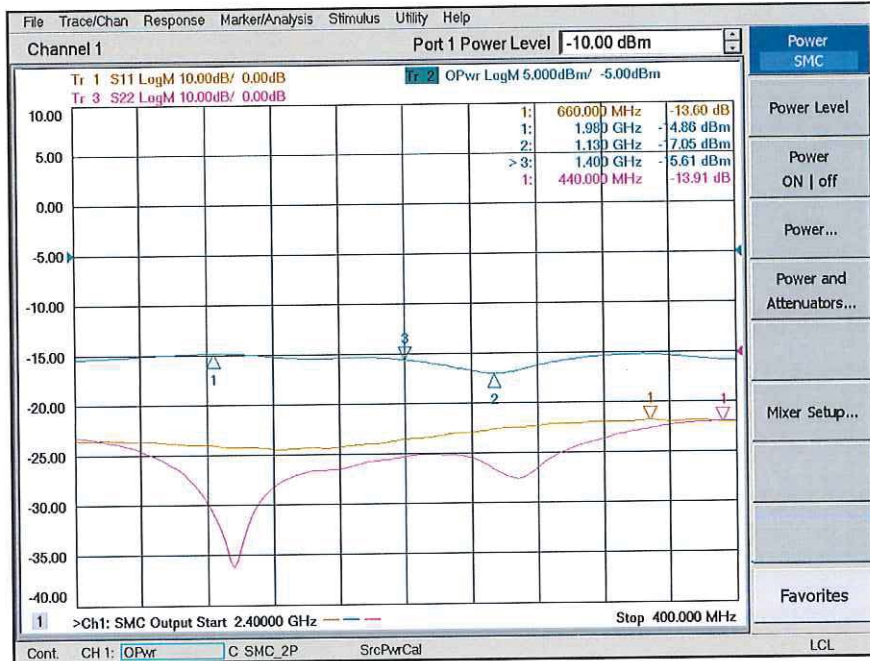
7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com



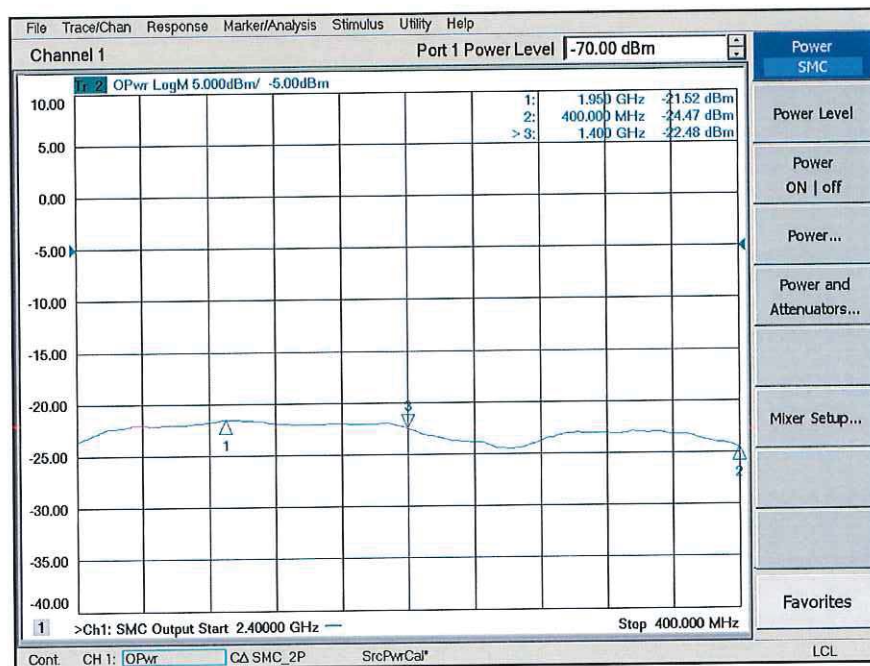
SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

PL17374/1621

RF Receive Input (J1) To IF1 Output (J3A) Channel 4 (-10dBm Input) Linear Channel



RF Receive Input (J1) To IF1 Output (J3A) Channel 4 (-70dBm Input) Linear Channel

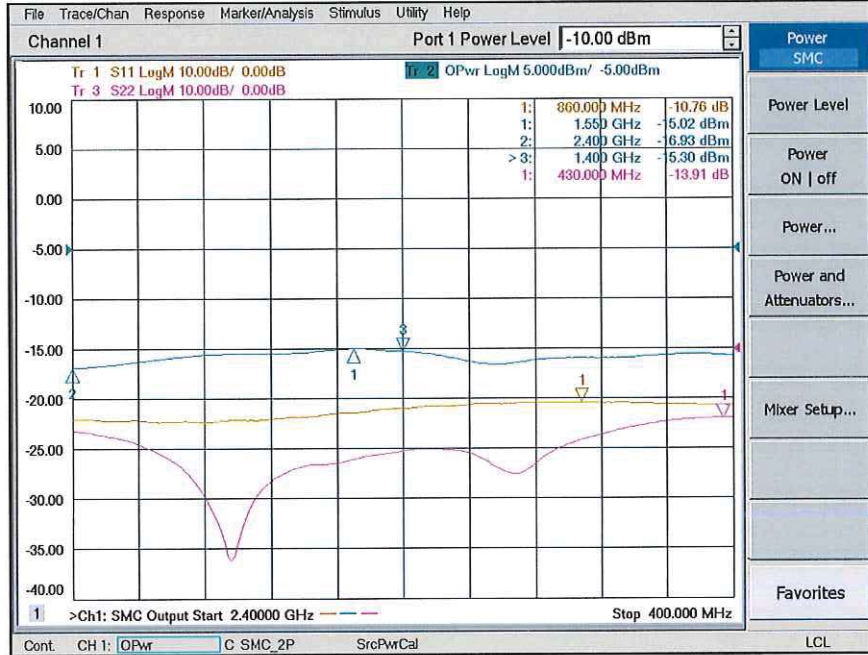




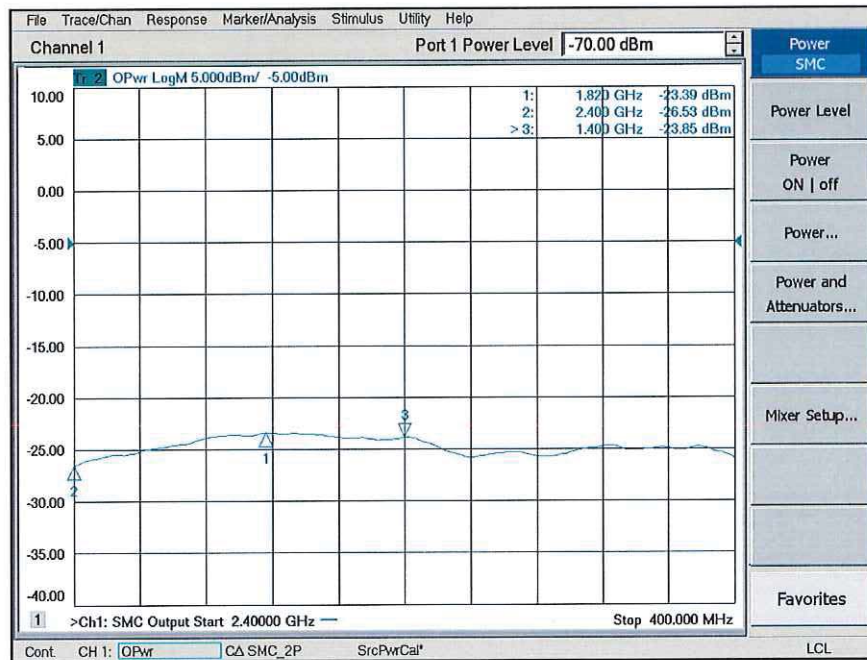
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RF Receive Input (J1) To IF1 Output (J3A) Channel 5 (-10dBm Input) Linear Channel



