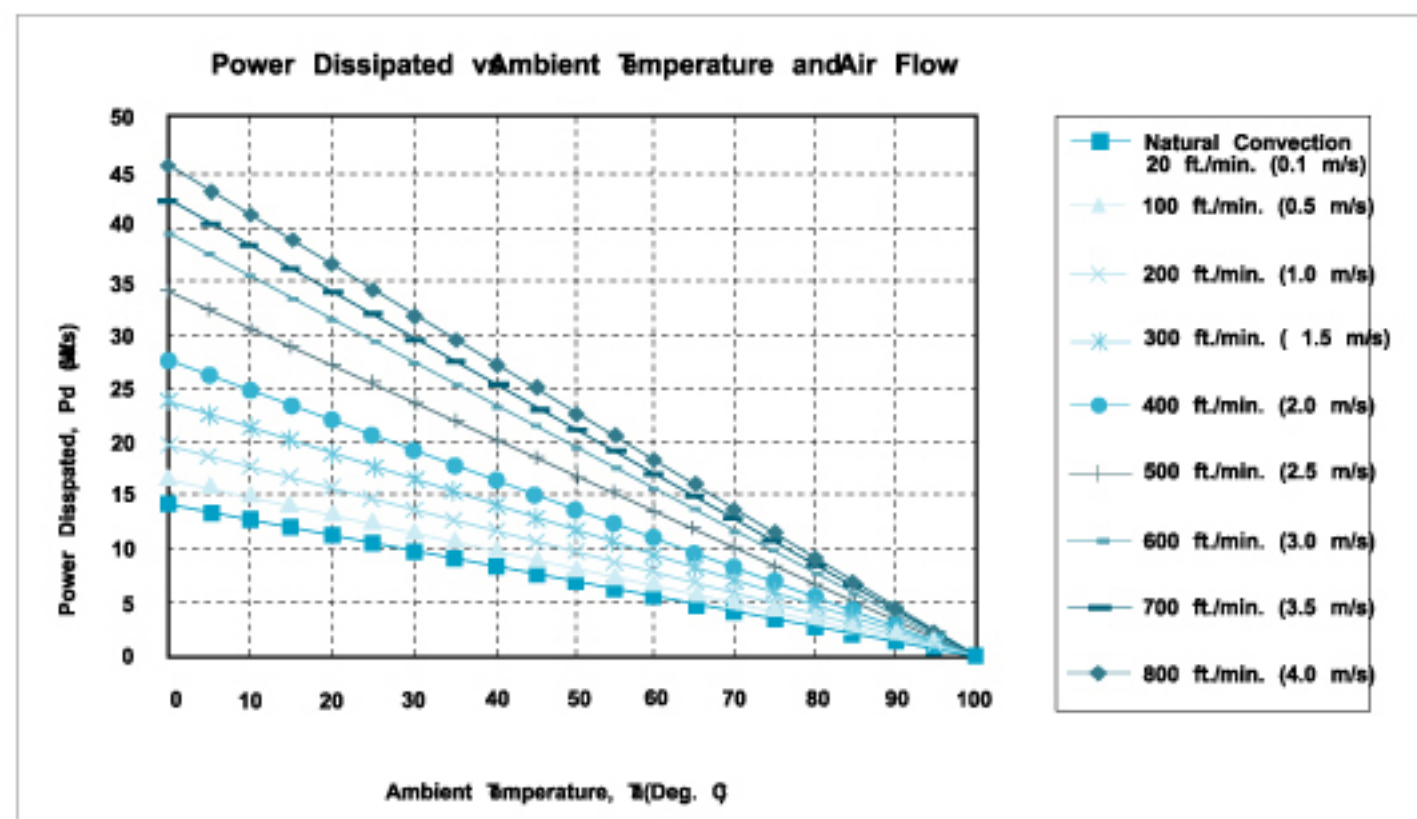


## Application Note

Derating:

The operating case temperature range of CHB100/150 series is -40°C to +100°C. When operating the CHB50/75/100/150 series, proper derating or cooling is needed.

Following is the derating curve of CHB50/75/100/150 without heat sink.



Forced Convection Power Derating without Heat Sink

Where:

The power dissipation (Pd):

$$P_d = P_i - P_o = P_o (1 - \eta) / \eta$$

The thermal resistance are list below:

Chart of Thermal Resistance vs Air Flow:

