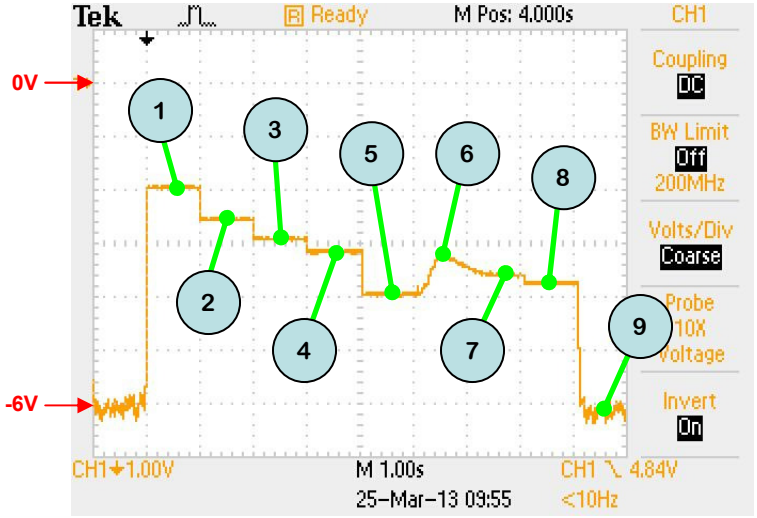
Analyze the DUT activity



MPU: Freescale MC9S08QE4		Vdd: 3.0V
PROCESSOR STATE	**Vscope**	**Current**
1. fBUS = 10 MHz LED ON	-1.95	11.2 mA
2. fBus = 10 MHz LED OFF	-2.56	2.75 mA
3. fBus = 10 MHz WAIT MODE	-2.92	1.20 mA
4. fBus = 1 MHz	-3.16	690 uA
5. fBus = 16 KHz	-3.96	110 uA
6. fBus = 16 KHz Enable 16 floating inputs which begin oscillating and consuming power. Note differences in current consumption between states 5, 7, and 8.		
7. 16 Inputs floating	-3.60	250 uA
8. 8 Inputs floating	-3.76	170 uA
9. STOP3 MODE	-6.10	0.8 uA

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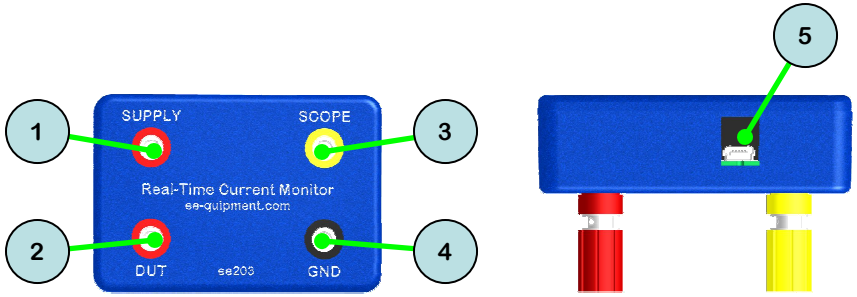
Real-Time Current Monitor Quick-Start Guide



1. **SUPPLY: Power source for the DUT. The source can be a power supply or a battery. The input voltage must be <= 5.5V.**

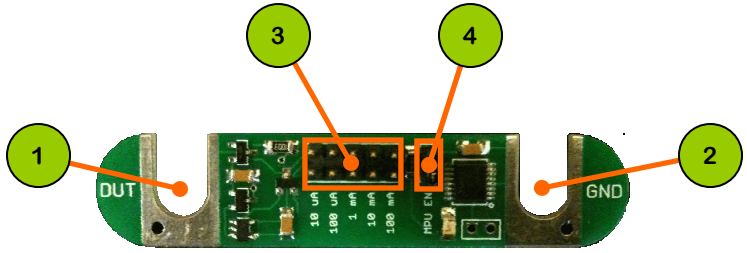
2. **DUT: Power supply for the DUT. This is internally connected to SUPPLY through a current sampling network.**

3. **SCOPE: Voltage output to an oscilloscope. The output voltage range is 0 < Vout < 8V. The SCOPE output impedance is 1 KΩ.**

4. **GND: This is the common GND connection for SUPPLY, DUT, SCOPE, and USB.**

5. **USB connector. This provides power to the unit and optional PC control and data logging.**

Demo Load Board



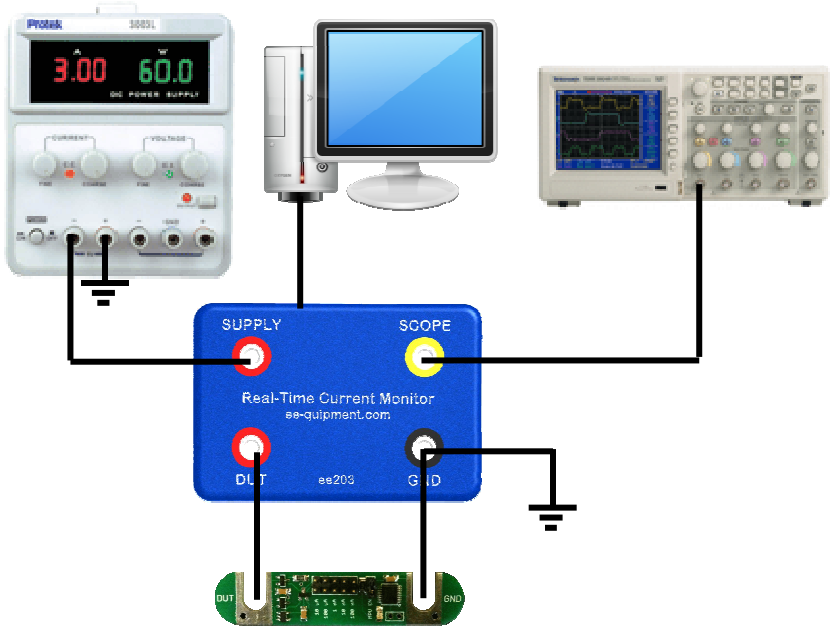
1. Power supply for the board. Connect this to the DUT connector on the ee203. Vin MIN is 1.8V. Vin MAX is 3.6V if the MPU EN jumper is installed or 5.5V if the MPU EN jumper is removed.

2. GND connection. Connect this to the GND connector on the ee203.

3. Current sink select jumpers. Installing a jumper will cause the marked current to be drawn from the DUT terminal (+/- 2%). Multiple jumpers may be installed and the currents will add linearly.

4. MPU enable. Install this jumper to power the MPU, which will run the power profile program described on the back page. DO NOT apply > 3.6V to the DUT terminal if the MPU EN jumper is installed.

Connecting the Device-Under-Test (DUT)



Connect the PC, oscilloscope, Current Monitor, and DUT as shown.

Configure the oscilloscope to show 6V full scale. The current drawn from the DUT terminal is displayed on the oscilloscope logarithmically:

$$i = 10 \wedge (-Vscope)$$

Use the 'invert' feature on the oscilloscope to provide a more intuitive display where the trace will rise for higher currents.