

PTW EPID QC Phantom Report

OVERALL RESULTS



ONE OR MORE TOLERANCE(S) FAILING

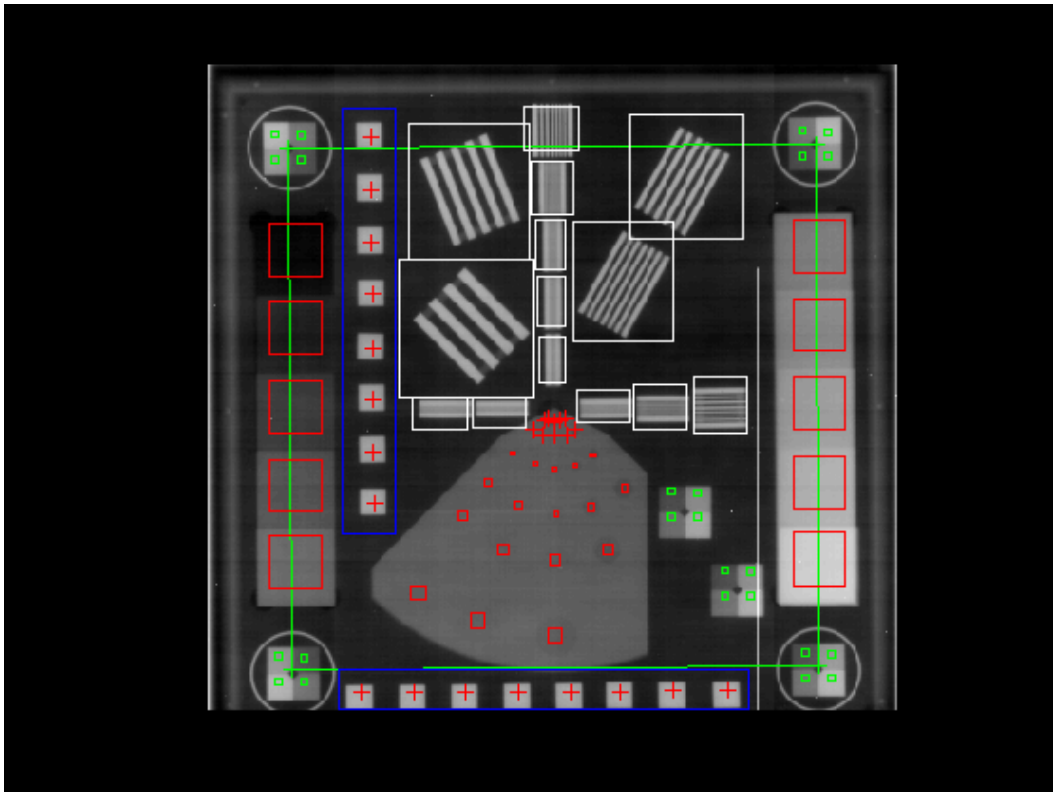


ANALYSIS COMPLETE

Image Information

Filename	C:\RIT\RIT113V4\Demo Images\Radia Demo Images\PTW EPID\PTW_EPID.dcm
Institution	
Station	
Image Type	ORIGINAL\PRIMARY\PORTAL
Acquisition Date	
Acquisition Time	
SOP Instance UID	1.2.246.352.43077212.2.1414.21876

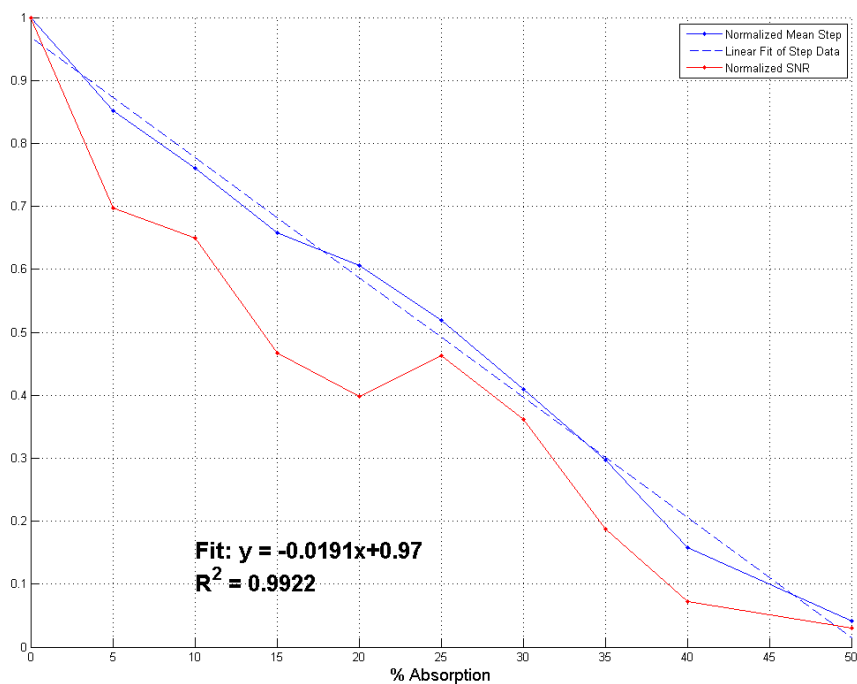
Analysis Image



Copper Step Data (Signal Linearity and SNR)

