

- **Model** QMC-GDOM12-780616R
- **Waveguide** WR12
- **Output** UG -387/U Compatible

- **Frequency** 78.5 GHz
- **Bandwidth** ± 3.0 GHz
- **Output Power** + 16.0 dBm / 40 mW
- **Bias Voltage** see table
- **Bias current** see table
- **DC connector** SMA female (center pin positive)
- **Temperature** + 32 °C ± 3

- **DC- DC Regulator Vs :** +12.0 volts



Installation:

Observe standard anti-static precautions.

Using the supplied matched DC-DC Regulator box. Connect the various leads.

Operating Instructions:

To power up the oscillator, follow the sequence and use the TTL control signal.

The micrometers should be adjusted slowly and smoothly.

Operation outside the range indicated in the results table is NOT recommended or in any way guaranteed by Quantum Microwave Components.

If the frequency is varied outside the specified range mode changes may occur. The oscillator may then be returned to its normal operation by powering down and re-setting the frequency micrometer within the specified range and then powering up the oscillator once again.

Frequency Stability:

A cooling fan or heatsink is recommended to maintain an optimum operating temperature.

A stable thermal environment will enhance frequency stability.

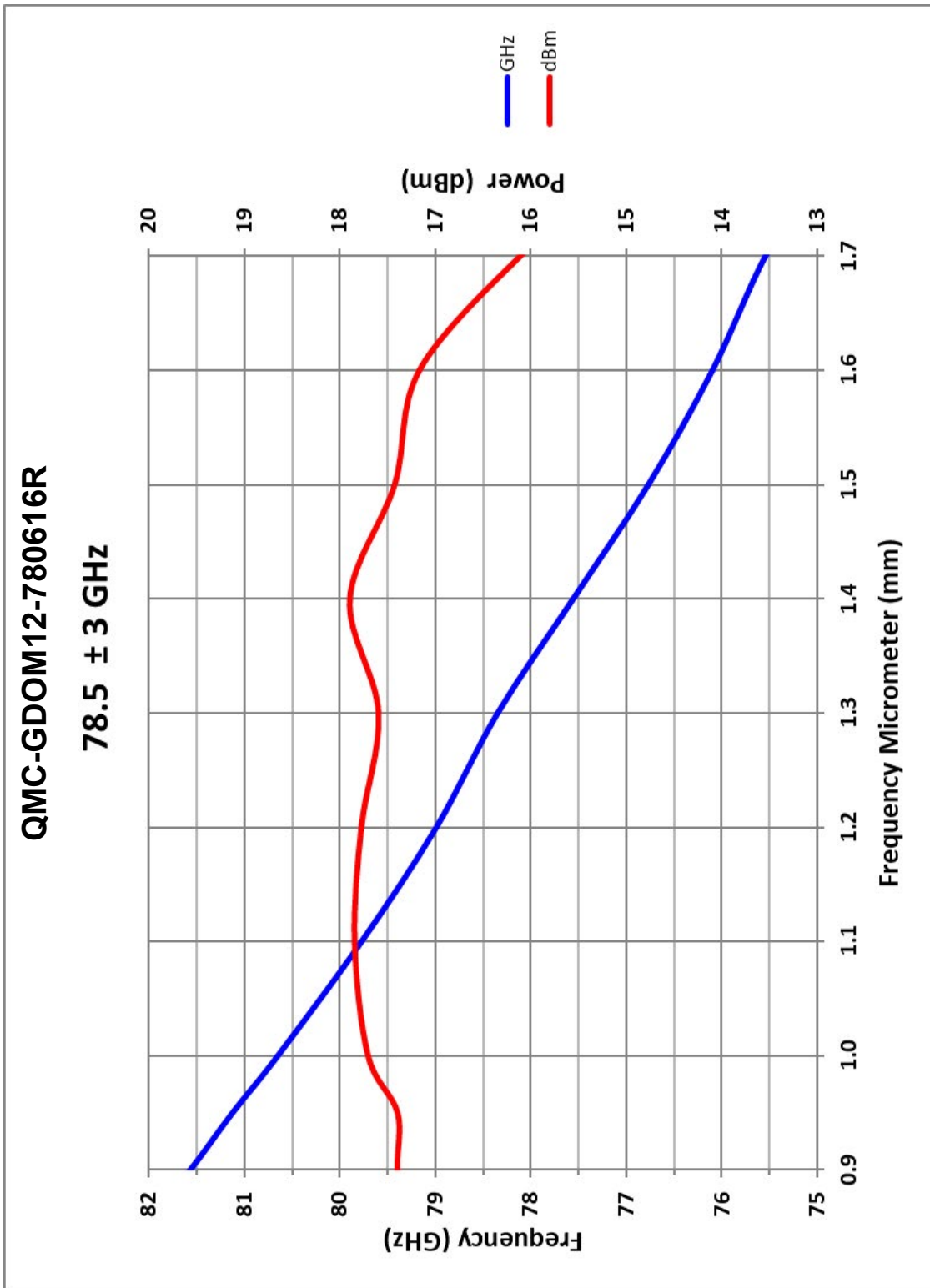
Summary of results.

Voltage +Vg	Current Ig	Power micrometer	Frequency micrometer	Frequency	Power	
Volts	mA	mm	mm	GHz	dBm	mW
+ 5.2	~751	3.65	1.75	75.11	15.36	34.4
+ 5.2		3.65	1.70	75.55	16.11	40.8
+ 5.2		3.80	1.60	76.10	17.17	52.1
+ 5.2	~ 752_	3.80	1.50	76.77	17.43	55.3
+ 5.2		3.60	1.40	77.56	17.90	61.7
+ 5.2	-	3.60	1.30	78.35	17.60	57.5
+ 5.2		3.60	1.20	78.99	17.78	60.0
+ 5.2		3.40	1.10	79.77	17.85	61.0
+ 5.2	~ 757	3.30	1.00	80.65	17.71	59.0
+ 5.2		3.30	0.95	81.13	17.40	55.0
+ 5.2		3.30	0.90	81.57	17.40	55.0
+ 5.2	~ 751	3.20	0.85	82.07	17.30	53.7

Absolute Maximum Vg = + 5.8 v (DO NOT EXCEED)

Threshold conditions : approximately 1.3 to 1.5 v , with 1100 to 1300 mA





Appendix 1

Use the following steps to Connect the DC- DC Regulator to Gunn oscillator

- 1 Connect Control / TTL cable
- 2 Apply + 3 v to Control /TTL i.e. **High state**
- 3 Connect $V_s = +12v$ to Input SMA supply connector
- 4 Connect SMA cable to Gunn oscillator & other end to V_o on the Regulator Box

- 5 Turn Input Supply $V_s = +12 v$ On
- 6 RED Led will Turn on and Output V_o will be close to zero volts

- 7 Turn Control /TTL to **0 volts** i.e., **Low state**
- 8 Green Led will turn on

- 9 Output $+V_o$ will be present and $+V_g = + 5.2 v$ will be present.
- 10 RF Oscillations and output power will be observed

Note

$V_g = +5.2 v$ is pre-set

the supplied SMA cable should be used., it has a specific resistance .