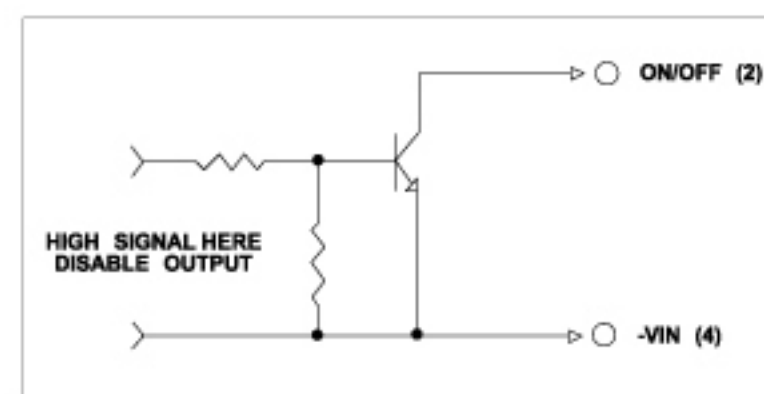
| AIR FLOW RATE                          | TYPICAL Rca |
|--|-------------|
| Natural Convection 20ft./min. (0.1m/s) | 7.12 °C/W   |
| 100 ft./min. (0.5m/s)                  | 6.21 °C/W   |
| 200 ft./min. (1.0m/s)                  | 5.17 °C/W   |
| 300 ft./min. (1.5m/s)                  | 4.29 °C/W   |
| 400 ft./min. (2.0m/s)                  | 3.64 °C/W   |
| 500 ft./min. (2.5m/s)                  | 2.96 °C/W   |
| 600 ft./min. (3.0m/s)                  | 2.53 °C/W   |
| 700 ft./min. (3.5m/s)                  | 2.37 °C/W   |
| 800 ft./min. (4.0m/s)                  | 2.19 °C/W   |

The temperature rise ( $\Delta T$ ):

$$\Delta T = \Delta P_d * R_{ca}$$

## Remote ON/OFF Control

The CHB100/150 Series allows the user to switch the module on and off electronically with remote on/off feature. The CHB100/150 Series are available with "positive logic" or "negative logic" (option).

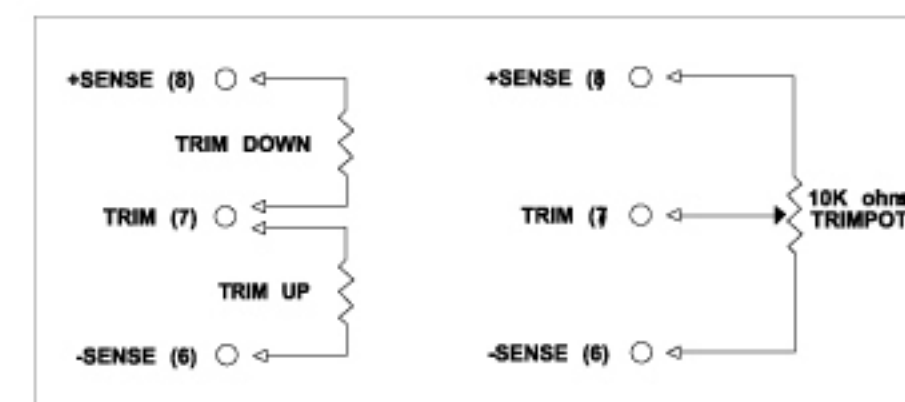


Logic Table

| Logic State (Pin 2)       | Negative Logic | Positive Logic |
|---------------------------|----------------|----------------|
| Logic Low - Switch Closed | Module on      | Module off     |
| Logic High - Switch Open  | Module off     | Module on      |

## External Output Trimming

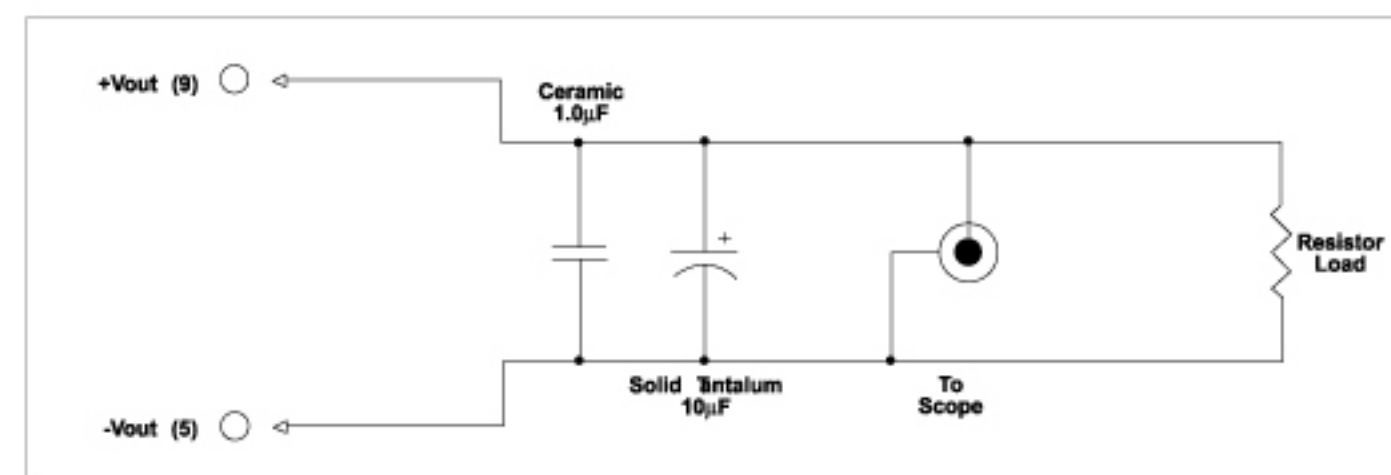
Output may optionally be externally trimmed ( $\pm 10\%$ ) with a fixed resistor or an external trimpot as shown.



External Output

## Output Noise

The output noise is measured with 10 $\mu$ F tantalum capacitor and 1.0 $\mu$ F ceramic capacitor across output.



Output Noise Test Circuit schematic