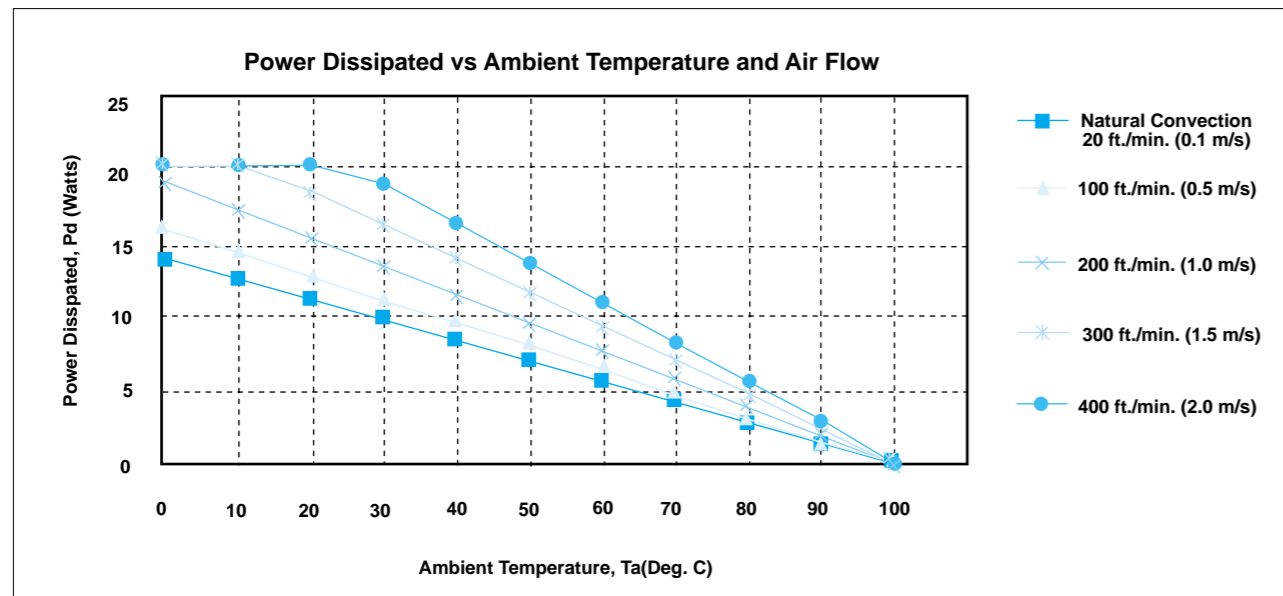


## Application Note

### Derating

The operating case temperature range of the CHB75 series is -40°C to +100°C. When operating the CHB75, proper derating or cooling is needed.

Following is the derating curve of CHB75 without heat sink



Forced Convection Power Derating with No Heat Sink

Where:

The power dissipation (Pd):

$$Pd = Pi - Po = Po (1 - \eta) / \eta$$

The thermal resistance are list below:

Chart of Thermal Resistance vs Air Flow:

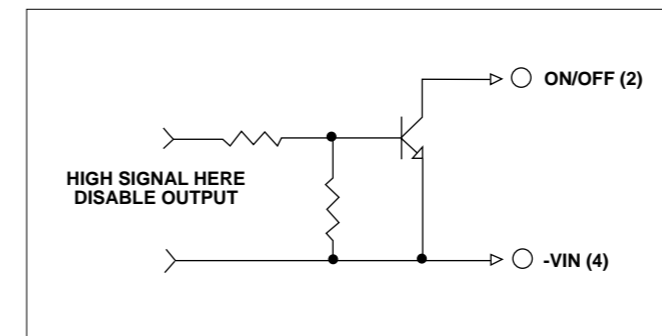
| AIR FLOW RATE      | TYPICAL Rca |
|--------------------|-------------|
| Natural Convection | 7.12 °C/W   |
| 100 ft./min.       | 6.21 °C/W   |
| 200 ft./min.       | 5.17 °C/W   |
| 300 ft./min.       | 4.29 °C/W   |
| 400 ft./min.       | 3.64 °C/W   |

The temperature rise ( $\Delta T$ ):

$$\Delta T = Pd * Rca$$

## Remote ON/OFF Control

The CHB75 series allows the user to switch the module on and off electronically with remote on/off feature. The CHB75 series are available with "positive logic" or "negative logic" (option).

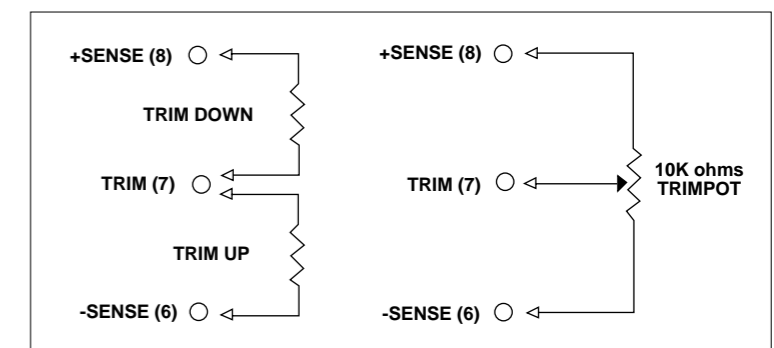


Logic Table

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

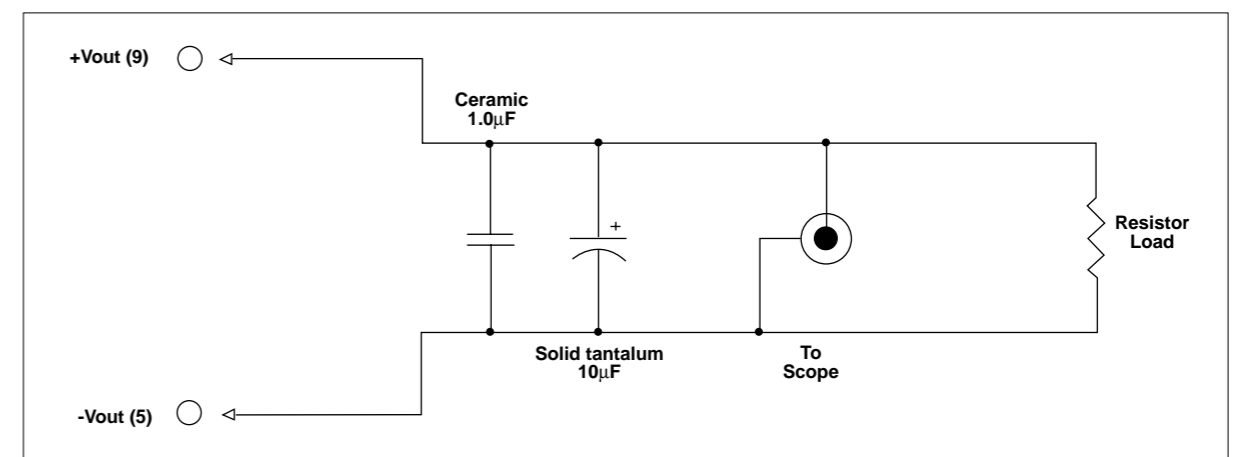
## External Output Trimming

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



## Output Noise

The output noise is measured with 10µF tantalum capacitor and 1.0µF ceramic capacitor across output.



Output Noise Test Circuit schematic