

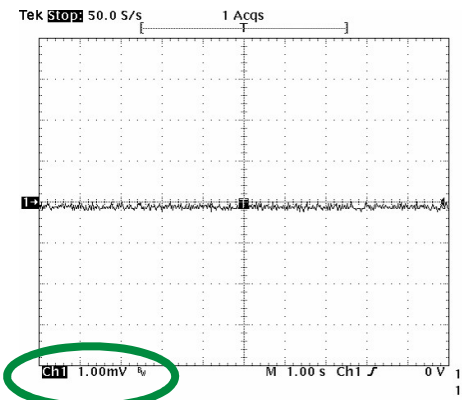
Oscilloscope noise floor

BEST

Noise floor = 0.2mV_{PP}

BW limit = 20MHz

BNC connection

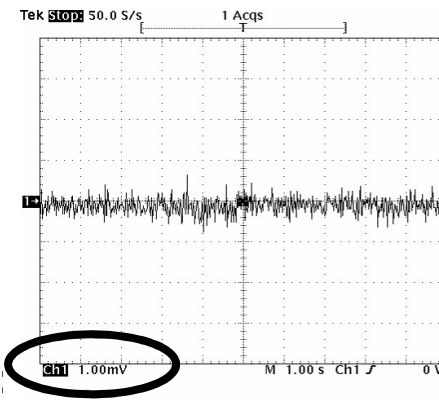


OK

Noise floor = 0.8mV_{PP}

BW = 400MHz

BNC connection

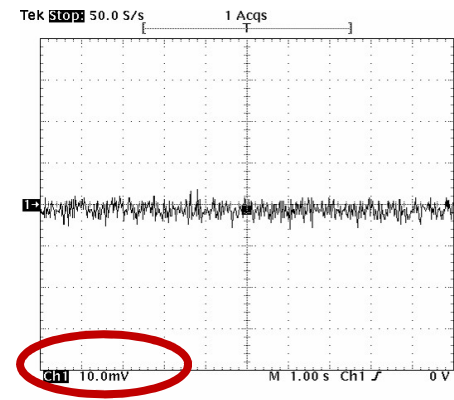


WORST

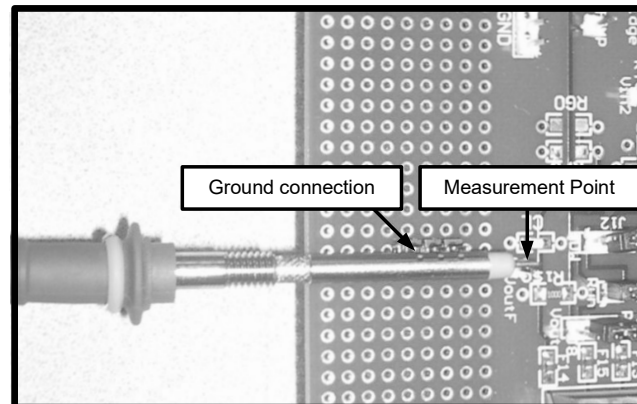
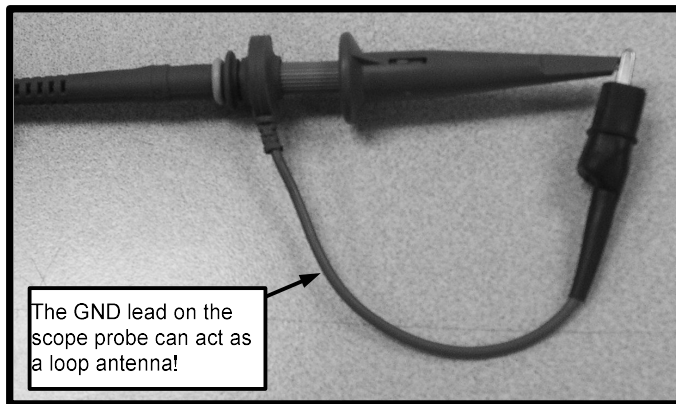
Noise floor = 8mV_{PP}

