

[Serial Mode Only Application Note for 3.5GHz]

- PART Name : BDA4601
- TEST FREQUENCY : 1MHz - 4GHz (For 3.5GHz Application)
- Main Application Goal : Insertion Loss & Attenuation Error
- Measuring Equipment List

Network Analyzer : 5071B

▪Test Result :

Frequency	MHz	100	Mark
Insertion Loss(S21)	dB	-2.4	@3.5GHz, Att=0dB
Input Return Loss(S11)	dB	-11.4	@3.5GHz, Att=0dB
Output Return Loss(S22)	dB	-10.6	@3.5GHz, Att=0dB
Max Attenuation Error	dB	+0.419	@3.5GHz, Att=0~31.5dB
Current	uA	160.0	Vcc = 3.3V

Appendix: TEST items available to change depending on the situation.

*Application Circuit (For Serial mode only)				
Schematic Diagram	BOM	Marks		
	C1	0402	100pF	SAMSUNG
	C10	0402	100pF	SAMSUNG
	C2	0402	100pF	SAMSUNG
	C3	0402	100nF	SAMSUNG
	C41	0603	10uF	SAMSUNG
Recommend Land Pattern		Notice		
		<ol style="list-style-type: none"> 1. Parallel(D0~D5) and PUP Pins are going to have to ground use for serial only application 2. It would like to recommend that set the GND via at the Expose pad about 16ea as possible($\Phi 0.25 \sim 0.3$) 3. GND Via Holes should be placed near the parallel pins(#1,#20,#19,#17,#16,#15,#7,#8) and GND(#10,#11,#12,#18) refer to recommend land pattern. 		

Figure 1. Insertion Loss vs Frequency over Temperature

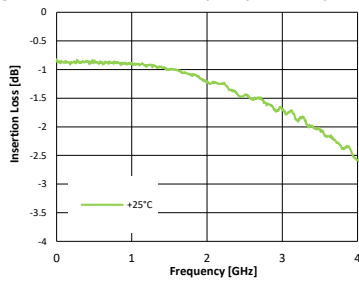


Figure 2. Insertion Loss vs Frequency over Major Attenuation Step

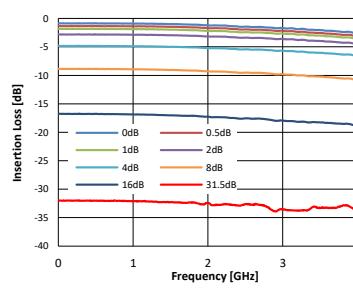


Figure 3. Input Return Loss vs Frequency over Major Attenuation Step

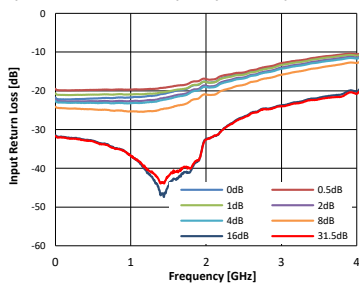


Figure 4. Output Return Loss vs Frequency over Major Attenuation Step

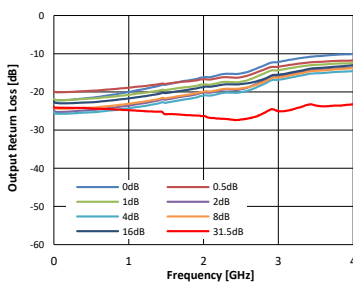


Figure 5. Input Return Loss vs Frequency over Major Attenuation Step

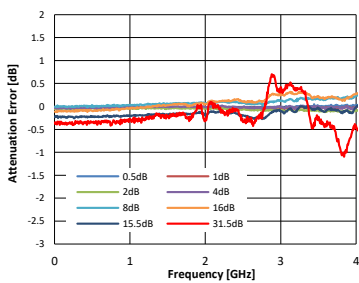


Figure 6. Attenuation Error vs 3.5GHz over Attenuation State

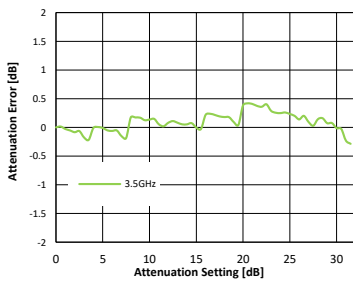


Figure 7. Actual Attenuation vs Ideal Attenuation over Frequency

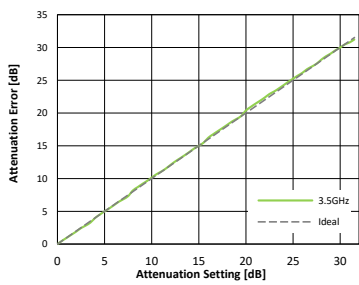


Figure 8. Step Error Attenuation State over Frequency

