

Amplifier MKV-822-0200

MTS-No.: 16944

Description

To amplify low signal level in EMC measurement technology and to increase the antenna ranges this one-stage wideband low noise amplifier (LNA) has been developed by MTS. The wideband amplifier was particularly designed for the MTS antenna MTA-300-3000 and can directly be connected to these.



Technical data:

1 RF-specifications:

1.1 Impedance	50 Ω		
1.2 Input power			
- linear	-15 dBm max.		
- absolute	13 dBm max.		
1.3 Frequency range	30 - 3000 MHz		
1.4 Noise figure @ 30 - 3000 MHz	< 2.7 dB		
1.5 Gain		min.	typ.
@ 100 MHz			22.7 dB
@ 1000 MHz			21.3 dB
@ 2000 MHz			19.4 dB
@ 3000 MHz	16.0 dB		17.1 dB
1.6 VSWR in / out		1.3	1.8
1.7 Reverse Isolation	24 dB	25.5 dB	
1.8 Output power @ 1 dB compression	5 dBm	8 dBm	

2 Connections:

2.1 RF-in- and outputs	2x N male / female (SMA on request)
Voltage supply	+12 V-Pin / grounding pin

3 General specifications:

3.1 Power consumption	50 mA max.
3.2 Power supply	+12 V DC
3.3 Operating temperature	+5 °C - +60 °C
3.4 Reference temperature of specifications	+25 °C
3.5 Dimensions (without connections)	31 mm x 42 mm x 22 mm (LxWxH)
3.6 Case style	Milled aluminium enclosure
3.7 Colour	SurTec650 (Chrome alloy)
3.8 Weight	100 grams

4 Delivered parts:

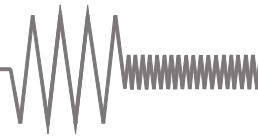
MKV-822-0200
Datasheet
Measurement files

5 Comments:

Warranty	12 months
RoHS-compliant	Yes

6 Recommended accessories:

Measurement cable assembly
Antennas

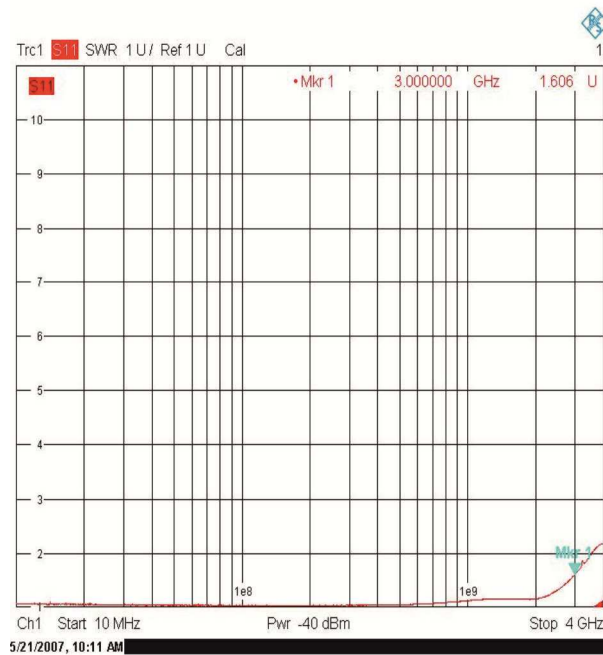


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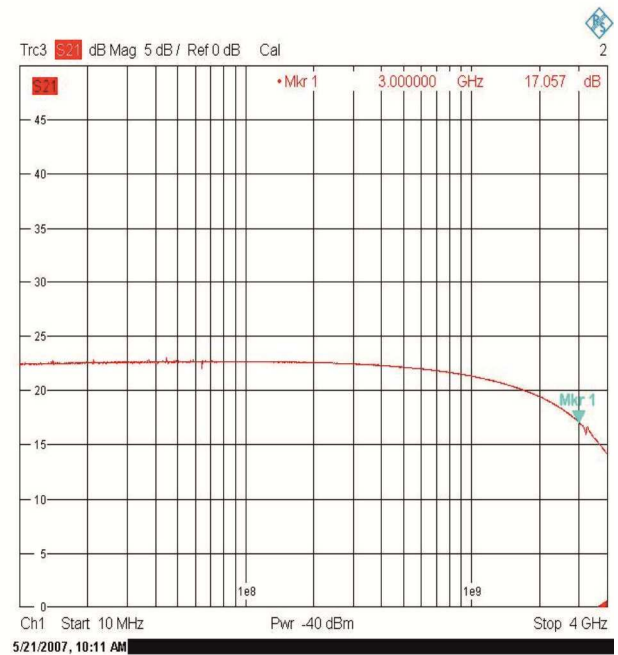
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Typical measurements:

