

RF MMIC Innovator

www.berex.com**[CLASSIFICATION] APPLICATION NOTE****[DATE] 2022. 05****[REVISION NO.] REV.A****[MEASURING INSTRUMENTS]****- NA_AGILENT E5080A****- SA_AGILENT N9020A****- SG_AGILENT N5182B****- SG_AGILENT N5182A**

1700-6000 MHz Gain Block 2stage AMP

5800MHz Application Note



1. BGM26 _ 5800MHz Application Note

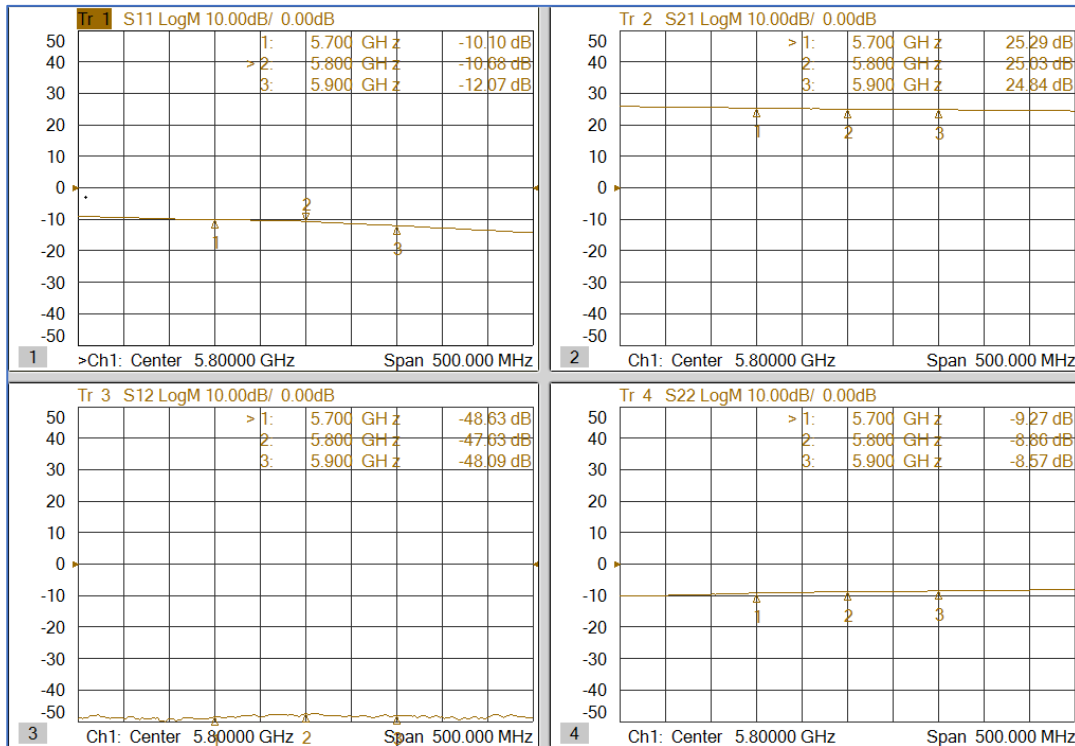
Schematic Diagram		BOM		Marks
	C1	0603	1nF	
	C2	0603	1nF	
	C3	0603	N/A	
	C4	0603	100pF	
	C5	0603	2pF	
	C6	0603	2pF	
	C7	0603	100pF	
	C8	0603	1nF	
	C9	0603	0.5pF	
	L1	0603	0 Ω	
	L2	0603	0 Ω	
R1	0603	4.3K Ω		

PCB Diagram & EVboard		Notice													
		<p>Below information is subject to change as conditions of the substrate.</p> <table border="1"> <thead> <tr> <th>Reference</th> <th>Object</th> <th>Distance</th> </tr> </thead> <tbody> <tr> <td>Input pin</td> <td>C5</td> <td>3.1mm</td> </tr> <tr> <td>Input pin</td> <td>C9</td> <td>1.5mm</td> </tr> <tr> <td>Output pin</td> <td>C6</td> <td>3.1mm</td> </tr> </tbody> </table>		Reference	Object	Distance	Input pin	C5	3.1mm	Input pin	C9	1.5mm	Output pin	C6	3.1mm
Reference	Object	Distance													
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1.1 BGM26 _ 5800MHz Test Result

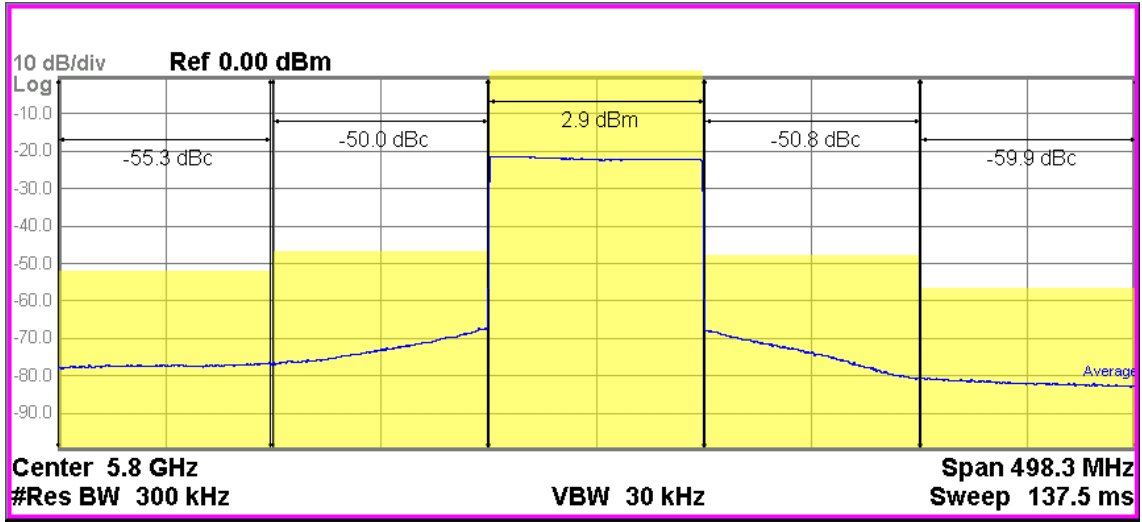
No.	Freq [MHz]	Vd [V]	Id [mA]	Gain [dB]	OIP3 [dBm] ⁽¹⁾	P1dB [dBm]	IRL [dB]	ORL [dB]	NF [dB]
1	5700	5	86	25.3	28.3	16.2	-10.1	-9.3	3.9
2	5800	5	86	25.0	27.8	15.9	-10.7	-8.9	4.0
3	5900	5	86	24.8	26.6	15.0	-12.1	-8.6	4.1

(1) OIP3 was tested @Pout=2dBm/tone (CW) 1MHz offset



1.2 BGM26_5800MHz 5G NR 100MHz ACLR Test Result

5800MHz 5G NR Downlink FR1 : SCS 30KHz, CBW 100MHz, 256QAM, PAR 9.66 at 0.01%
 ACLR Channel Power measured at -50dBc.



Total Carrier Power 2.930 dBm/ 98.28 MHz

ACP-IBW

Carrier Power	Filter	Offset Freq	Integ BW	Lower		Upper		Filter
				dBc	dBm	dBc	dBm	
1 2.930 dBm / 98.28 MHz	OFF	100.0 MHz	98.28 MHz	-50.03	-47.10	-50.82	-47.89	OFF
		200.0 MHz	98.28 MHz	-55.35	-52.42	-59.93	-57.00	OFF