


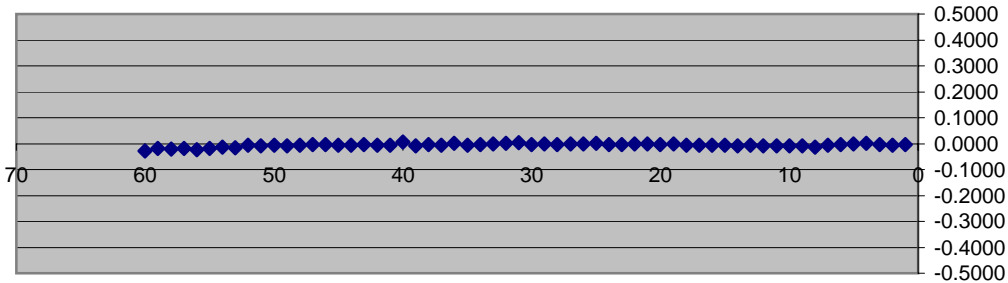
<b>Procedure</b> JPS0011P	<b>Agilent HP8156A</b> <b>Opt</b> 201	<b>Sheet 1 of 4</b>
<b>Serial Number</b>	<b>Customer Reference Number</b>	<b>Certificate Number</b>
<b>Customer</b>	<b>Calibrated By</b>	<b>Date</b>
<b>Ambient Temp</b> 21 +/- 1C	<b>R.H.</b> 44 +/- 5%	
<b>Reference Equipment Used</b>		

**Insertion Loss**


Source Wavelength:	1301.4nm	Ref Patchcord 1:	Cal 03 9/125 FC/APC
UUT Wavelength:	1301.4nm	Ref Patchcord 2:	Cal 14 9/125 FC/APC
Measured Insertion Loss:	-2.0145 dB	Source Power:	1.03645 dBm
Insertion Loss Status:	<b>PASS</b>	Specification Insertion Loss:	<3.0dB

**Linearity/Attenuation Accuracy Test**

Set (dB)	Actual	Error	Set (dB)	Actual	Error	Set (dB)	Actual	Error
1	-1.004398	-0.004398	21	-21.000710	-0.000710	41	-41.005190	-0.005190
2	-2.006564	-0.006564	22	-22.000240	-0.000240	42	-42.006980	-0.006980
3	-3.003496	-0.003496	23	-23.004170	-0.004170	43	-43.003540	-0.003540
4	-3.999087	0.000913	24	-24.002900	-0.002900	44	-44.006930	-0.006930
5	-5.001787	-0.001787	25	-24.998440	0.001560	45	-45.005750	-0.005750
6	-6.004819	-0.004819	26	-26.001600	-0.001600	46	-46.003910	-0.003910
7	-7.006360	-0.006360	27	-27.002240	-0.002240	47	-47.004730	-0.004730
8	-8.013382	-0.013382	28	-28.004680	-0.004680	48	-48.005720	-0.005720
9	-9.007929	-0.007929	29	-29.000610	-0.000610	49	-49.008640	-0.008640
10	-10.008360	-0.008360	30	-30.003540	-0.003540	50	-50.006250	-0.006250
11	-11.007900	-0.007900	31	-30.996900	0.003100	51	-51.009200	-0.009200
12	-12.008540	-0.008540	32	-31.998460	0.001540	52	-52.007240	-0.007240
13	-13.006640	-0.006640	33	-33.000280	-0.000280	53	-53.016000	-0.016000
14	-14.009550	-0.009550	34	-34.003360	-0.003360	54	-54.012640	-0.012640
15	-15.006980	-0.006980	35	-35.005110	-0.005110	55	-55.019280	-0.019280
16	-16.005050	-0.005050	36	-35.999670	0.000330	56	-56.023620	-0.023620
17	-17.005710	-0.005710	37	-37.006300	-0.006300	57	-57.018490	-0.018490
18	-18.006340	-0.006340	38	-38.003380	-0.003380	58	-58.020120	-0.020120
19	-19.001670	-0.001670	39	-39.008140	-0.008140	59	-59.018830	-0.018830
20	-20.004120	-0.004120	40	-39.994960	0.005040	60	-60.028980	-0.028980



Specification: <+/-0.1dB                      Status: PASS


<b>Procedure:</b> JPS0011P	<b>Agilent HP8156A</b>	<b>Sheet 2 of 4</b>
<b>Serial Number:</b>	<b>Customer Reference Number:</b>	<b>Certificate Number:</b>
<b>Date:</b>	<b>Calibrated By:</b>	
<b>Reference Equipment Used:</b>		

**Attenuation Repeatability**

Set	Actual	Actual	Difference
6	-6.005265	-6.00337	-0.0019
12	-12.007993	-12.00742	-0.0006
18	-18.005163	-18.00502	-0.0001
24	-24.001547	-24.00140	-0.0001
30	-30.00195	-30.00201	0.0001
36	-35.997743	-35.99802	0.0003
42	-42.004813	-42.00516	0.0003
48	-48.001503	-48.00159	0.0001
54	-54.003577	-54.00565	0.0021
60	-59.98411	-59.99400	0.0099

