

## MST-0422

*MWA analogue signal conditioning module*

### **Test: Temperature run**

*Note: only for pre-production units or samples*

Serial number: 001

Tester: C. Coleman

Date: 15/12/2010

### **Test procedure**

1. Put ASC module in environmental chamber
2. Connect 8 sets of extension cables out to where they can be connected to the mobile VNA
3. Set all attenuators to 0dB
  - Verify frequency response and gain of all 8 channels at 25C*
  - Repeat for 45C and 5C*
4. Power down and cycle temperature from -5C to 80C, 5C/min ramps and 15min dwell
  - Repeat measurements of frequency response and gain*

### **Comments**

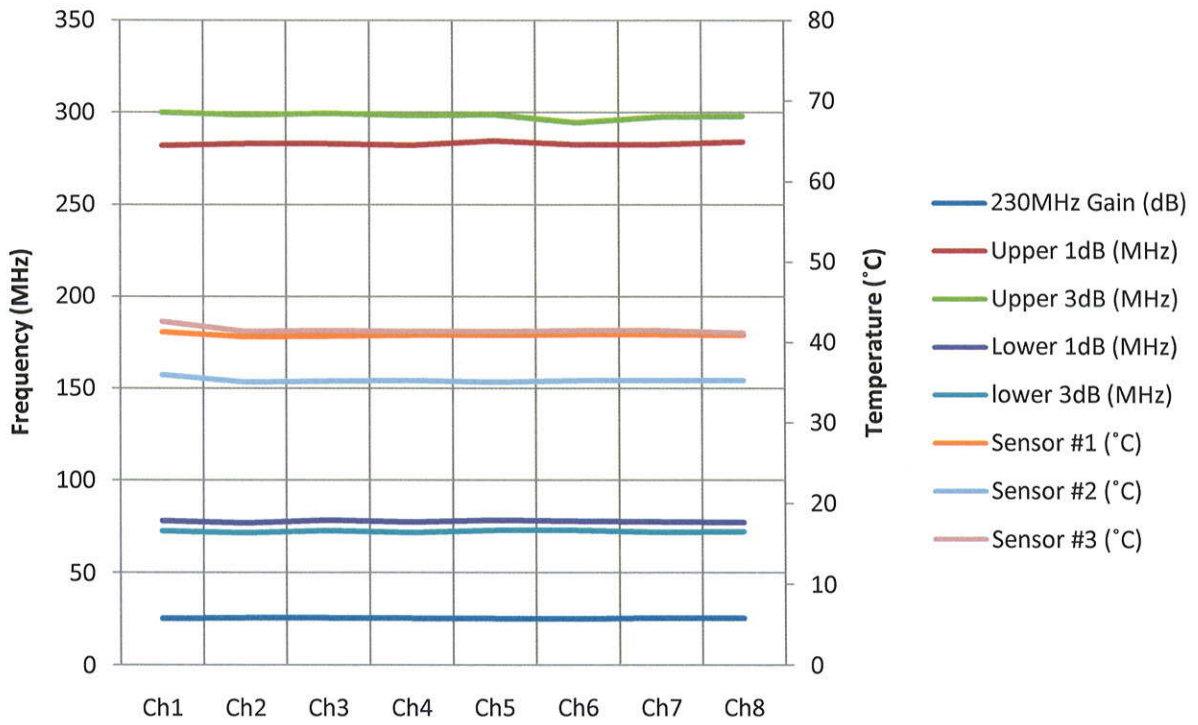
25°C						Temperature		
	230MHz Gain (dB)	Upper 1dB (MHz)	Upper 3dB (MHz)	Lower 1dB (MHz)	lower 3dB (MHz)	Sensor #1 (°C)	Sensor #2 (°C)	Sensor #3 (°C)
Ch1	25.2	282	300	78	72.6	41.3	36	42.6
Ch2	25.6	283.1	298.6	76.9	71.5	40.7	35.1	41.4
Ch3	25.6	283.1	299.4	78.4	72.7	40.8	35.2	41.5
Ch4	25.4	282.2	298.2	77.4	71.7	40.9	35.3	41.4
Ch5	25.2	284.5	298.8	78.4	72.8	40.9	35.1	41.4
Ch6	25.1	282.5	294.5	77.9	72.8	41	35.3	41.5
Ch7	25.5	282.7	297.5	77.6	71.9	41	35.3	41.5
Ch8	25.3	284.1	298	77.2	72.1	40.9	35.3	41.2