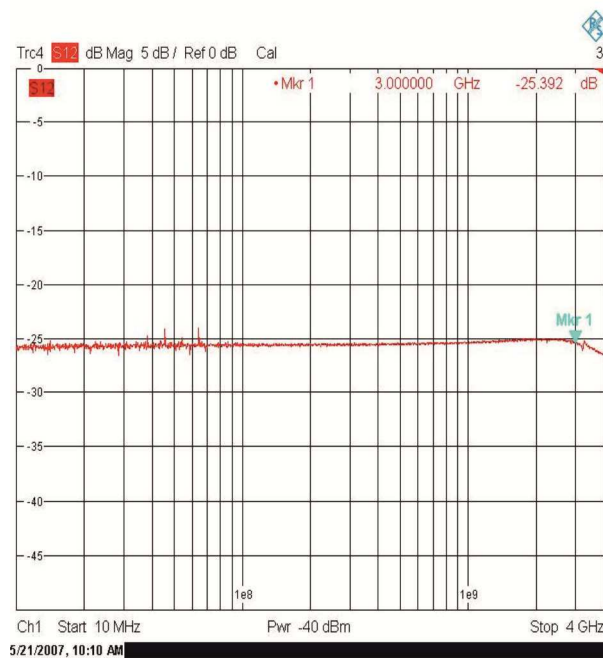
VSWR in



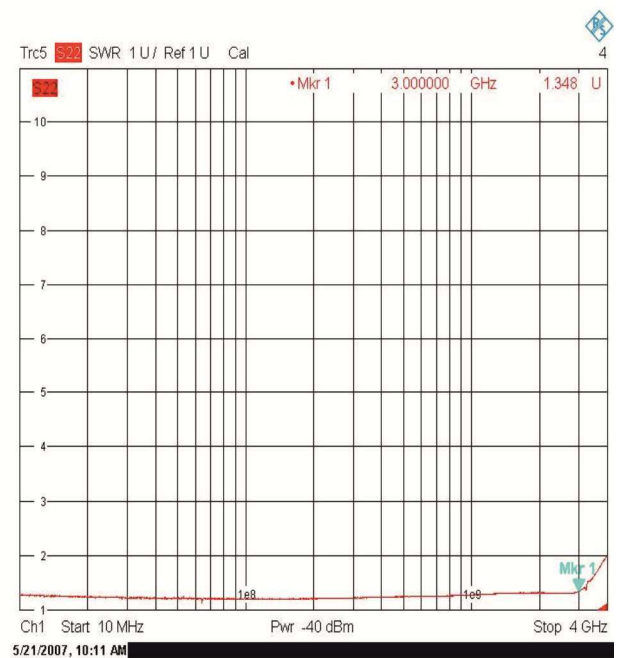
Gain

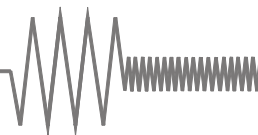


Isolation



VSWR out





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Typical measurements:

VSWR IN Isolation Gain VSRW OUT

Frequenz	S11	S12	S21	S22	IP-3	Noise
(MHz)	(U)	(dB)	(dB)	(U)	Output (dBm)	Figure (dB)
100	1,03	-25,59	22,70	1,22	25,39	2,37
200	1,03	-25,56	22,62	1,22	25,42	2,29
300	1,03	-25,54	22,48	1,24	25,44	2,29
400	1,03	-25,59	22,35	1,24	25,00	2,43
500	1,03	-25,64	22,19	1,25	24,87	2,16
600	1,04	-25,46	22,03	1,25	24,76	2,16
700	1,05	-25,46	21,86	1,25	25,10	2,18
800	1,07	-25,46	21,69	1,26	25,31	2,22
900	1,09	-25,43	21,54	1,26	25,32	2,42
1000	1,11	-25,40	21,35	1,26	25,34	2,32
1100	1,12	-25,29	21,18	1,27	25,17	2,36
1200	1,14	-25,35	21,00	1,28	25,07	2,29
1300	1,14	-25,34	20,81	1,29	24,95	2,23
1400	1,15	-25,29	20,64	1,29	24,75	2,22
1500	1,14	-25,30	20,44	1,29	24,81	2,17
1600	1,14	-25,31	20,22	1,29	24,96	2,19
1700	1,13	-25,32	20,04	1,29	25,20	2,19
1800	1,12	-25,19	19,85	1,29	25,45	2,19
1900	1,12	-25,20	19,66	1,29	25,46	2,26
2000	1,12	-25,17	19,46	1,30	25,50	2,32
2100	1,13	-25,23	19,26	1,29	25,45	2,35
2200	1,13	-25,13	18,97	1,29	25,44	2,39
2300	1,14	-25,14	18,78	1,29	25,39	2,39
2400	1,17	-25,27	18,53	1,28	25,35	2,40
2500	1,22	-25,12	18,30	1,29	25,30	2,38
2600	1,29	-25,30	18,10	1,29	25,24	2,36
2700	1,35	-25,36	17,85	1,29	25,27	2,38
2800	1,41	-25,23	17,61	1,30	25,30	2,41
2900	1,48	-25,50	17,38	1,32	25,33	2,42
3000	1,55	-25,62	17,12	1,34	25,48	2,43
3100	1,60	-25,79	16,83	1,38	25,46	2,44
3200	1,64	-26,30	16,02	1,38	25,44	2,44
3300	1,66	-25,38	16,44	1,56	25,41	2,49
3400	1,80	-25,92	15,83	1,57	25,38	2,54
3500	1,93	-26,15	15,65	1,64	25,25	2,61
3600	2,01	-26,37	15,29	1,71	25,02	2,69
3700	2,09	-26,37	15,07	1,80	24,82	2,69
3800	2,15	-26,64	14,77	1,88	24,73	2,70
3900	2,19	-26,76	14,48	1,97	24,69	2,70
4000	2,20	-26,82	14,23	2,03	24,70	2,70