Specification: <+/-0.01dB

Status: **PASS**

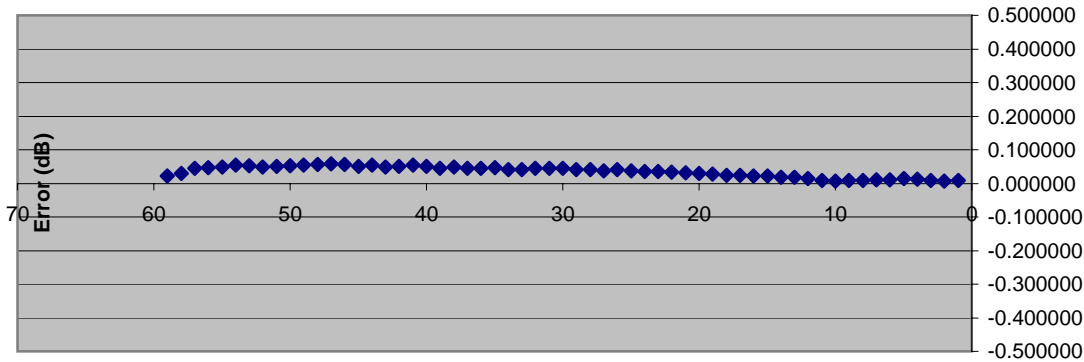
<b>Procedure:</b> JPS0011P	<b>Agilent HP8156A</b>	<b>Sheet 3 of 4</b>
<b>Serial Number:</b>	<b>Customer Reference Number:</b>	<b>Certificate Number:</b>
<b>Date:</b>	<b>Calibrated By:</b>	
<b>Reference Equipment Used:</b>		

**Insertion Loss**


Source Wavelength: 1546.8nm      Ref Patchcord 1: Cal 03 9/125 FC/APC  
 UUT Wavelength: 1546.8nm      Ref Patchcord 2: Cal 14 9/125 FC/APC  
 Measured Insertion Loss: -1.9697 dB      Source Power: 0.25890 dBm  
 Insertion Loss Status: **PASS**      Specification Insertion Loss: <3.0dB

**Linearity/Attenuation Accuracy Test**

Set (dB)	Actual	Error	Set (dB)	Actual	Error	Set (dB)	Actual	Error
1	-0.991949	0.008051	21	-20.969070	0.030930	41	-40.948910	0.051090
2	-1.993314	0.006686	22	-21.966980	0.033020	42	-41.946060	0.053940
3	-2.991015	0.008985	23	-22.964680	0.035320	43	-42.949380	0.050620
4	-3.987794	0.012206	24	-23.964200	0.035800	44	-43.950790	0.049210
5	-4.986080	0.013920	25	-24.962690	0.037310	45	-44.946180	0.053820
6	-5.990319	0.009681	26	-25.959990	0.040010	46	-45.949890	0.050110
7	-6.989041	0.010959	27	-26.963330	0.036670	47	-46.944060	0.055940
8	-7.992136	0.007864	28	-27.959000	0.041000	48	-47.942040	0.057960
9	-8.991240	0.008760	29	-28.959720	0.040280	49	-48.944510	0.055490
10	-9.994153	0.005847	30	-29.955830	0.044170	50	-49.946070	0.053930
11	-10.990750	0.009250	31	-30.956160	0.043840	51	-50.947240	0.052760
12	-11.986090	0.013910	32	-31.955250	0.044750	52	-51.949780	0.050220
13	-12.982600	0.017400	33	-32.958860	0.041140	53	-52.951770	0.048230
14	-13.981670	0.018330	34	-33.958790	0.041210	54	-53.947790	0.052210
15	-14.978790	0.021210	35	-34.953490	0.046510	55	-54.946450	0.053550
16	-15.977960	0.022040	36	-35.955150	0.044850	56	-55.951220	0.048780
17	-16.976000	0.024000	37	-36.956120	0.043880	57	-56.952410	0.047590
18	-17.977010	0.022990	38	-37.949920	0.050080	58	-57.955770	0.044230
19	-18.972280	0.027720	39	-38.951420	0.048580	59	-58.970480	0.029520
20	-19.970110	0.029890	40	-39.955810	0.044190	60	-59.978460	0.021540



Specification: <+/-0.1dB      Status: **PASS**

<b>Procedure:</b> JPS0011P	<b>Agilent HP8156A</b>	<b>Sheet 4 of 4</b>
<b>Serial Number:</b>	<b>Customer Reference Number:</b>	<b>Certificate Number:</b>
<b>Date:</b>	<b>Calibrated By:</b>	
<b>Reference Equipment Used:</b>		

**Attenuation Repeatability**

Set	Actual	Actual	Difference
6	-5.990559	-5.989323	-0.001236
12	-11.986617	-11.985863	-0.000754
18	-17.977023	-17.976837	-0.000186
24	-23.963870	-23.963667	-0.000203
30	-29.955173	-29.955073	-0.000100
36	-35.954340	-35.954517	0.000177
42	-41.945610	-41.946077	0.000467
48	-47.942723	-47.942613	-0.000110
54	-53.948730	-53.946903	-0.001827
60	-59.974763	-59.981417	0.006654

Specification: <+/-0.01dB

Status: PASS

**Comments:**

Procedure: As Derived from Agilent 8156A Operating Guide (second edition) Section D Ref JPSSL0012

Specification: Section C 8156A Operating Guide (second edition). Ref JPSSL0012

Reference Equipment:

Reference	Manf	Model	Serial	Description	Cal Due
-----------	------	-------	--------	-------------	---------