

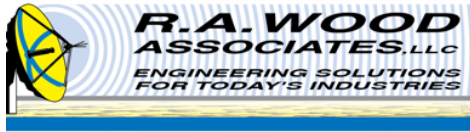
RCT0050 Amplifier Results

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R. A. Wood Associates

164 Industrial Park Drive
Frankfort, NY 13340
Voice: 315-735-4217
Fax: 315-735-4328
RAWood@rawood.com
www.rawood.com



RCT0050 Ultra-Wideband Amplifier

- R. A. Wood Associates designed and built a new wideband amplifier, using surface mount technology
- 0.5 to 18 GHz Frequency band
- Flat gain (slight 2.0 dB up-tilt)
- Noise Figure (<2 to 5 dB)
- Output P1dB (18 to 24 dBm, 22 dBm Ave)
- Current draw: ~200 mA Ave
- Typical measured data is shown
- This amplifier has great overall characteristics, for narrowband or wide bandwidth applications (EW)
- These can be built quickly with surface mount assembly

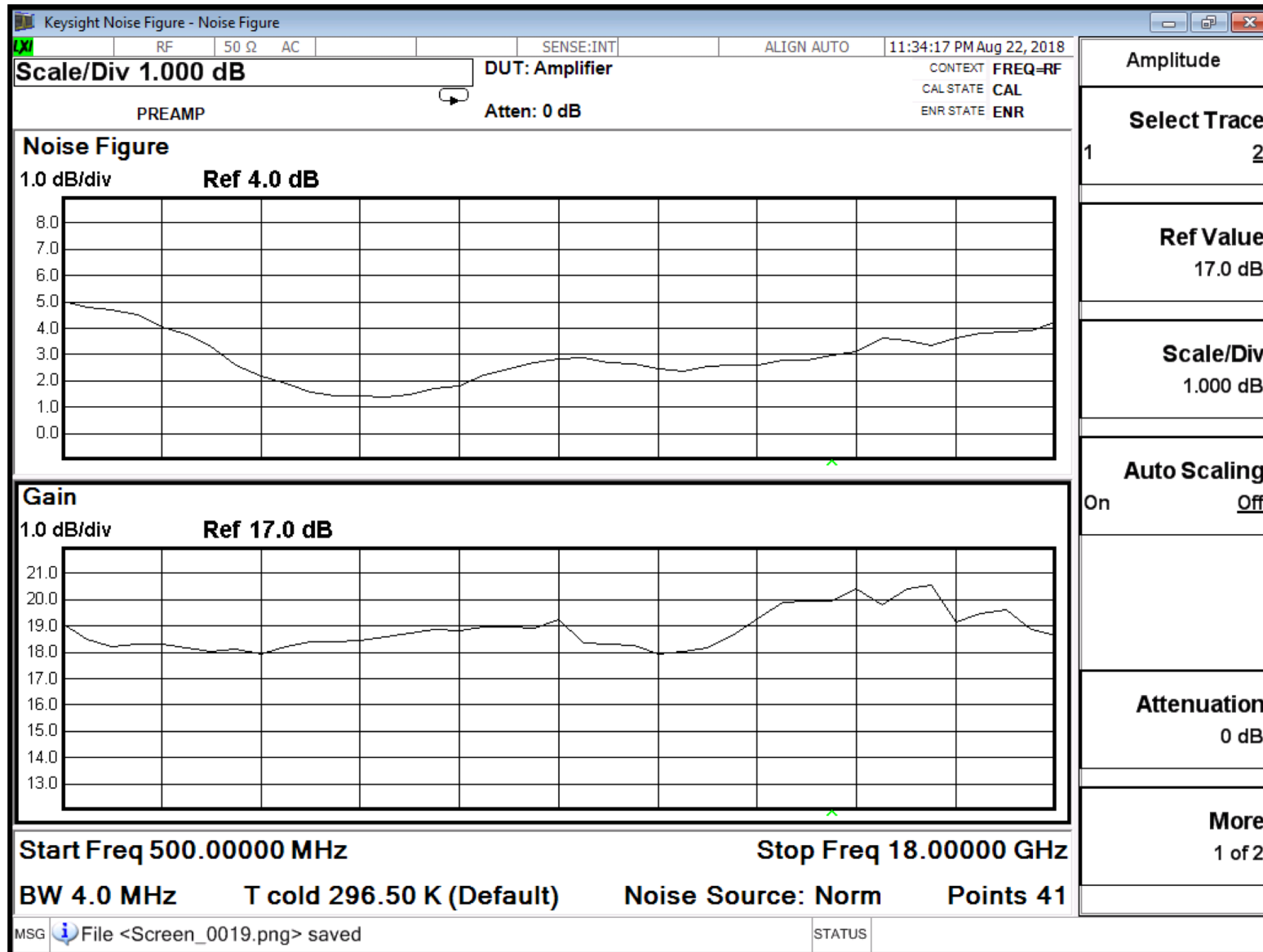
Automated Test Summary for 8 Units

	Limit Min	Limit Max	SN1	SN2	SN3	SN4	SN5	SN6	SN7	SN10	Avg	STDEVP