Step	Mean	Standard Deviation	SNR	Normalized Mean	Normalized SNR
0%	4500.94	45.80	98.28	1.00	1.00
5%	3835.33	55.94	68.56	0.85	0.70
10%	3420.66	53.54	63.89	0.76	0.65
15%	2959.04	64.51	45.87	0.66	0.47
20%	2726.35	69.58	39.19	0.61	0.40
25%	2334.67	51.39	45.43	0.52	0.46
30%	1841.69	51.90	35.49	0.41	0.36
35%	1334.54	72.34	18.45	0.30	0.19
40%	710.06	99.88	7.11	0.16	0.07
50%	184.28	63.48	2.90	0.04	0.03

Signal Linearity and SNR



Linearity of Copper Step Wedges

Slope	-0.0191
Intercept	+0.97
Correlation Coefficient (R ²)	0.9922
Minimum Correlation Coefficient	0.9500
Pass/Fail	Pass

Brass Step Data (Signal Linearity Isotropy)

Normalized to first step on copper steps.

Pattern Location	10%	20%	30%	40%
Lower Right Corner	0.88	0.74	0.57	0.39
Lower Left Corner	0.88	0.72	0.57	0.40
Upper Right Corner	0.88	0.72	0.57	0.39
Upper Left Corner	0.89	0.74	0.58	0.41
Central Area (Closest to Corner)	0.84	0.68	0.55	0.37
Central Area (Closest to Center)	0.80	0.64	0.53	0.34
Mean	0.86	0.71	0.56	0.38
Standard Deviation	0.0339	0.0388	0.0202	0.0252

Geometric Accuracy

Measurement	Length (mm)	Pass/Fail (205 <= Length (mm) <= 210)
Upper Left to Upper Right	209.30	Pass
Lower Left to Lower Right	209.30	Pass
Upper Left to Lower Left	207.25	Pass
Upper Right to Lower Right	207.25	Pass

Geometric Accuracy (Block Spacing)

Orientation	Mean Spacing (mm)	Pass/Fail (20 <= Mean Spacing (mm) <= 21)
Horizontal	20.84	Pass
Vertical	20.74	Pass

Line Pairs Detected (Diagonal)