BW = 400MHz

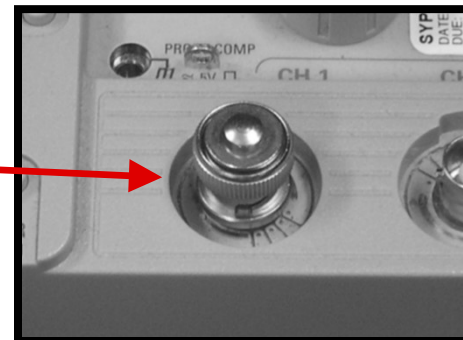
10x scope probe



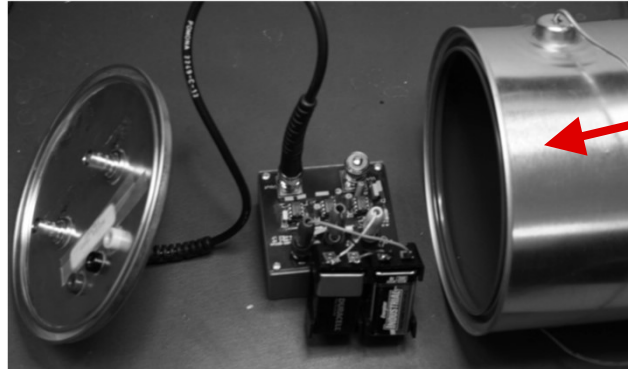
Oscilloscope noise measurement



Always measure the noise floor with a BNC shorting cap



General measurement precautions

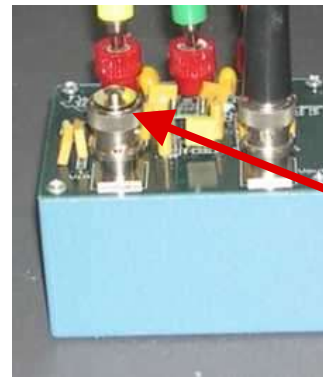


Steel paint can as RFI / EMI shield. This also minimizes thermal drift.

Linear supply or battery

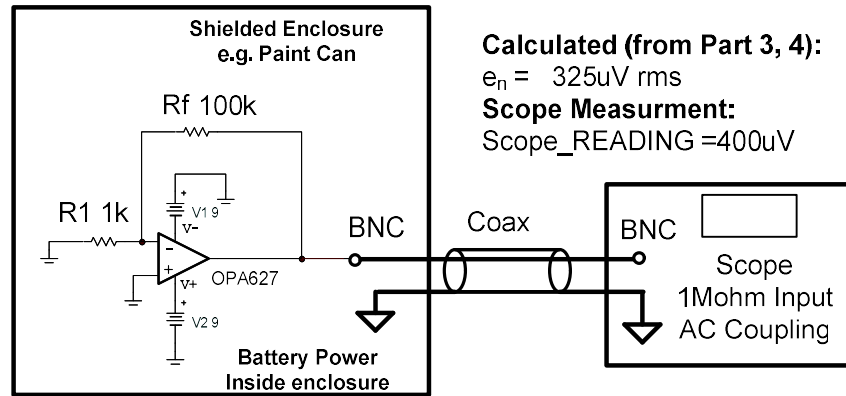
BNC from circuit under test

BNC to scope

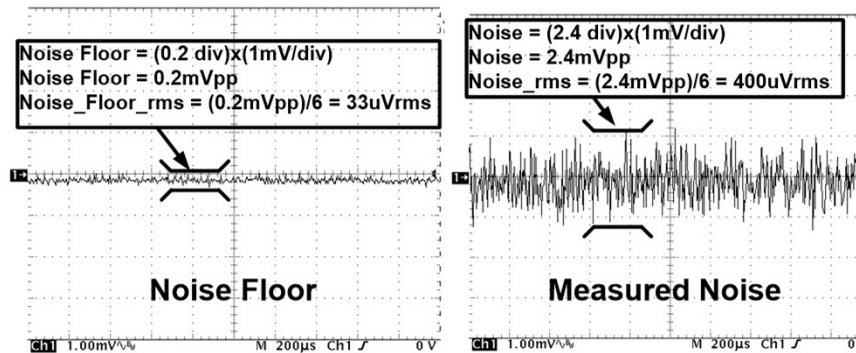


Use BNC male shorting cap for noise floor

OPA627 oscilloscope example



Calculated (from Part 3, 4):
 $e_n = 325\mu\text{V rms}$
Scope Measurement:
Scope_READING = 400 μV



Thank you