

## Technical Guide

# Quasonix Transmitter Overtemp Control Operation

Applies to all Quasonix Transmitters

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Specifications subject to change without notice.

All Quasonix products are under U.S. Department of Commerce jurisdiction; not covered by ITAR

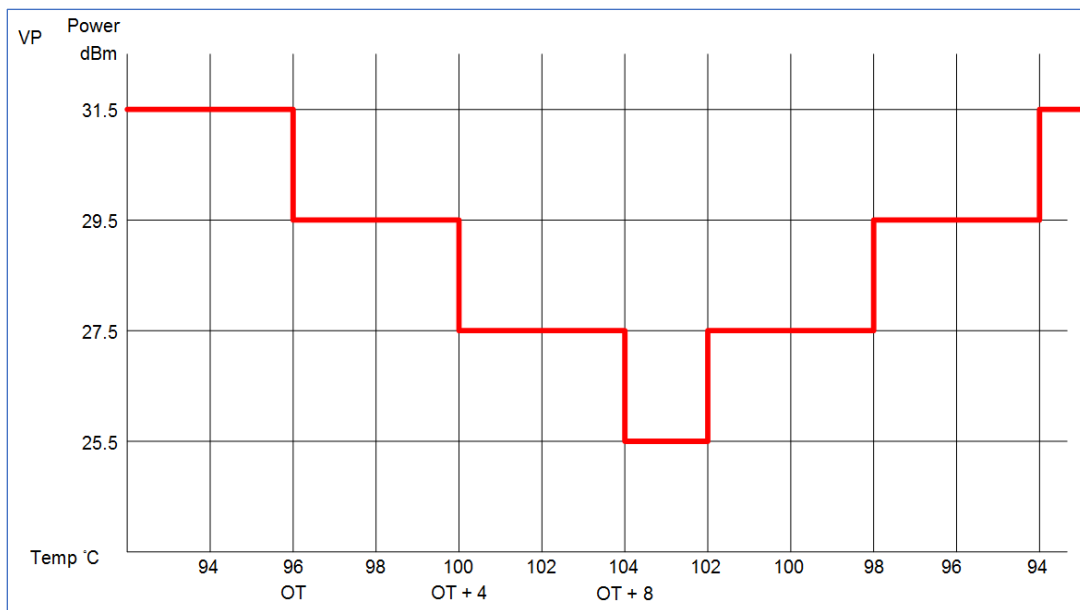
**High temperature backdown works like this:**

Each transmitter has an internal overtemperature (OT) setting which is set at the factory. If overtemperature control is enabled, using the OC command, then:

- If the internal transmitter temperature reaches the OT setpoint, **and** the Variable Power (VP) setting is above 29.5, then the actual power setting is cut back by 2 dB from the user setting.
- If the temperature reaches the OT setpoint plus 4 degrees, **and** the VP setting is above 27.5, then the actual power setting is cut back by 4 dB from the user setting.
- If the temperature reaches the OT setpoint plus 8 degrees, **and** the VP setting is above 25.5, then the actual power setting is cut back by 6 dB from the user setting.
- If the power has been cut back by 6 dB, **and** the temperature drops below the OT setpoint plus 6, (2 degrees of hysteresis coming down) then raise the power level to be cut back by only 4 dB.
- If the power has been cut back by 4 dB, **and** the temperature drops below the OT setpoint plus 2, (2 degrees of hysteresis coming down) then raise the power level to be cut back by only 2 dB.
- If the power has been cut back by 2 dB, **and** the temperature drops below the OT setpoint MINUS 2, (2 degrees of hysteresis coming down) then raise the power level back to the user setting.

NO power cutback happens if the power level set by the user is already below the maximum power minus the desired cutback level. If the power level is at or below 25.5, then no cutback will ever occur.

The power levels specified for VP may be integer levels if this is a T3 nano or T3PA (contact Quasonix for clarification on your transmitter type) which still have the 0-31 in 1 dB step attenuators in them.



**Overtemperature Control Example**