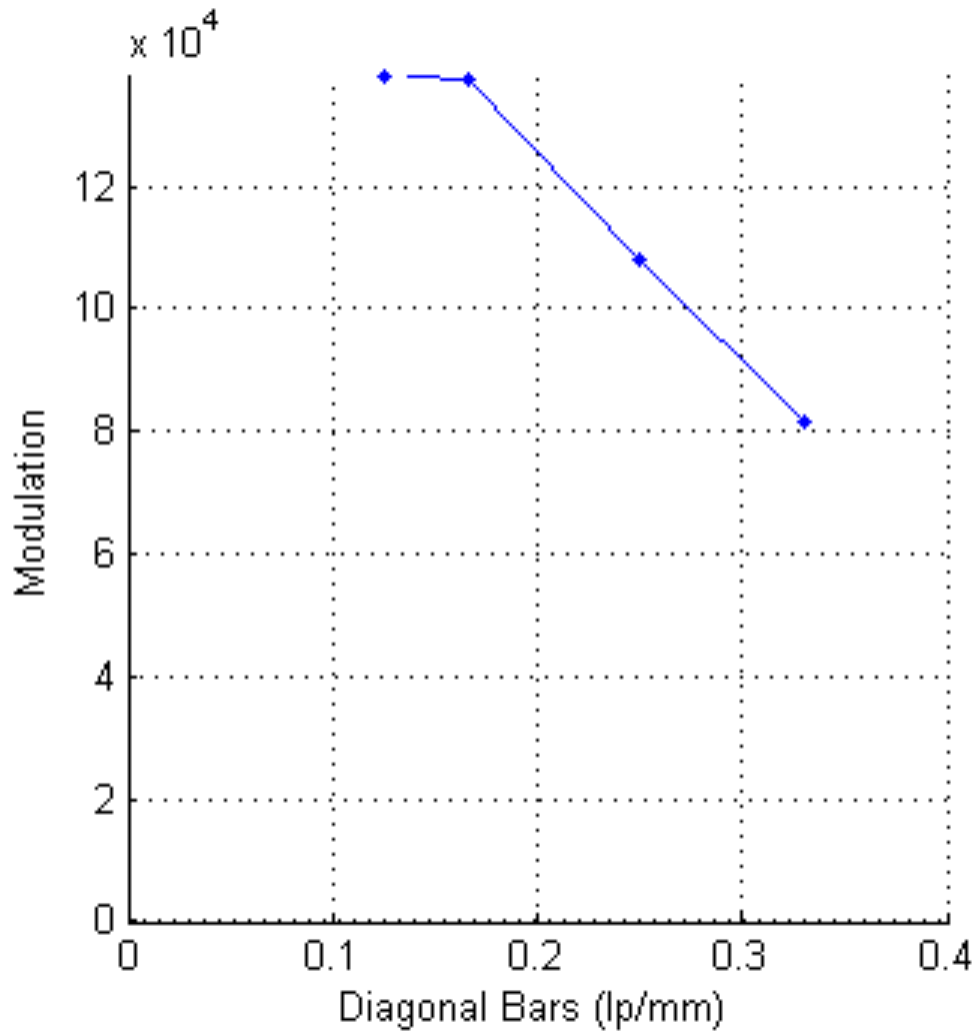
4 of 4 detected

Modulation

Bar	Modulation	Comments
0.125 lp/mm	138120.00	
0.167 lp/mm	137639.00	
0.25 lp/mm	107886.00	
0.33 lp/mm	81372.00	
0.5 lp/mm Vertical	26058.00	
1.0 lp/mm Vertical	0.00	No bars or spaces detected.
2.0 lp/mm Vertical	0.00	No bars or spaces detected.
2.5 lp/mm Vertical	0.00	No bars or spaces detected.
3.3 lp/mm Vertical	0.00	No bars or spaces detected.
0.5 lp/mm Horizontal	26922.00	
1.0 lp/mm Horizontal	0.00	Incorrect number of bars detected in this pattern.
2.0 lp/mm Horizontal	0.00	No bars or spaces detected.
2.5 lp/mm Horizontal	0.00	No bars or spaces detected.
3.3 lp/mm Horizontal	0.00	No bars or spaces detected.

Minimum Visible resolution tolerance setting (lp/mm): 0.5 (Pass)

Modulation Diagonal Calculation



Interpolated LP (normalized to 0.125 lp/mm)

Modulation	Interpolated lp/mm
NaN	NaN
NaN	NaN

Low Contrast Measurements

Depth (mm)	Diameter (mm)	Contrast Object Mean	Background Mean	Difference	Pass/Fail (Difference >= 0.5)
4.8	1.1	1806.00	1934.00	128.00	Pass
4.8	2.0	1756.00	1903.00	147.00	Pass
4.8	4.0	1673.42	1913.00	239.58	Pass
4.8	7.0	1632.00	1939.72	307.72	Pass
3.2	1.1	1735.00	1978.00	243.00	Pass
3.2	2.0	1836.00	1950.00	114.00	Pass
3.2	4.0	1787.56	1982.56	195.00	Pass
3.2	7.0	1825.12	1930.37	105.25	Pass
3.2	10.0	1812.76	2056.43	243.67	Pass
2.0	1.1	1808.00	1969.00	161.00	Pass
2.0	2.0	2022.00	1984.00	38.00	Fail
2.0	4.0	1915.89	2068.89	153.00	Pass
2.0	7.0	2038.80	2023.20	15.60	Fail
2.0	10.0	2005.92	2108.73	102.82	Pass
2.0	15.0	2036.63	2071.09	34.46	Fail
1.0	1.1	1743.00	1831.00	88.00	Pass
1.0	2.0	2046.00	1980.00	66.00	Pass
1.0	4.0	1963.89	2051.00	87.11	Pass
1.0	7.0	2015.04	2075.57	60.53	Pass
1.0	10.0	2012.14	2055.16	43.02	Fail
1.0	15.0	2103.14	2210.35	107.21	Pass
0.5	1.1	1743.00	1941.00	198.00	Pass
0.5	2.0	1982.00	2074.00	92.00	Pass
0.5	4.0	1923.75	1990.11	66.36	Pass
0.5	7.0	1970.48	1975.64	5.16	Fail
0.5	10.0	2095.12	2119.55	24.43	Fail
0.5	15.0	2065.34	2111.79	46.45	Fail

Analysis Settings

Trim margin (Pixels)	0
Trim Threshold Factor	1
Invert Image for Analysis	2