RF Receive Input (J1) To IF1 Output (J3A) Channel 5 (-70dBm Input) Linear Channel





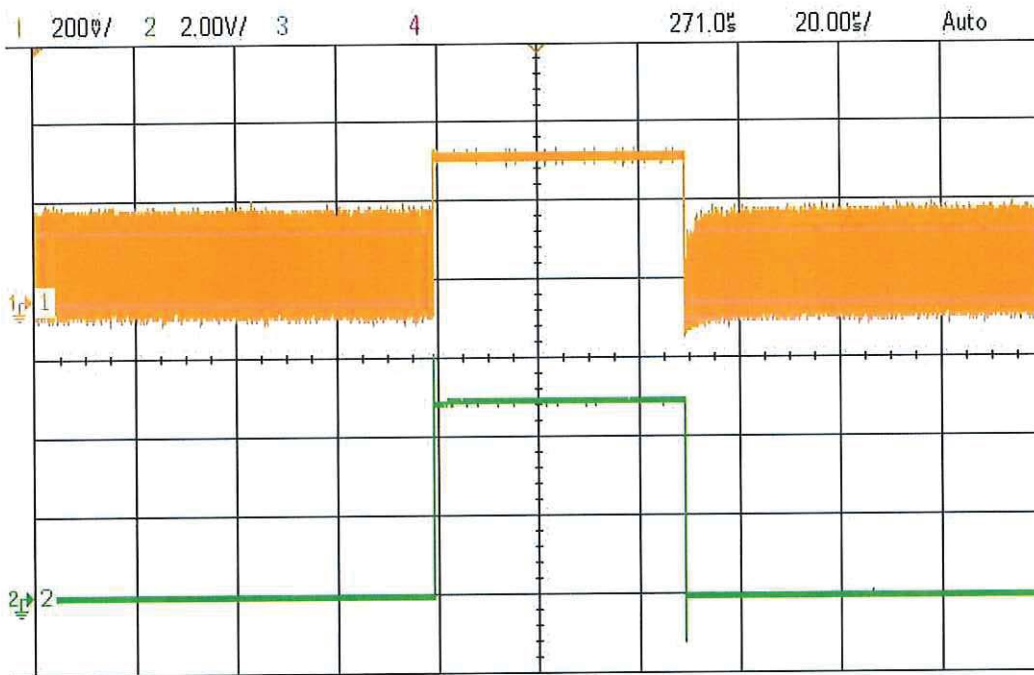
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RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

Log Proportional Detected Video Output (V1) and Threshold Detected Video Output (V0)

Thru Channel - 1.4GHz @ -68dBm Threshold Set to 14



Yellow Trace: J11 - Log Proportional Detected Video Output (V1)

Green Trace: J12 - Threshold Detected Video Output (V0)



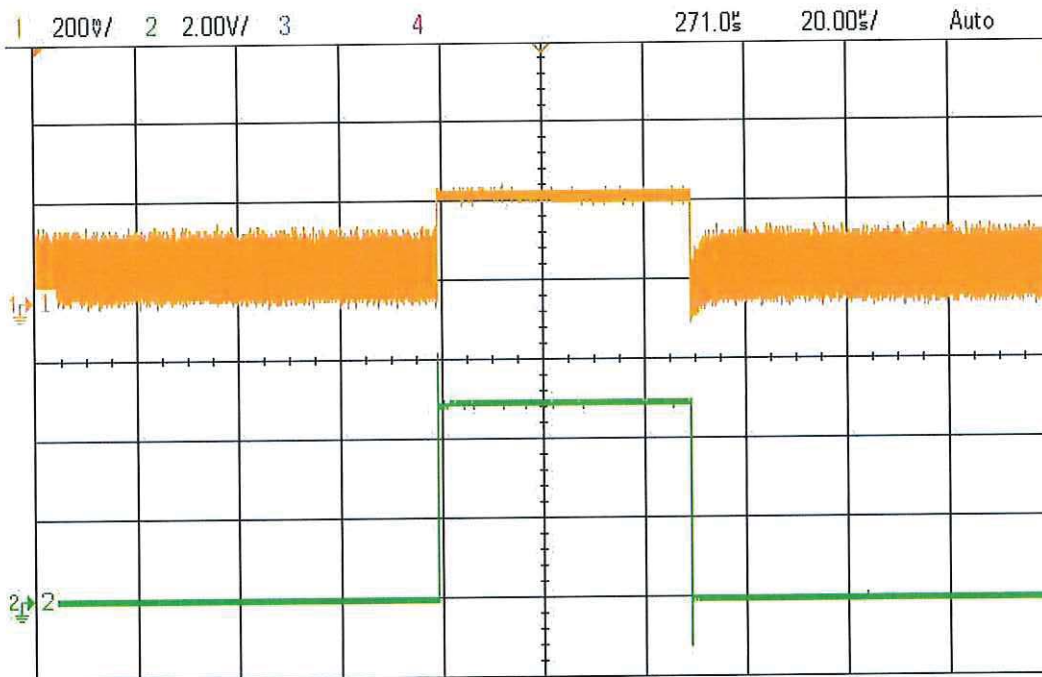
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RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

Log Proportional Detected Video Output (V1) And Threshold Detected Video Output (V0)

Channel 1 - 3.4GHz @ -72dBm Threshold Set to 11



Yellow Trace: J11 - Log Proportional Detected Video Output (V1)

Green Trace: J12 - Threshold Detected Video Output (V0)



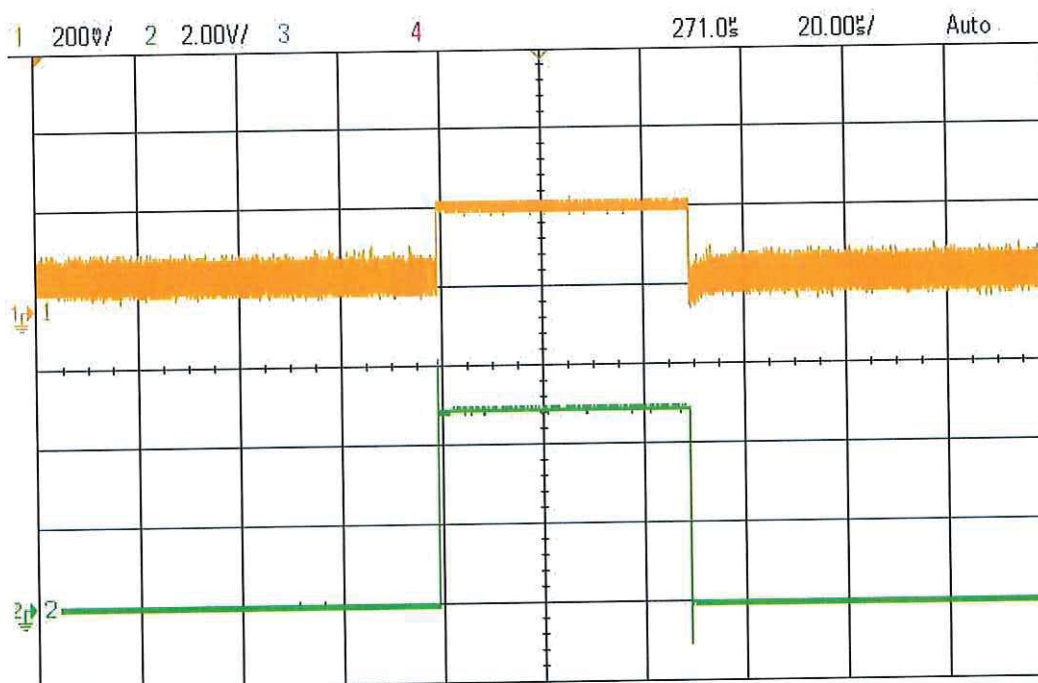
SUMMARY TEST DATA
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RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