DC Current (A)	0.150	0.220	0.187	0.184	0.185	0.217	0.188	0.191	0.200	0.199	0.194	0.010
Dissipation (W)			2.244	2.208	2.220	2.604	2.256	2.292	2.400	2.388	2.327	0.125
S21 Avg	18.00	20.00	19.00	18.89	18.92	19.24	19.01	19.07	19.27	19.08	19.06	0.13
S21 Max	18.50	22.00	20.45	20.34	20.39	20.78	20.53	20.51	20.76	20.71	20.56	0.16
S21 Min	17.00	20.50	18.08	17.96	17.86	18.16	18.00	17.96	18.21	17.96	18.02	0.11
Slope BFL	0.50	3.00	2.13	1.89	1.90	2.32	2.12	1.82	2.15	2.22	2.07	0.17
p-p dev	0.50	3.00	2.37	2.38	2.53	2.62	2.52	2.55	2.55	2.75	2.53	0.11
Max S11	-100.00	-9.54	-10.11	-9.96	-10.29	-11.23	-10.21	-9.63	-10.87	-11.01	-10.41	0.52
Max S22	-100.00	-9.54	-13.79	-14.17	-14.48	-11.57	-14.25	-13.27	-12.10	-13.23	-13.36	0.98
J1-J2 GCP avg	18.00	22.00	21.84	22.21	22.17	21.45	22.22	22.69	22.86	22.05	22.19	0.42
J1-J2 GCP min	18.00	20.00	18.33	18.46	18.37	18.18	18.58	18.66	18.91	18.74	18.53	0.22

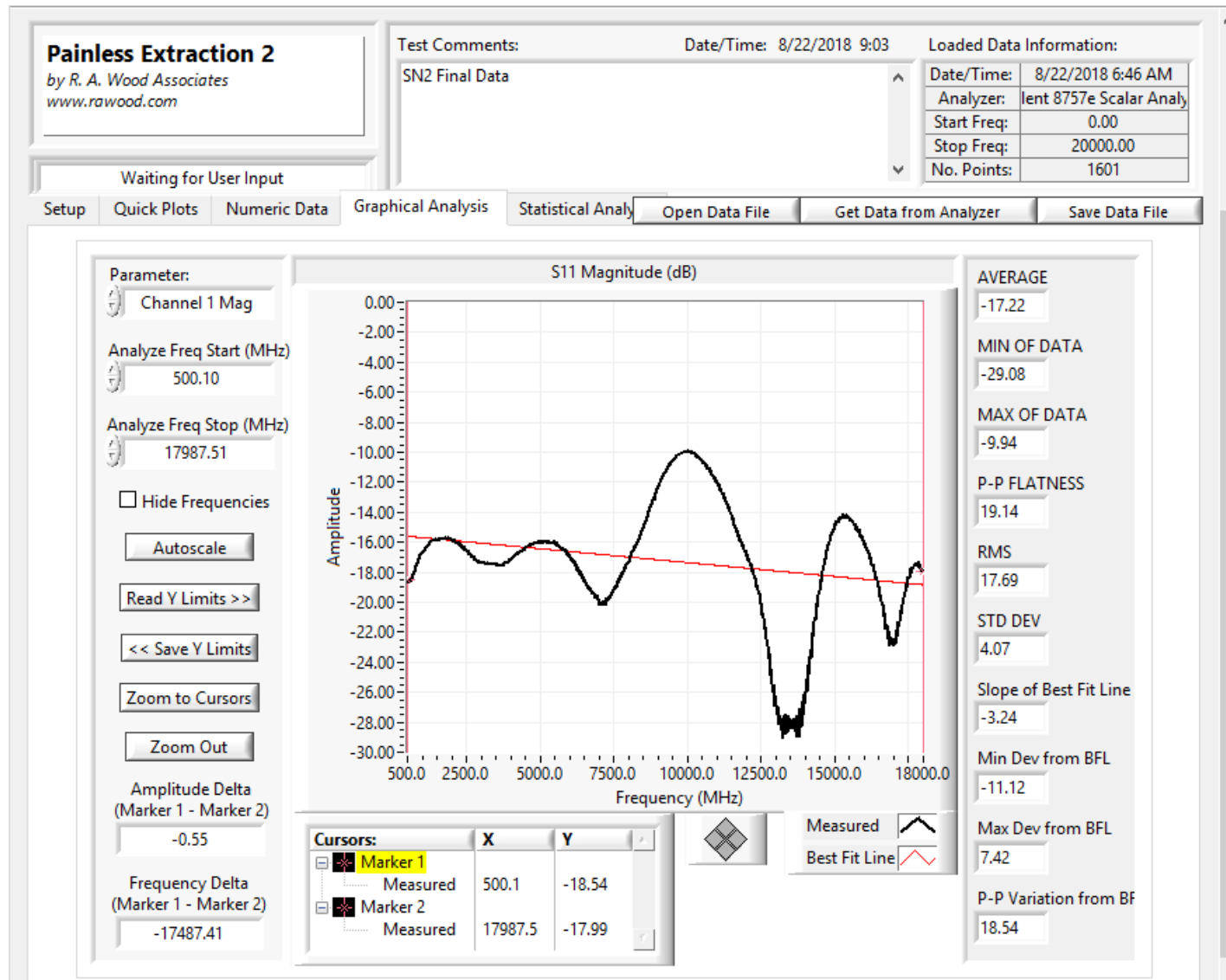
SN2 S21 (500 MHz to 18 GHz)