45°C						Temperature		
	230MHz Gain (dB)	Upper 1dB (MHz)	Upper 3dB (MHz)	Lower 1dB (MHz)	lower 3dB (MHz)	Sensor #1 (°C)	Sensor #2 (°C)	Sensor #3 (°C)
Ch1	25	280.3	299.4	77.9	72.8	59.4	56.6	59.6
Ch2	25.3	283.3	298.2	76.8	71.3	59.7	56.7	59.4
Ch3	25.4	281.7	298.8	78.7	72.7	59.5	56.5	59.3
Ch4	25.2	280.9	297.8	77.2	71.7	59.8	56.8	59.5
Ch5	24.9	284.7	298.4	78.2	72.8	59.9	56.6	59.6
Ch6	24.8	282.7	294.3	77.6	72.5	59.9	56.8	59.6
Ch7	25.4	283.8	297.3	77.4	71.9	59.7	56.7	59.6
Ch8	25.1	284.1	297.6	77.2	71.9	59.8	56.8	59.4

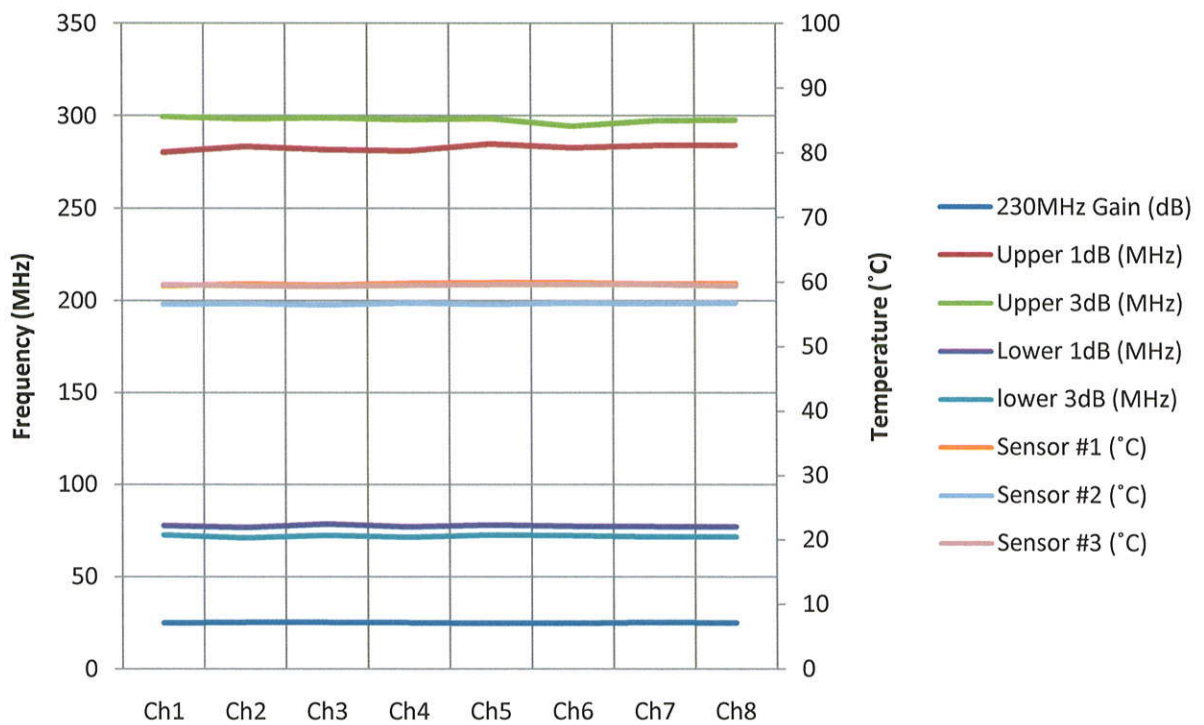
5°C						Temperature		
	230MHz Gain (dB)	Upper 1dB (MHz)	Upper 3dB (MHz)	Lower 1dB (MHz)	lower 3dB (MHz)	Sensor #1 (°C)	Sensor #2 (°C)	Sensor #3 (°C)
Ch1	25.4	284.1	300.6	77.6	72.5	19	16.4	20.8
Ch2	26	281.9	300.2	76.9	71.3	19.5	16.4	20.7
Ch3	25.8	284.5	300.2	78.2	72.7	19.4	16.4	20.6
Ch4	25.7	283.3	298.8	77.2	71.7	19.5	16.3	20.6
Ch5	25.3	287.2	299.6	77.6	72.5	19.5	16.3	20.7
Ch6	25.4	283.5	295.3	77.8	72.9	19.5	16.3	20.5
Ch7	25.9	284.3	298	77.2	71.9	19.5	16.4	20.4
Ch8	25.6	285.1	298.4	76.9	72.1	19.5	16.4	20.3