Log Proportional Detected Video Output (V1) And Threshold Detected Video Output (V0)

Channel 2 - 5.4GHz @ -72dBm Threshold Set to 11



Yellow Trace: J11 - Log Proportional Detected Video Output (V1)

Green Trace: J12 - Threshold Detected Video Output (V0)



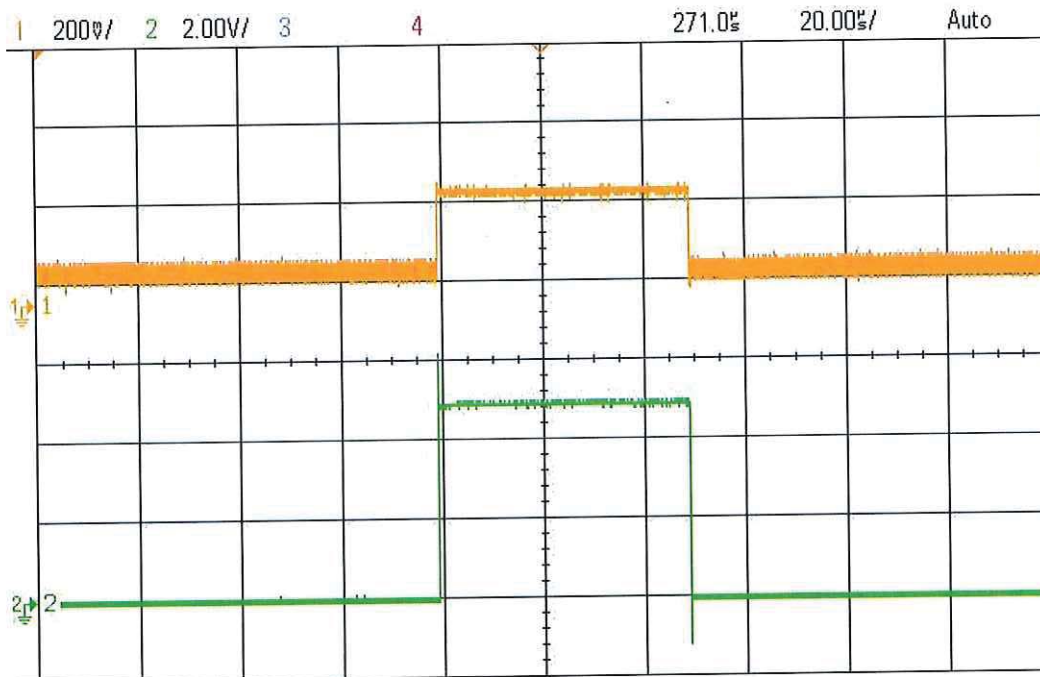
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RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

Log Proportional Detected Video Output (V1) And Threshold Detected Video Output (V0)

Channel 3 - 7.4GHz @ -69dBm Threshold Set to 11



Yellow Trace: J11 - Log Proportional Detected Video Output (V1)

Green Trace: J12 - Threshold Detected Video Output (V0)



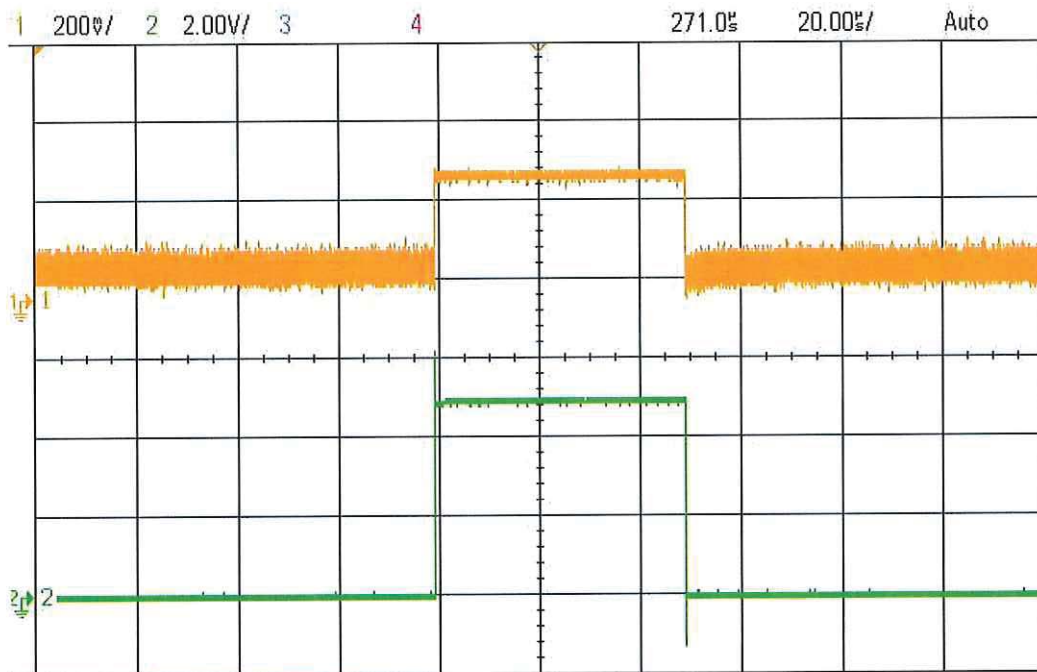
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RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

Log Proportional Detected Video Output (V1) And Threshold Detected Video Output (V0)

Channel 4 - 9.4GHz @ -71dBm Threshold Set to 11



Yellow Trace: J11 - Log Proportional Detected Video Output (V1)

Green Trace: J12 - Threshold Detected Video Output (V0)