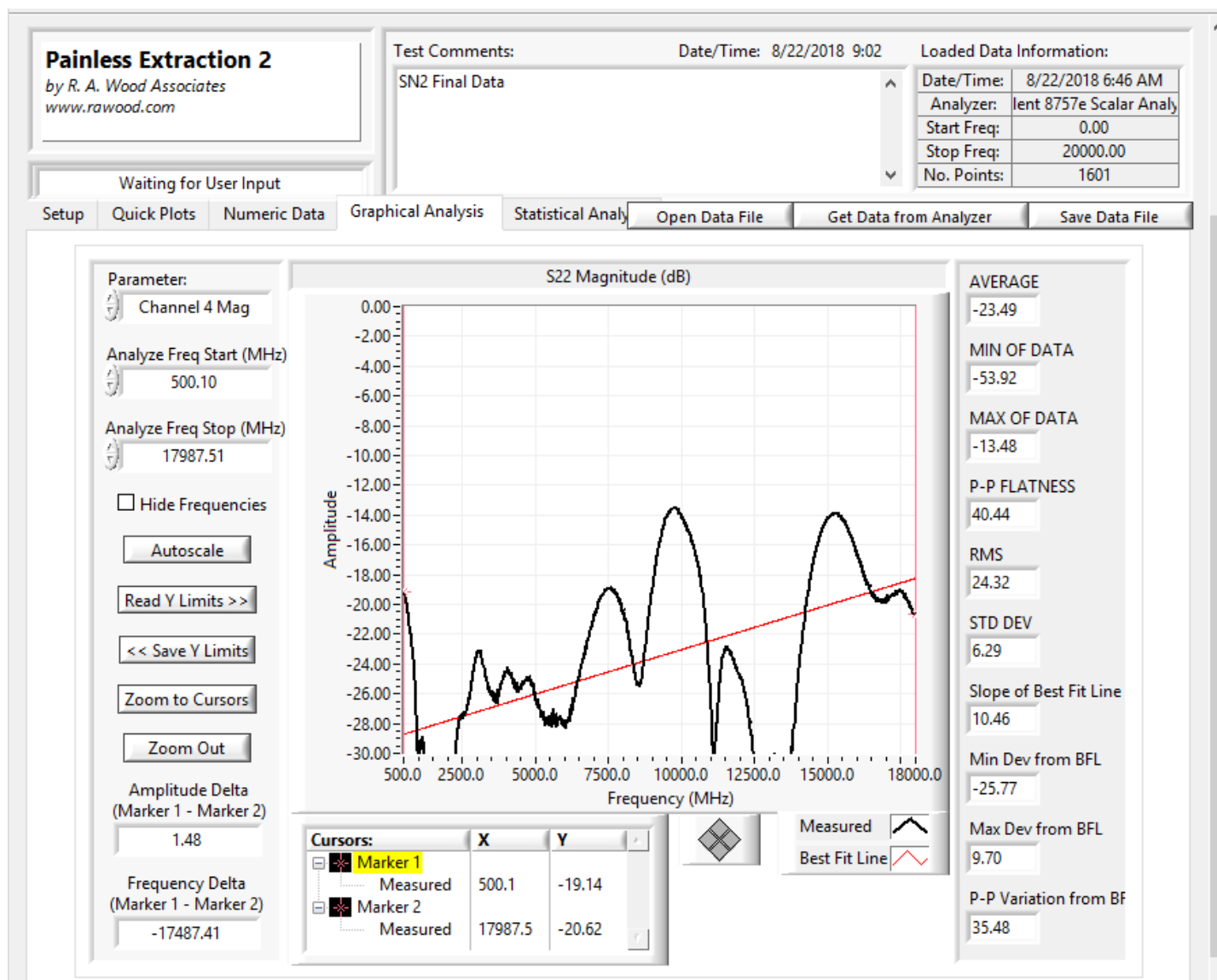
SN2 Measured NF



SN2 S11

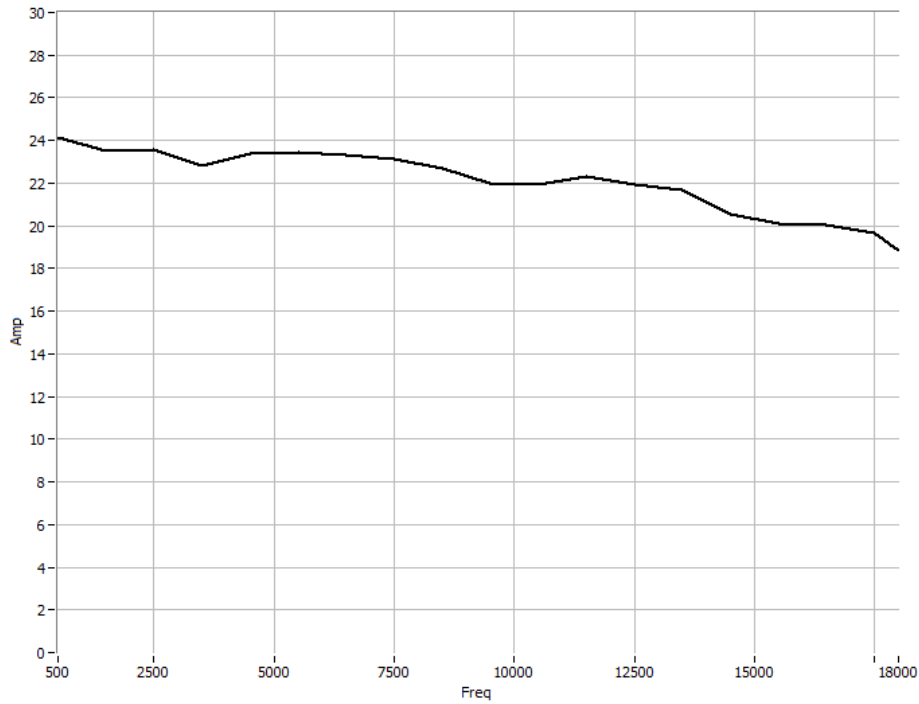


