

4-layer board, 2.4 x 1.1 in.

All passives 0805.

J1 BNC right angle. TE 227677-1

J2 RJ45, shielded. Amphenol RJHSE-5380

ATN1 Attenuator, 30 dB, 10W, Anaren D10AA30Z4

K1 Relay, DPDT, RF, 5V Omron G6K-2F-RF-S-TR03 DC5

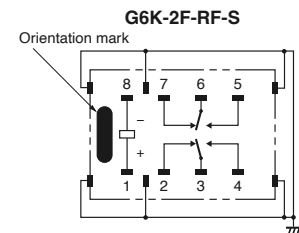
Demod BW = $1/2\pi \cdot 3k \cdot C3$

Set to ~50 kHz. C = 1.06 nF

Offset comp loop freq = $1/2\pi \cdot 2.6k \cdot C4$

Set to ~60 kHz

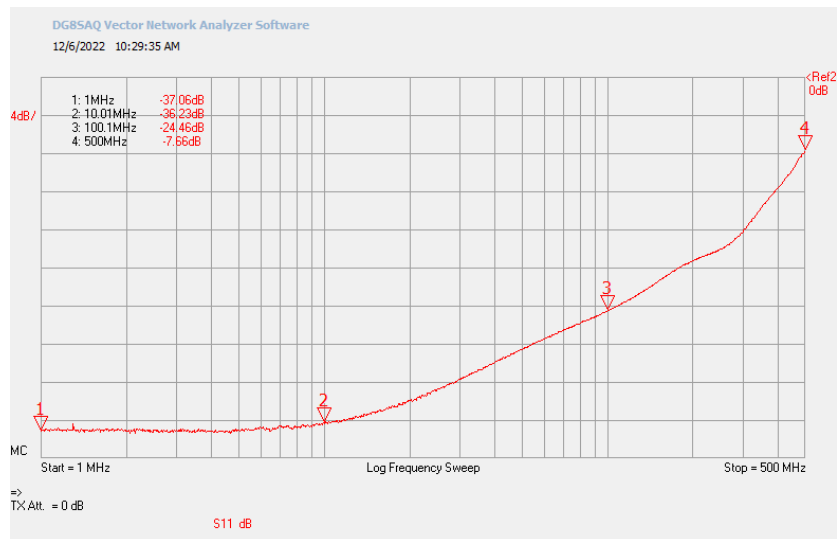
$$R_{SET} = \frac{39M\Omega \cdot ^\circ C}{T_{SET} (^{\circ}C) + 281.6^{\circ}C} - 90.3k\Omega$$



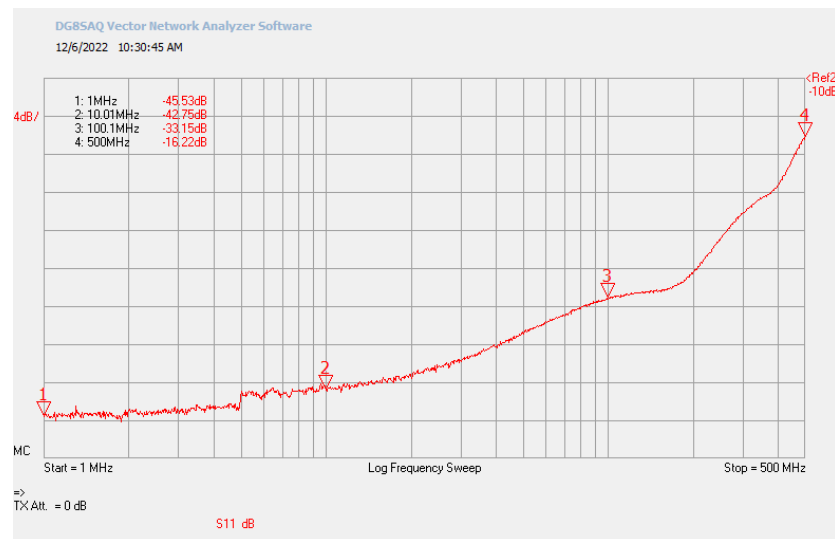
**RF Power Sensor #1,
AD8313, V2**

NA60 10-16-23

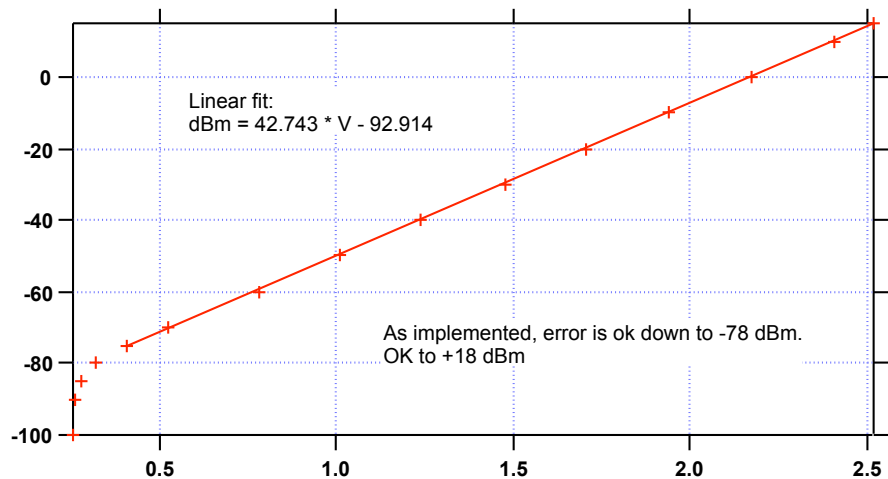
Input return loss, direct



Input return loss, with 30 dB attenuator



Sensor 1 Bench Calibration 12-6-22



SPECIFICATIONS

Input impedance: 50 Ω , see return loss graphs

Rated bandwidth: 100 kHz - 440 MHz

Rated input range: -78 to +18 dBm

With attenuator, -58 to +40 dBm

Rated linearity: ± 0.4 dB

Scale tempco: -0.04 dB/ $^{\circ}\text{C}$

Demod output bandwidth: 50 kHz

Demod output scale: 23.4 mV/dB

Temperature alarm: 70 $^{\circ}\text{C}$, open-drain with weak pullup

Power supply: 5V, 10 mA

Attenuator relay: 5V, 21 mA

**RF Power Sensor #1,
AD8313**

NA6O 12-6-22