www.linwave.co.uk

Gunn Oscillator Module Fc 107 GHz Typ ± 50 MHz Pout 10-20 mW.

LW22-797599

Description

Linwave Technology offer a range of Gunn Oscillator modules from 30 GHz to 110 GHz which can be customised to meet specific requirements.

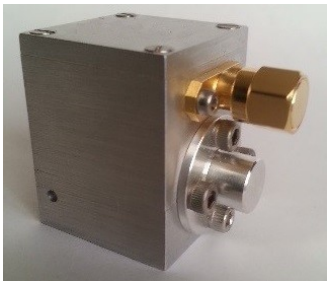

Figure 1. Narrow Band Gunn Oscillator module

General Parameters (see TR sheet for specific unit results)

Parameter	Value	Comments
Model	LW22-797599	Narrow band
Centre Frequency	107 GHz	
Waveguide	WR10	
RF Output Interface	UG-387/U	Compatible
Output Power	15 mW	10-20 mW Typ. Available
Bandwidth	± 50 MHz	Typ.
Gunn Voltage (Nom)	+3.7 V	+4.2 Abs. Max
Gunn Current	510 mA	Typ.
Nominal Operating Temp.	32 Degs C	

For price, delivery and to place orders please contact
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Data sheet Iss 01, dated 30/05/19 DS00-797599, SAP Activity No. 4084

Operating Instructions

The oscillator unit is a precision part, but careful usage should ensure a long service life. Before use it is recommended to bear in mind the following points:

- Observe standard ESD precautions.
- 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 then powering up the oscillator once again.
- A cooling fan or heatsink is recommended to maintain an optimum operating temperature.
- A stable thermal environment will enhance frequency stability, preferably within ± 3 Degs C to keep within the results for the unit.
- Linwave recommend the use of its purpose built DC bias generator available upon request

<u>Using an External Supply:</u>

- Connect the power supply (minimum 1.2A output) leads to the appropriate Gunn terminals. To avoid turn on transients we recommend that the bias leads be connected to a power supply that has previously been turned on and set to zero voltage.
- To power up the oscillator, slowly and continuously increase the supply voltage to the value specified (Vg= + x.y V – see TR sheet for voltage vs frequency results for a specific unit) – DO NOT exceed +4.2V. To power down the oscillator reverse the above process.

  A typical table of results is provided below; it indicates the frequency variation with bias voltage Vg.

  Operation outside the range indicated in the results table is NOT recommended or in any way guaranteed

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Table of Typical Oscillator Performance Parameters (For indication only).

Room temperature (heatsink mounted)

Vg	Current	Frequency	Output Power	
volts	mA	GHz	dBm	mW
3.45	708	107.0	15	
3.50	707	107.09	15	
3.55	706	107.18	14.8	
3.60	707	107.27	14.9	
3.65	707	107.38	15	
3.70	706	107.49	15	

Using a Matched Bias Generator:

Alternatively, a matched bias generator can be used (recommended) which will take a +12 V DC input and generate an output bias at the optimum level (voltage) for the corresponding oscillator module. Consult DS00-797600 for further details.

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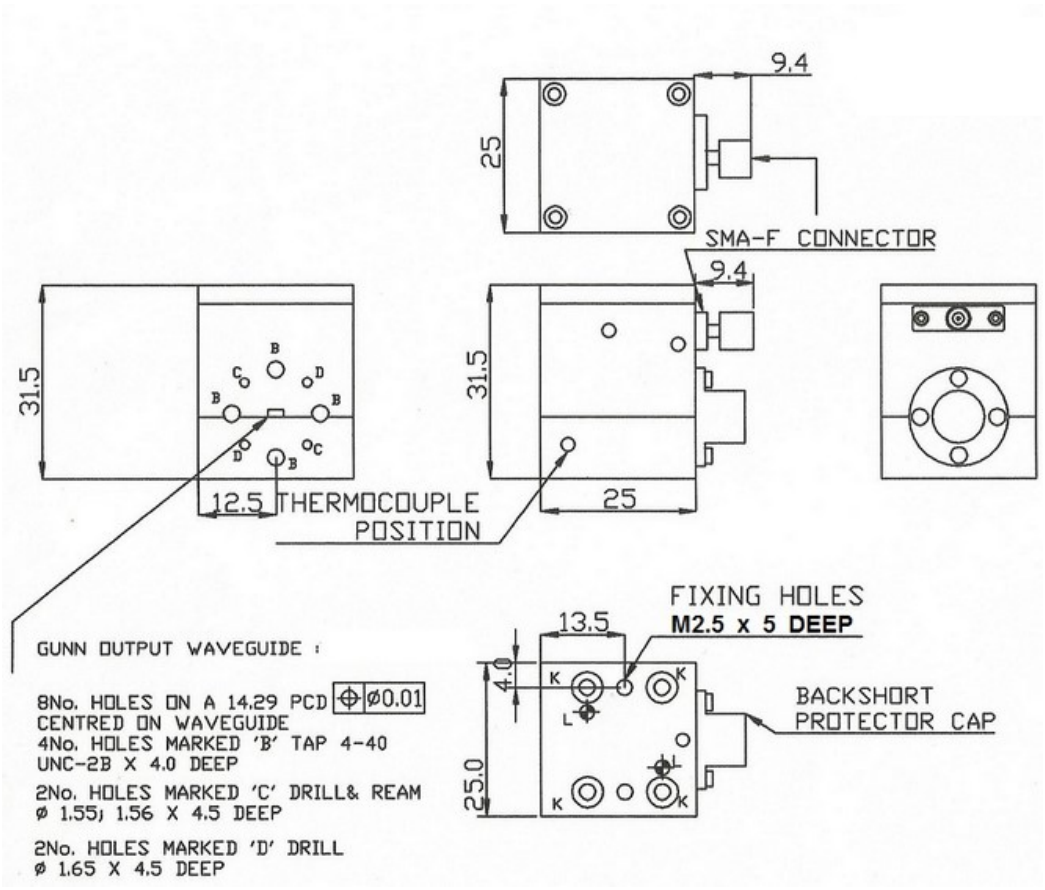
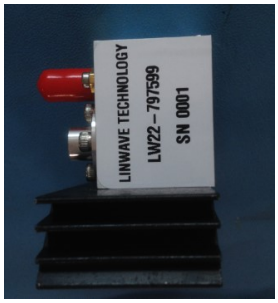
Mechanical Outline





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