SN2 S22

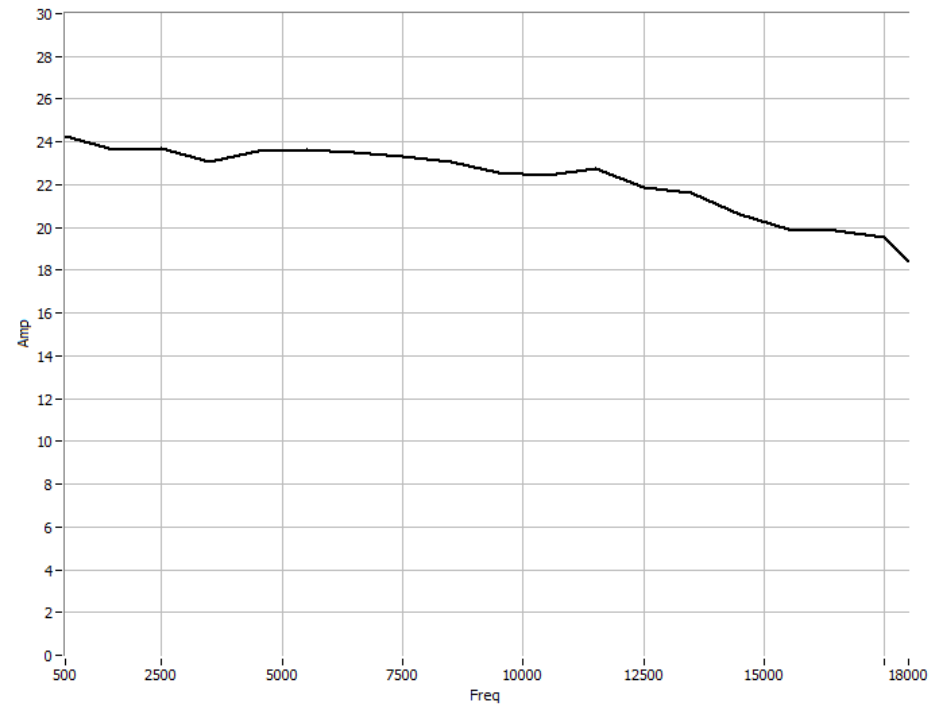


Pout 1 dB (SN3, SN10)