After Temp Cycle						Temperature		
	230MHz Gain (dB)	Upper 1dB (MHz)	Upper 3dB (MHz)	Lower 1dB (MHz)	lower 3dB (MHz)	Sensor #1 (°C)	Sensor #2 (°C)	Sensor #3 (°C)
Ch1	25.3	276.4	299.6	78.4	72.9	39.4	36.4	39.8
Ch2	25.7	282.1	298.6	76.8	71.5	39.9	36.9	40.1
Ch3	25.7	282.7	299.2	78.6	72.6	40.2	37.1	40.3
Ch4	25.5	280.7	298	77.6	71.7	40.3	37.3	40.4
Ch5	25.2	285.8	298.8	77.9	72.6	40.3	37.1	40.5
Ch6	25.2	282.5	294.5	78.2	72.8	40.4	37.3	40.5
Ch7	25.6	284.9	298	76.9	71.8	40.5	37.4	40.6
Ch8	25.4	285.5	298.4	77.4	72.1	40.6	37.5	40.3

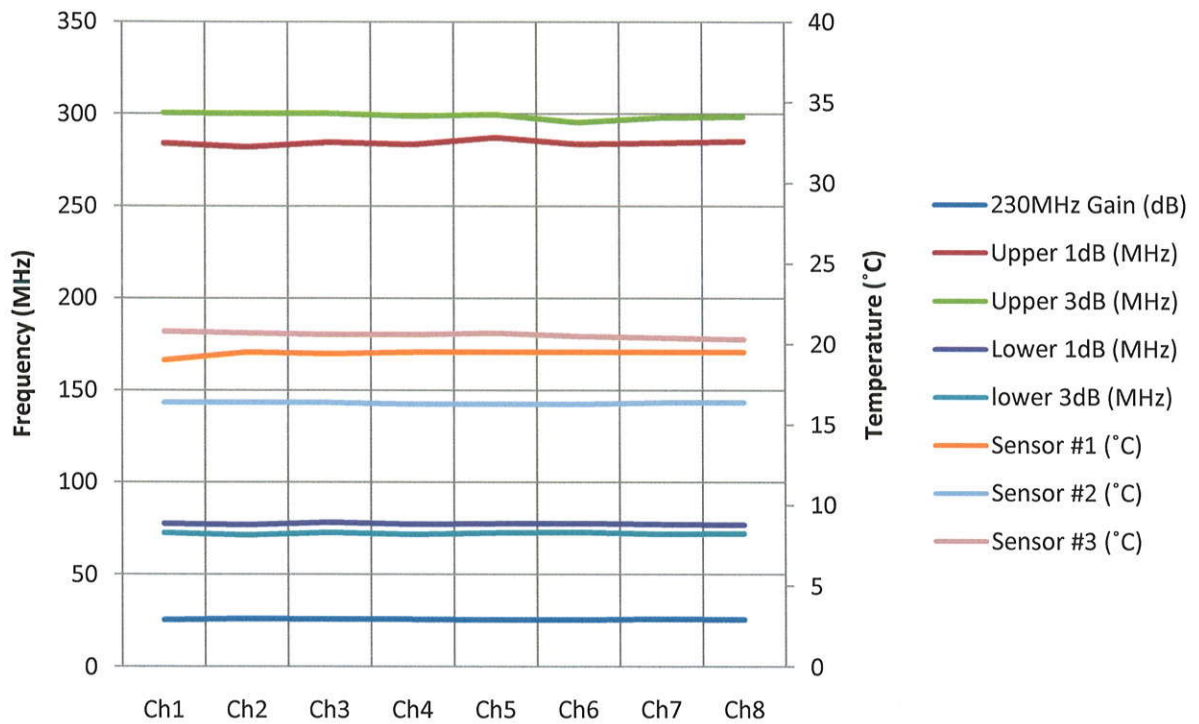
## 25°C Results



## 45°C Results



### 5°C Results



### After Temp Cycle Results

