

**Scope:**

The purpose of this Application Note is to explain how the 6310 series electronic loads operate below 1VDC. Below is an explanation of how the current sinking capability of the load de-rates when operating voltage across the load's terminals is below 1VDC.

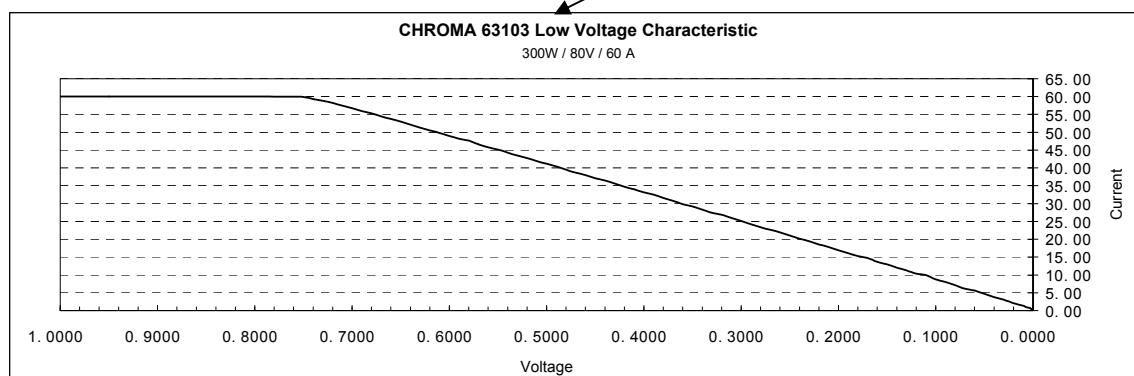
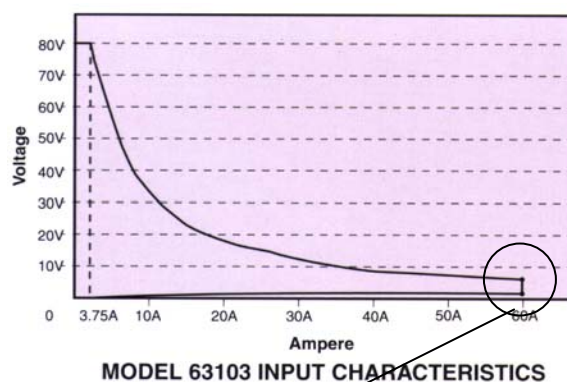
**Definition:**

- **VOn Point:** This feature allows the user to set a voltage value at which the load will begin or stop sinking current.
- **UUT:** Unit Under Test

**Purpose of the VOn Point:**

The purpose of the VOn Point feature is to provide a "soft startup" for power supplies and other types of UUTs which may malfunction or inhibit operation if current is draw before the UU reaches a minimum operation voltage (i.e. in some cases the UUT's voltage must be allowed to raise to a certain value before the load begins to sink current). Many power supplies will fold-back if too large of a current is draw on power-up. Additionally, the VOn Point features disables the load (i.e. stops sinking) whenever the UUT's voltage falls below this preset level.

**Example of Operation (6310 Loads):**



The figure above shows the current de-rating profile for the Model 63103/63303 60A loads\*. As shown in the figure, the load will sink full current (60A for this model) at terminal voltages from 1-80VDC. Below 1VDC the available load current linearly de-rates to zero amps. This curve assumes the VOn Point feature has been preset to zero volts.

**NOTE: VOn Point feature is preset at the factory of 0.96VDC. This default value maybe be changed by the user (see example below)**

\*This curve applies to all 6310 series loads. For loads with other full-scale current values, scale y-axis proportionally.

#### **EXAMPLE ON HOW TO CHANGE VON POINT VALUE**

To change the **VOn Point** feature value, follow this procedure:

1. Turn mainframe ON, allow instrument to complete its startup routine.
2. Press the **Configuration Button**.
3. Press **Arrow Down** in the Keypad until the prompt is displayed for VOn Point.
4. Type the **Voltage On** value you wish to have as Default (zero volts is recommended for applications below 1VDC)  
*\* Default Value when Load is shipped = 0.96V*
5. Press **Enter**.

To have this value as your Default Value, follow this procedure:

1. Press the **Save** button.
2. Press **Arrow Down** in the Keypad.
3. Press **1** in the Keypad.
4. Press **Enter**.