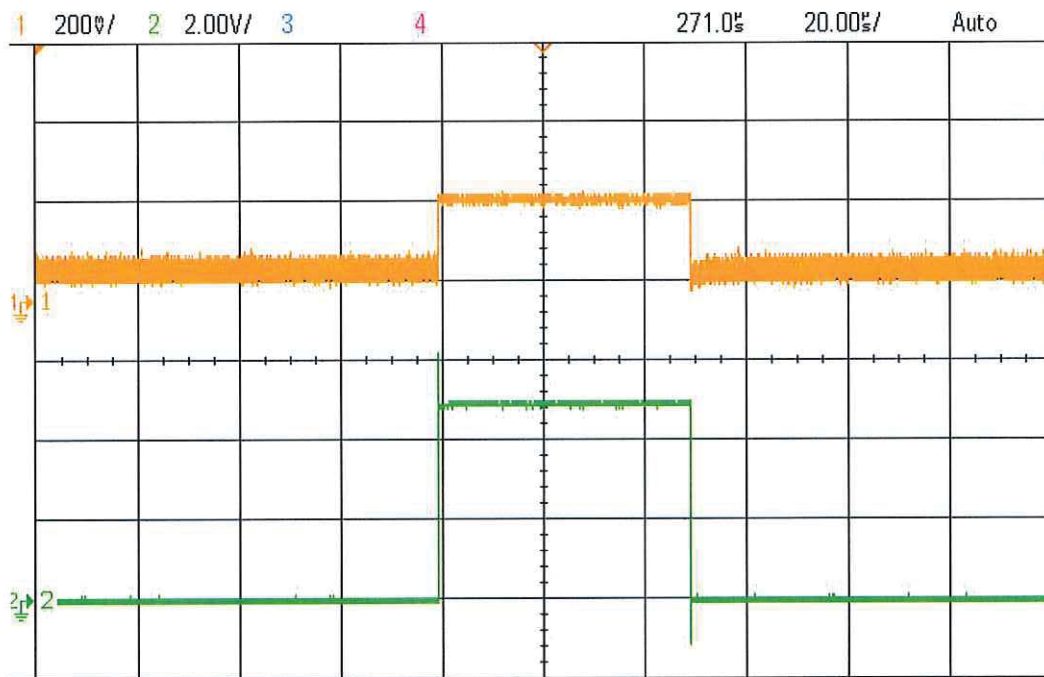
SUMMARY TEST DATA
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RECEIVE INPUT to IF OUTPUT PLOTS - Limited RF Channel

Log Proportional Detected Video Output (V1) And Threshold Detected Video Output (V0)

Channel 5 - 11.4GHz @ -69dBm Threshold Set to 11



Yellow Trace: J11 - Log Proportional Detected Video Output (V1)

Green Trace: J12 - Threshold Detected Video Output (V0)



**SUMMARY TEST DATA
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TABLE 1

Typical Minimum Threshold Values for Band Centers and Band Edges

Channel	Frequency	dBm	Threshold setting	Frequency	dBm	Threshold setting	Frequency	dBm	Threshold setting
1	2.4 GHz	-73	11	3.4 GHz	-72	11	4.4 GHz	-71	11
2	4.4 GHz	-71	11	5.4 GHz	-72	11	6.4 GHz	-69	11
3	6.4 GHz	-67	11	7.4 GHz	-69	11	8.4 GHz	-66	11
4	8.4 GHz	-69	11	9.4 GHz	-71	11	10.4 GHz	-69	11
5	10.4 GHz	-66	11	11.4 GHz	-69	11	12.4 GHz	-66	11
THRU	400 MHz	-69	14	1.4 GHz	-69	14	2.4 GHz	-68	14

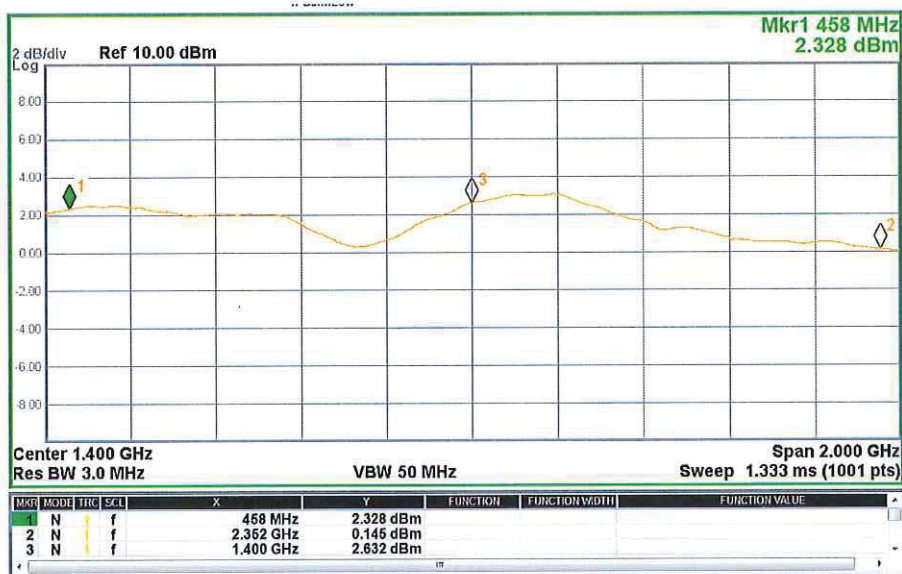


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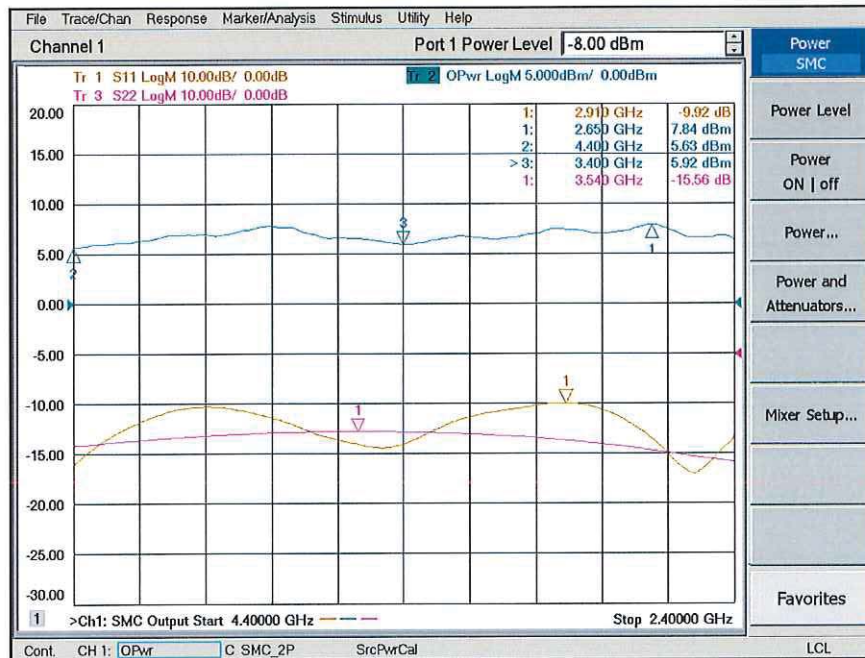
PL17374/1621

IF INPUT to TRANSMIT OUTPUT PLOTS

IF1 Input (J4A) To RF Transmit Output (J6) Thru Channel (-8dBm Input)



IF1 Input (J4A) To RF Transmit Output (J6) Channel 1 (-8dBm Input)