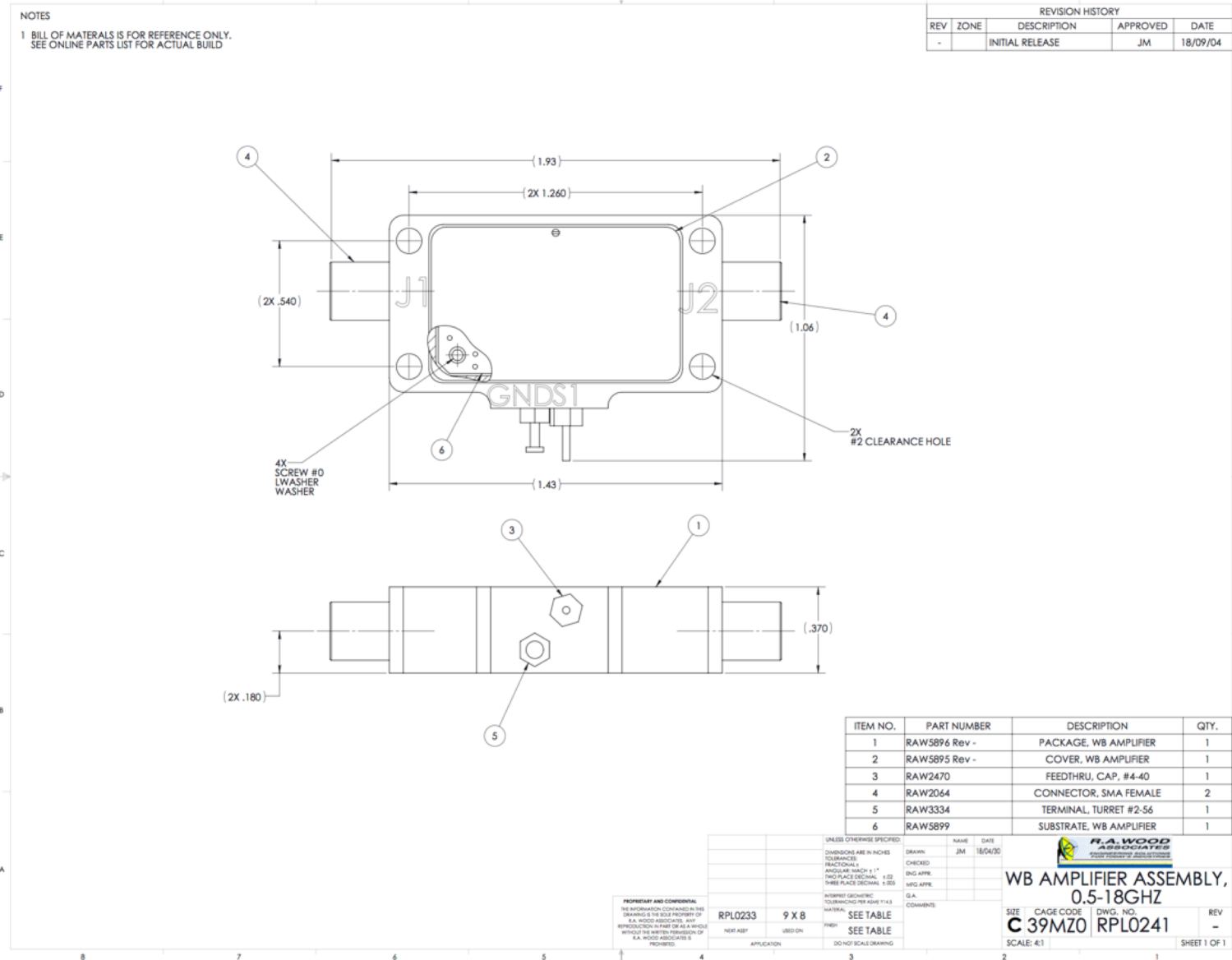
RPL0241_VNA - Serial Number 10_Final - Gain Compression J1 to J2 Testing



RPL0241_VNA - Serial Number 03_Final - Gain Compression J1 to J2 Testing



Amplifier Outline Drawing



10/17/18