

# Smart IRt/c™



## Infrared Temperature Sensor

### TA Pull Down Pin

#### Option Description

The TA Pull Down Pin allows the user to select whether the Smart IRt/c™ output the target temperature or the ambient temperature. This is achieved by pulling and holding the pin to ground. For as long as the pin is held low, plus one response time (less than 250 msec), the unit will output ambient temperature, releasing the pin will return the unit to normal operation.

There are two main benefits of this feature; you can not know the ambient temperature with out a second device and the more sophisticated can determine the heat flow from the target. Knowing the heatflow can be useful in some applications; it can also allow you to correct for emissivity errors.

#### Option Specifications

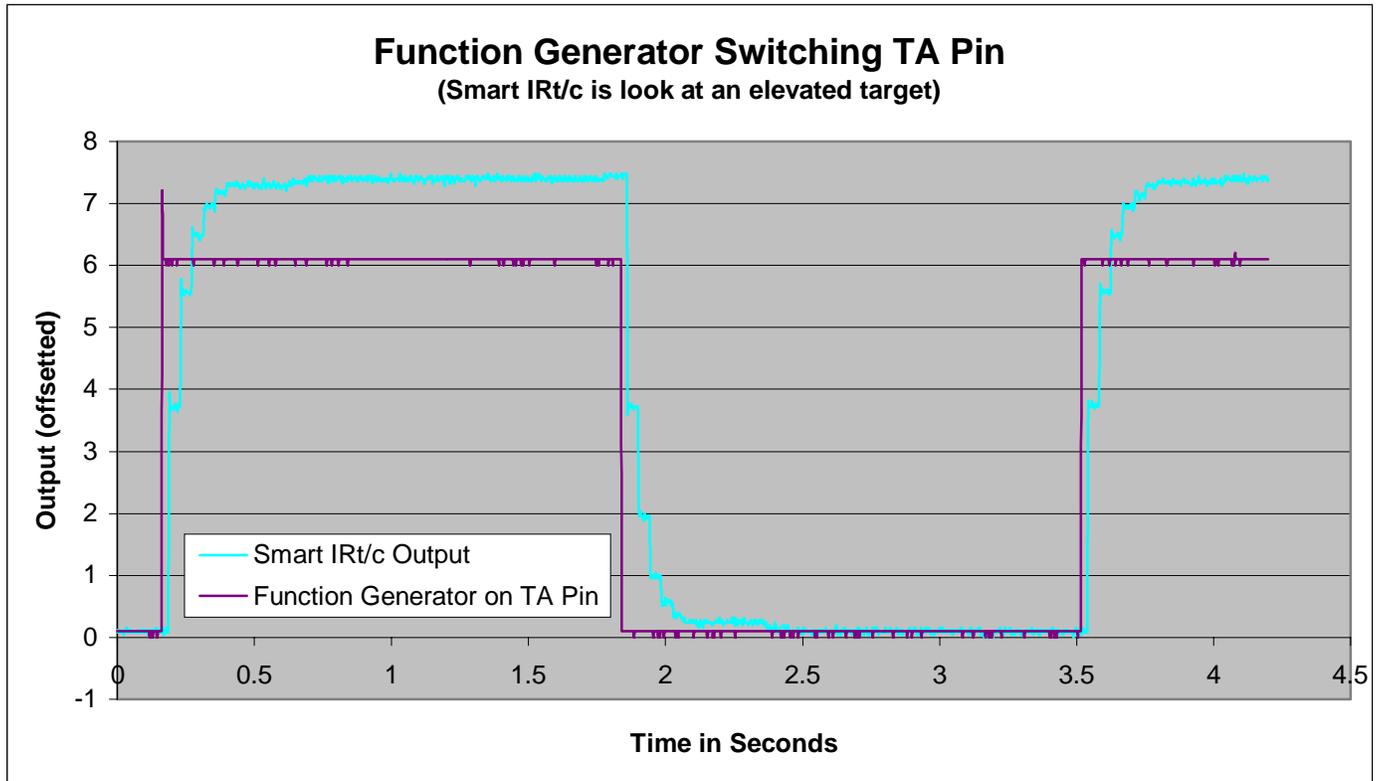
<b>Ambient Temperature Range</b>	0 °C to 70 °C (32 °F to 158 °F)
<b>TA Pull Down</b>	Pull down below 0.5V *
<b>Maximum Switch Time for Output Toggle</b>	One Response Time, 250 msec
<b>Time Constant after Switch</b>	Less than 650 msec
<b>Pin Color</b>	Normally Brown
<b>TA output 0-5V models</b>	50 mV / °C (0-70 °C, 0-3.5V)
<b>TA output 0-10V models</b>	10 mV / °C (0-70 °C, 0-7.0V)
<b>TA output 4-20mA models</b>	0.229 mA / °C (0-70 °C, 4-20mA)
<b>TA output RS232 models</b>	Degrees C

\* Applying a voltage above 5.4V may cause the unit to freeze or malfunction, restarting without the high voltage present should reset the unit. Pulling the pin significantly high can cause permanent damage.

Internally the input is tied high with a minimum of a 12K impedance to a 5V +/-5% rail.

# Smart IR<sub>t/c</sub><sup>TM</sup> Infrared Temperature Sensor

## Graphs and Supporting Data



### Sample Circuit to Use TA Pin