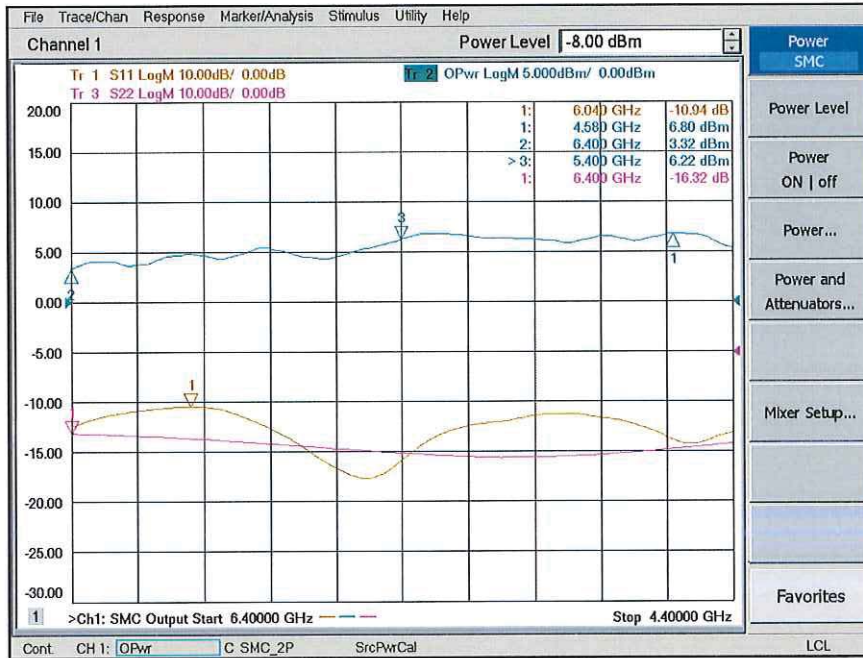


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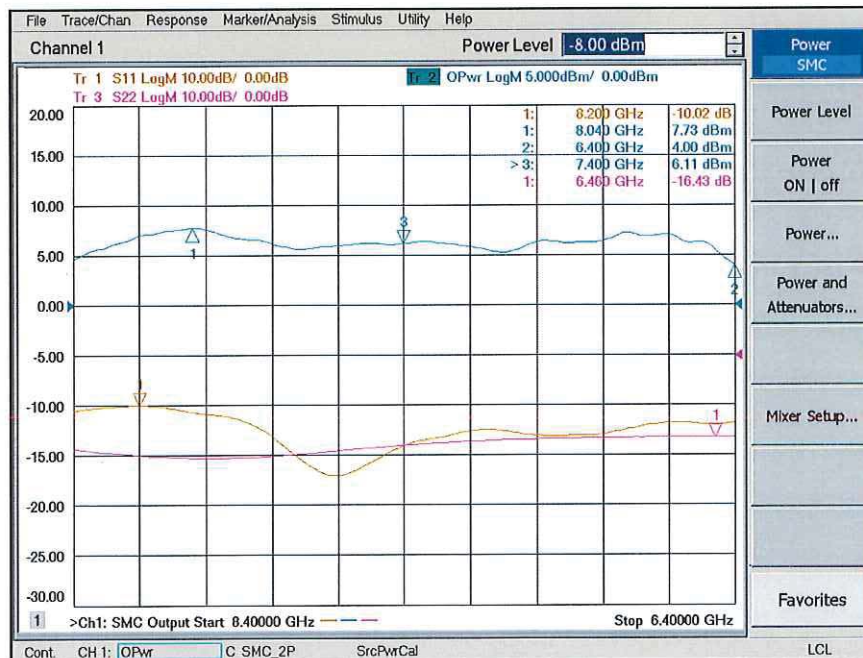
PL17374/1621

IF INPUT to TRANSMIT OUTPUT PLOTS

IF1 Input (J4A) To RF Transmit Output (J6) Channel 2 (-8dBm Input)



IF1 Input (J4A) To RF Transmit Output (J6) Channel 3 (-8dBm Input)



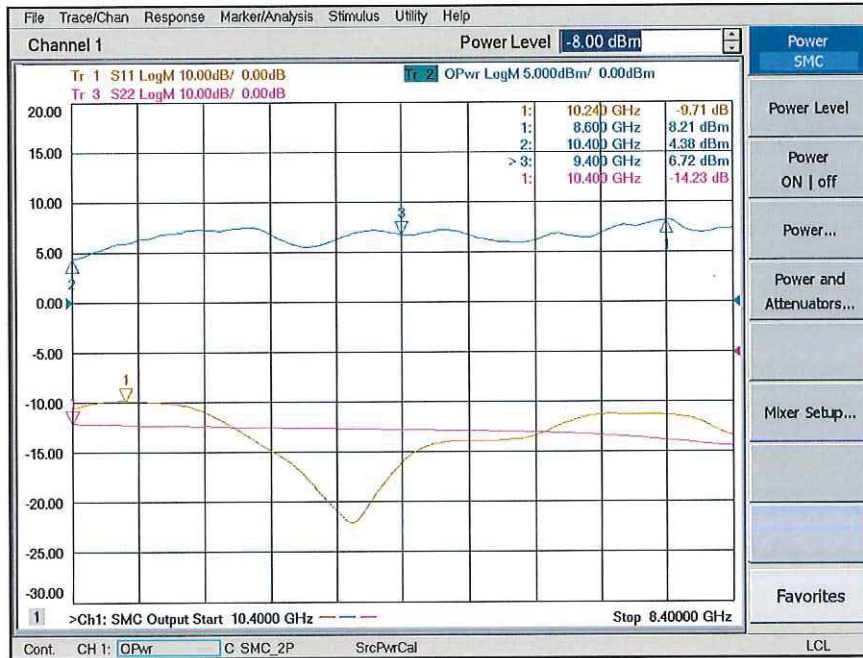


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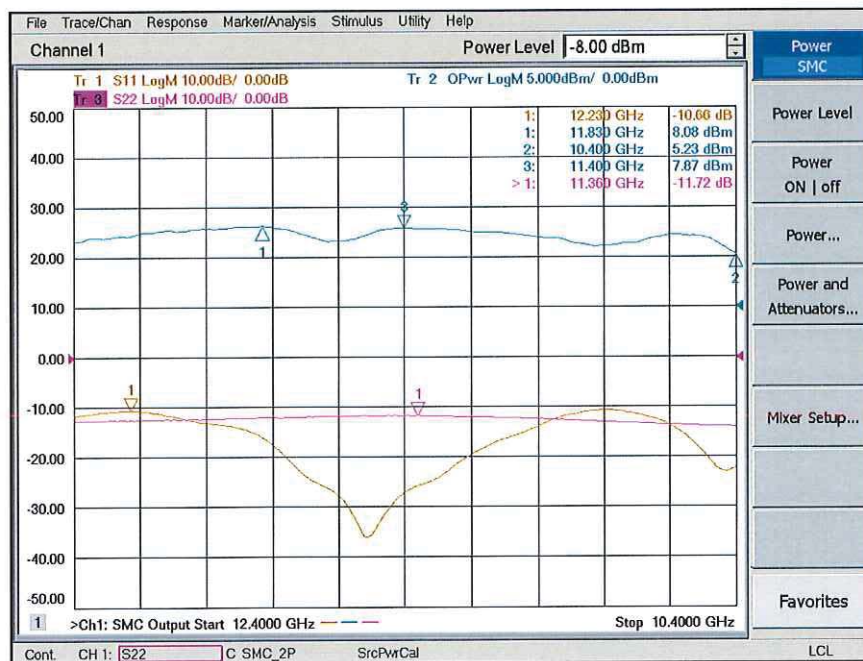
PL17374/1621

IF INPUT to TRANSMIT OUTPUT PLOTS

IF1 Input (J4A) To RF Transmit Output (J6) Channel 4 (-8dBm Input)



IF1 Input (J4A) To RF Transmit Output (J6) Channel 5 (-8dBm Input)



