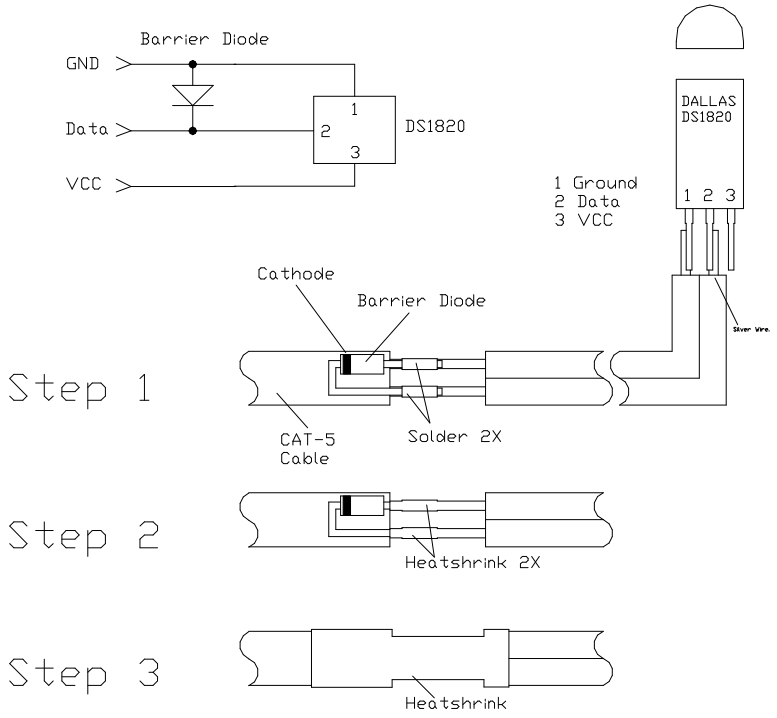
Point Six, Inc.

Application Notes For DS1820 Digital Thermometer Chip

To suppress ringing on the net of DS1820's Point Six, Inc. recommends the use of a barrier diode to clamp the ringing on the bus. This ringing becomes an even greater problem when extending the cables of temperature probes which contain DS1820's. Point Six also recommends CAT-5 twisted pair cable for network extensions. By using barrier diodes on each DS1820 and CAT-5 cable the problems associated with ringing can be minimized. The drawing below shows how to connect the barrier diode across the DS1820. The diode should be placed as close to the DS1820 as possible. Many Point Six temperature probes have these diodes built-in. Currently the STP010 and STP025 **Do not** contain barrier diodes.

Diodes to use are 1N5817, 1N5818, 1N5819 or equivalent.



Step 1: Locate the silver and copper wires coming from the probe. Solder a diode across the wires as shown in step 1 above.

Step 2: Place heatshrink or electrical tape over each joint to prevent shorting.

Step3: Place heatshrink or electrical tape over the entire junction and diode to prevent shorting.

Power **should not** be bussed parallel to the data for long runs. To bus power on long runs, use CAT-5 Two Pair Cable. Use one pair for Power and Ground and the other pair for Data and Ground tie the grounds together at the sensor.

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