



# Channel Loss Characteristics Summary for Straw Polling

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This summary identifies frequency points of interest from other presentations relevant to the channel loss characteristics.



# Summary Characteristics

<b>Freq</b>	Impr FR-4 Loss in dB	13si Loss in dB	Meg6 Loss in dB
<b>7GHz</b>	17.9	17.2	11.7
<b>12.75GHz</b>	31.0	28.3	18.7
<b>14GHz</b>	33.7	30.6	20.2

## 40in 8mil track 17mil spacing, 1/2oz cu

<b>Freq</b>	Impr FR-4 Loss in dB	13si Loss in dB	Meg6 Loss in dB
<b>7GHz</b>	23.9	22.9	15.6
<b>12.75GHz</b>	41.3	37.7	25.0
<b>14GHz</b>	45.0	40.8	26.9

## Surface Roughness Penalty

	7GHz	12.75GHz	14GHz
penalty HVLP	0.9	1.6	1.7
penalty VLP	3.5	6.0	6.5
penalty STD	4.3	7.4	8.0

## Connector Penalty times 2

	7GHz	12.75GHz	14GHz
Penalty	0.5	0.8	1.0

## Ripple or Deviation Penalty

	7GHz	12.75GHz	14GHz
Penalty	1.0	1.8	2.0



# Summary Comparison

## 30in 8mil track 17mil spacing, 1/2oz cu

STD			VLP			HVLP			
Total Impr fr4	Total 13si	Total Meg6	Total Impr fr4	Total 13si	Total Meg6	Total Impr fr4	Total 13si	Total Meg6	Freq
Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	
24.2	23.5	18.0	23.4	22.7	17.2	20.8	20.1	14.6	<b>7</b>
41.8	39.1	29.5	40.4	37.7	28.1	36.0	33.3	23.7	<b>12.75</b>
45.7	42.6	32.2	44.2	41.1	30.7	39.4	36.3	25.9	<b>14</b>

## 40in 8mil track 17mil spacing, 1/2oz cu

STD			VLP			HVLP			
Total Impr fr4	Total 13si	Total Meg6	Total Impr fr4	Total 13si	Total Meg6	Total Impr fr4	Total 13si	Total Meg6	Freq
Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	Loss in dB	
30.2	29.2	21.9	29.4	28.4	21.1	26.8	25.8	18.5	<b>7</b>
52.1	48.5	35.8	50.7	47.1	34.4	46.3	42.7	30.0	<b>12.75</b>
57.0	52.8	38.9	55.5	51.3	37.4	50.7	46.5	32.6	<b>14</b>



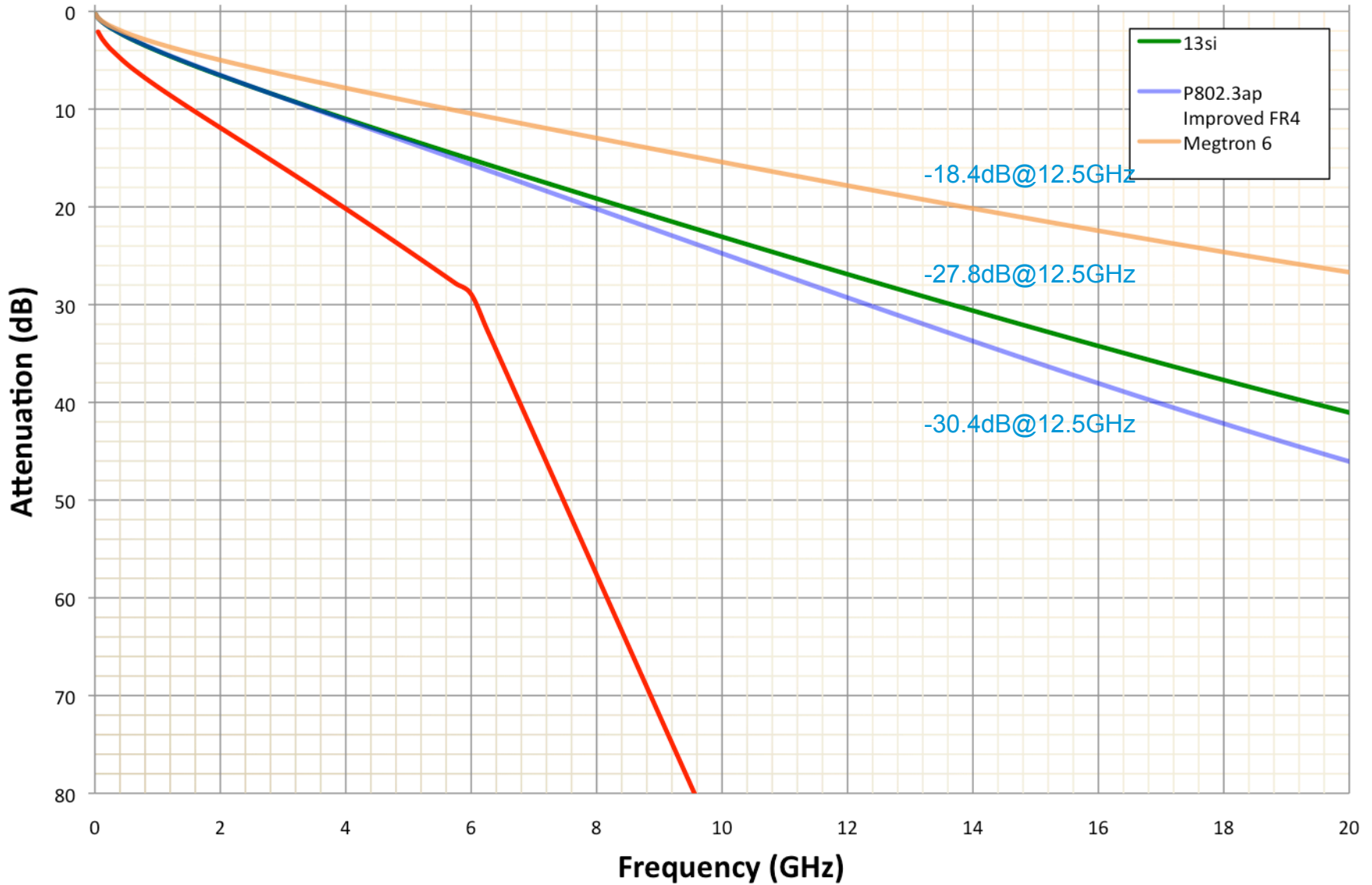
# Potential Straw Poll Questions

- Do you support a channel model of at least [-20dB@7GHz?](#)
- Do you support a channel model of at least [-25dB@7GHz?](#)
- Do you support a channel model of at least [-30dB@7GHz?](#)
  
- Do you support a channel model of at least [-30dB@12.9GHz?](#)
- Do you support a channel model of at least [-35dB@12.9GHz?](#)
- Do you support a channel model of at least [-40dB@12.9GHz?](#)

# Back Up Slides



## Estimated Attenuation from Conductor & Dielectric (30in)



## Estimated Attenuation from Conductor & Dielectric (40in)