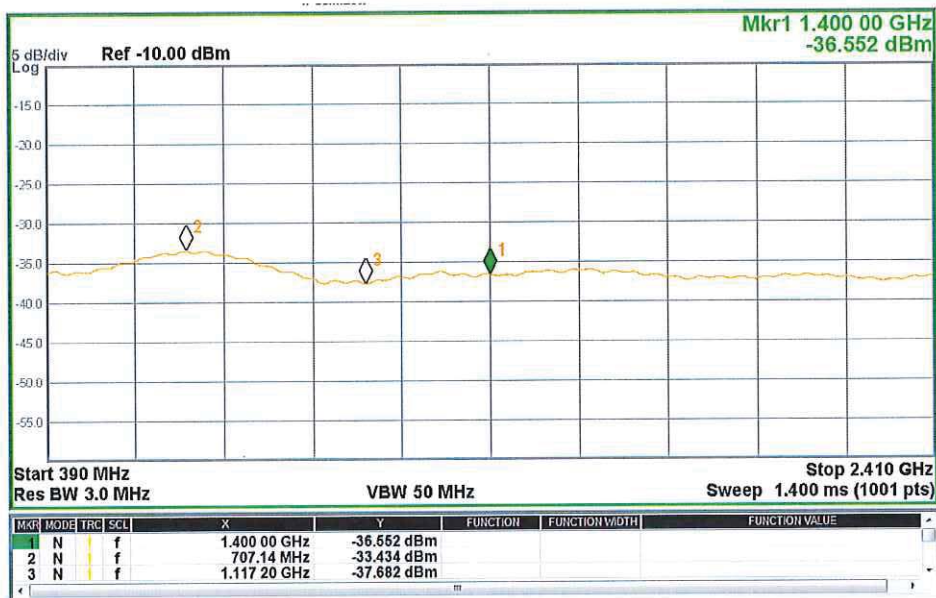


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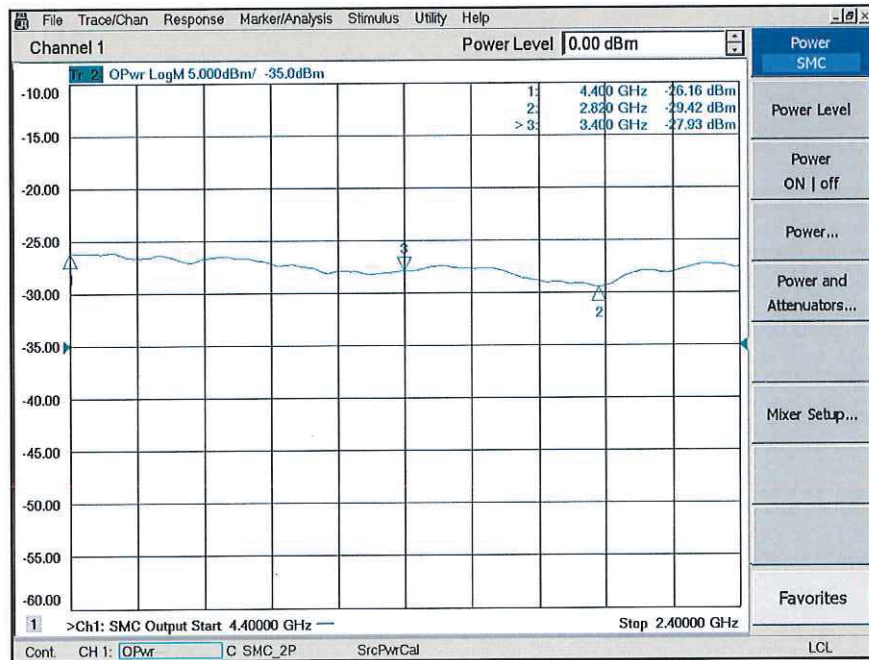
PL17374/1621

IF INPUT to RF TRANSMIT SAMPLE OUTPUT PLOTS

IF1 Input (J4A) To RF Transmit Sample Output (J8) Thru Channel (0dBm Input)



IF1 Input (J4A) To RF Transmit Sample Output (J8) Channel 1 (0dBm Input)



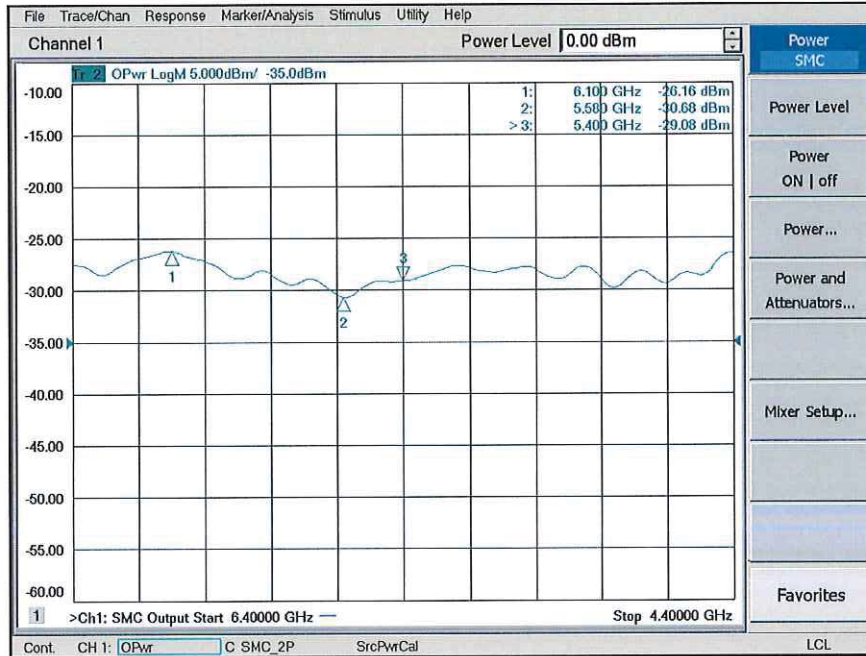


SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

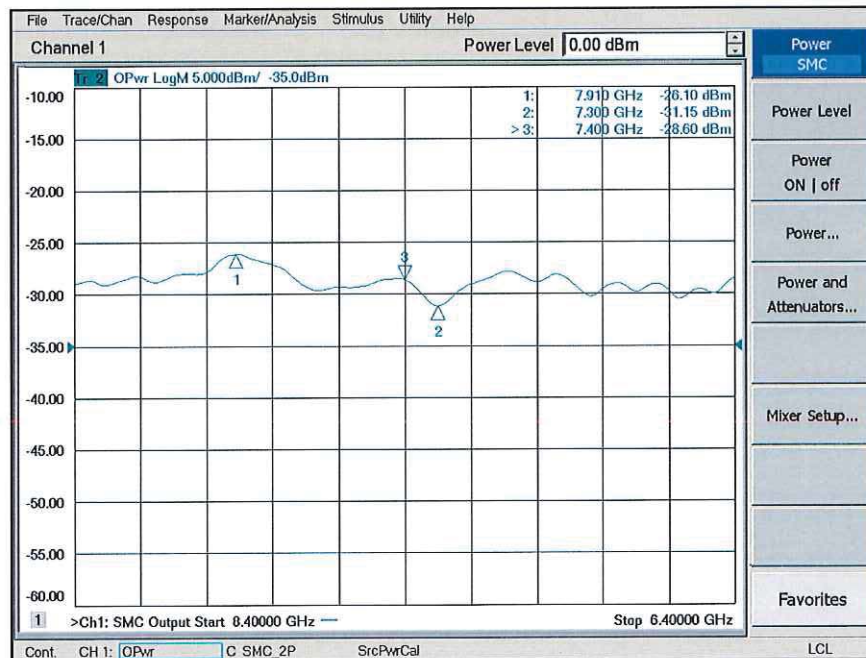
PL17374/1621

IF INPUT to RF TRANSMIT SAMPLE OUTPUT PLOTS

IF1 Input (J4A) To RF Transmit Sample Output (J8) Channel 2 (0dBm Input)



IF1 Input (J4A) To RF Transmit Sample Output (J8) Channel 3 (0dBm Input)



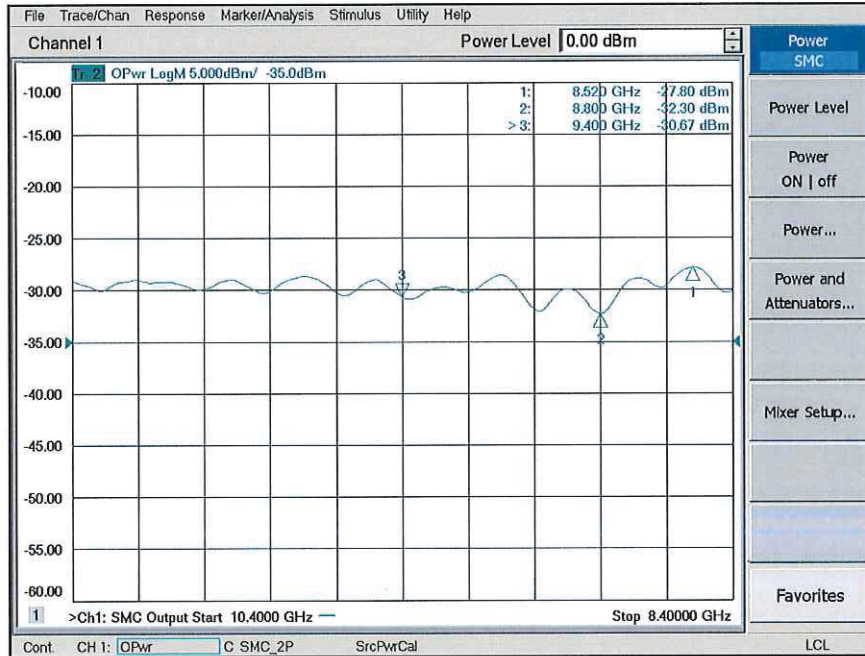


SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

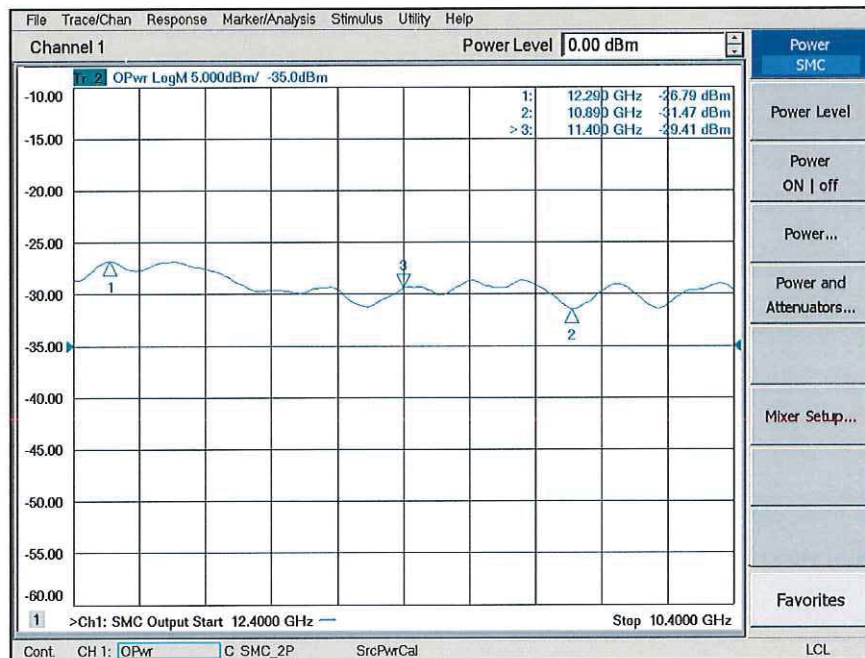
PL17374/1621

IF INPUT to RF TRANSMIT SAMPLE OUTPUT PLOTS

IF1 Input (J4A) To RF Transmit Sample Output (J8) Channel 4 (0dBm Input)



IF1 Input (J4A) To RF Transmit Sample Output (J8) Channel 5 (0dBm Input)



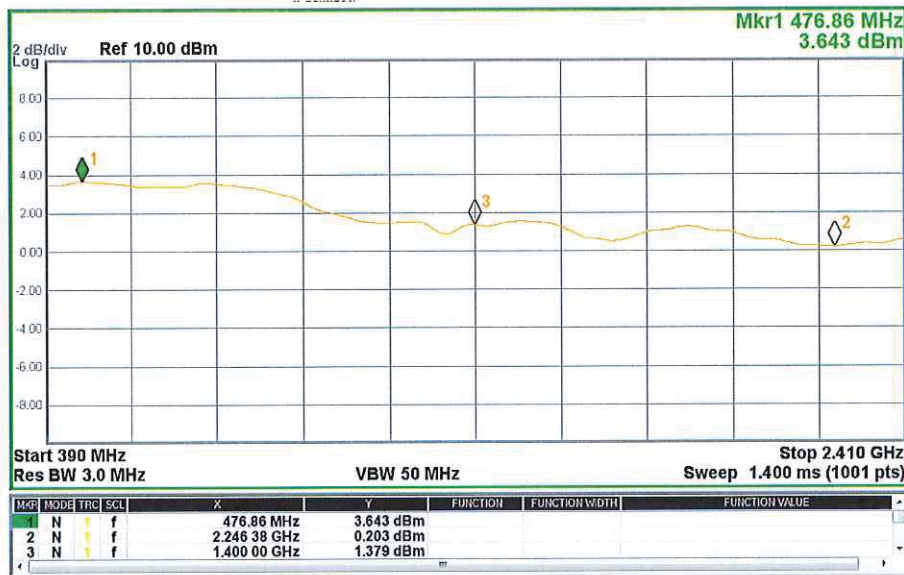


SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

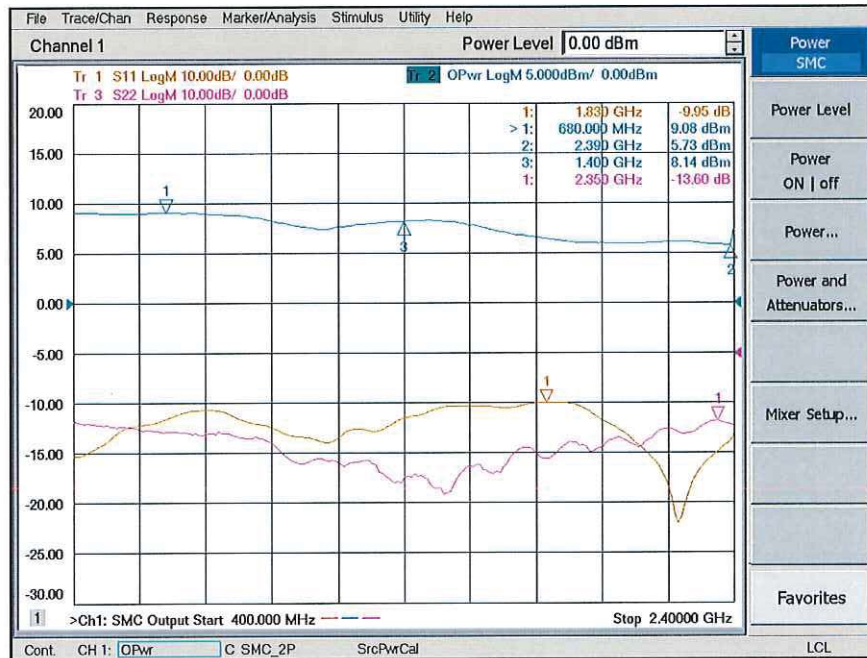
PL17374/1621

IF INPUT to RF TRANSMIT BUILT-IN-TEST OUTPUT PLOTS

IF1 Input (J4A) To IF1 Output (J3A) Thru Channel (0dBm Input)



IF1 Input (J4A) To IF1 Output (J3A) Channel 1 (0dBm Input)



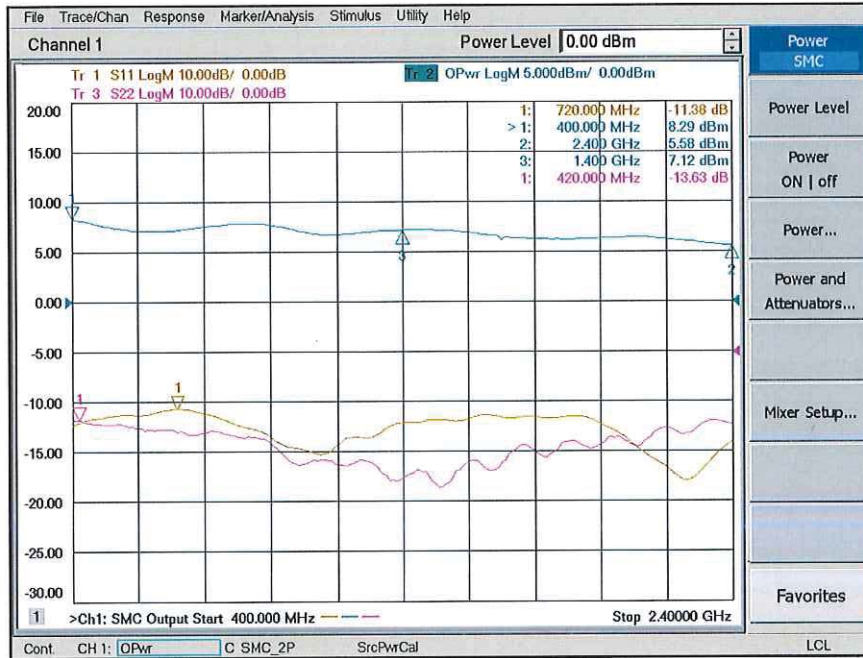


SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX

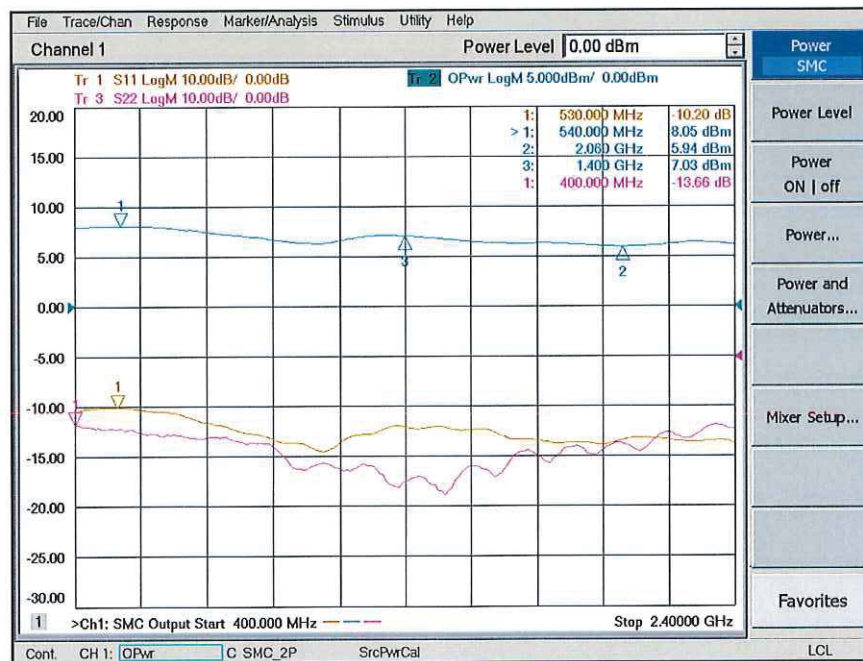
PL17374/1621

IF INPUT to RF TRANSMIT BUILT-IN-TEST OUTPUT PLOTS

IF1 Input (J4A) To IF1 Output (J3A) Channel 2 (0dBm Input)



IF1 Input (J4A) To IF1 Output (J3A) Channel 3 (0dBm Input)



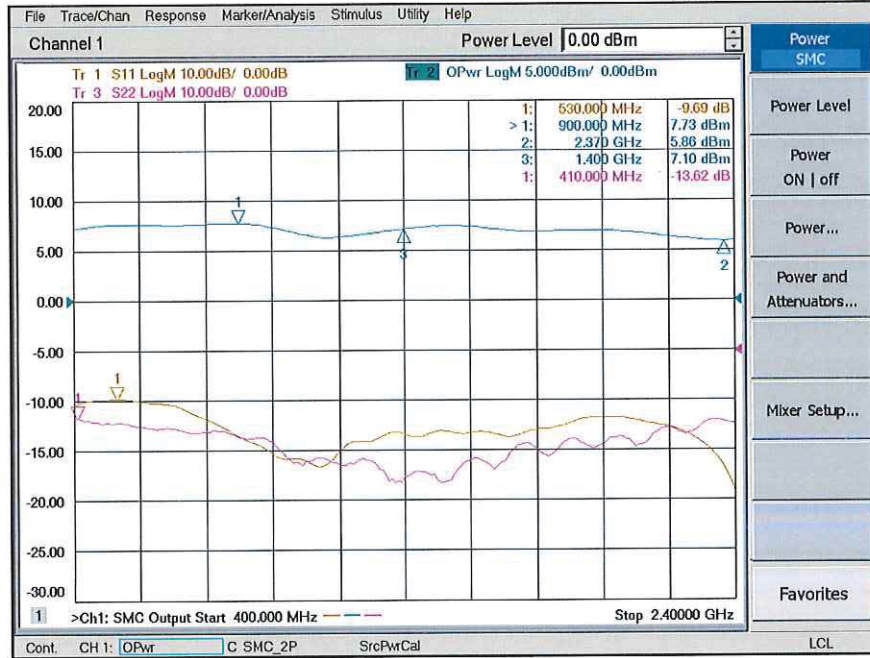


**SUMMARY TEST DATA
ON
PTRAN-100M18G-SDLVA-SFB-3UVPX-10HP-MAH-MX**

PL17374/1621

IF INPUT to RF TRANSMIT BUILT-IN-TEST OUTPUT PLOTS

IF1 Input (J4A) To IF1 Output (J3A) Channel 4 (0dBm Input)



IF1 Input (J4A) To IF1 Output (J3A) Channel 5 (0dBm Input)

