WR 12 Bias Tuned Gunn oscillator

Model G 12 (GN12)

The unit utilises a GaAs Gunn device in a waveguide cavity.
The frequency can be adjusted using the applied bias voltage.

The module provides a convenient way of generating an RF signal using a solid state device.
A clean and stable DC power supply will enhance performance and spectral purity

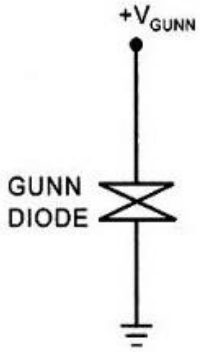
Applications:-

Educational
Communications
Research
Imaging/ Sensors

Frequency	Power		Voltage	Min Bandwidth
(GHz)	mW	dBm	volts	(MHz)
84	10	10	+ 5.1	100
84	20	13	+ 5.1	100
84	30	14.8	+ 5.1	100
84	40	16.0	+ 5.1	100
84	50	17.0	+ 5.1	100
84	60	17.8	+ 5.1	100
84	70	18.5	+ 5.1	100

Alternative centre frequency available.
Specifications at + 32ºC case temperature

DC input : SMA female
RF output : UG-387/U flange compatible



Note: Customised performance and outline envelope available e.g. greater bandwidth, smaller outline/ mass

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Applications:-

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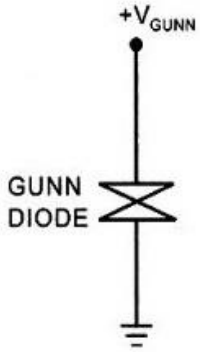
Frequency	Power		Voltage	Min Bandwidth
(GHz)	mW	dBm	volts	(MHz)
80	10	10	+ 5.3	100
80	20	13	+ 5.3	100
80	30	14.8	+ 5.3	100
80	40	16.0	+ 5.3	100
80	50	17.0	+ 5.3	100
80	60	17.8	+ 5.3	100
80	80	19.0	+ 5.3	100

Alternative centre frequency available.
Specifications at + 32ºC case temperature

DC input : SMA female
RF output : UG-387/U flange compatible



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Applications:-

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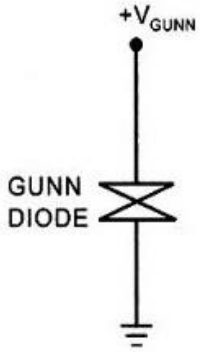
Frequency	Power		Voltage	Min Bandwidth
(GHz)	mW	dBm	volts	(MHz)
76.5	10	10	+ 5.4	100
76.5	20	13	+ 5.4	100
76.5	30	14.8	+ 5.4	100
76.5	40	16.0	+ 5.4	100
76.5	50	17.0	+ 5.4	100
76.5	60	17.8	+ 5.4	100
76.5	80	19.0	+ 5.4	100

Alternative centre frequency available.

Specifications at + 32ºC case temperature

DC input : SMA female
RF output : UG-387/U flange compatible



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Applications:-

Educational
Communications
Research
Imaging/ Sensors

Frequency	Power		Voltage	Min Bandwidth
(GHz)	mW	dBm	volts	(MHz)
70.0	10	10	+ 5.5	100
70.0	20	13	+ 5.5	100
70.0	30	14.8	+ 5.5	100
70.0	40	16.0	+ 5.5	100
70.0	50	17.0	+ 5.5	100
70.0	60	17.8	+ 5.5	100
70.0	80	19.0	+ 5.5	100

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DC input : SMA female
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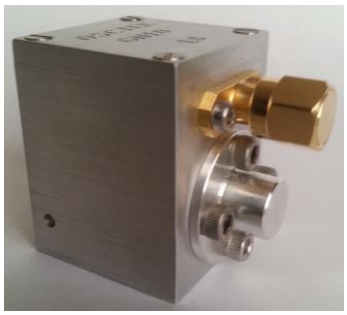
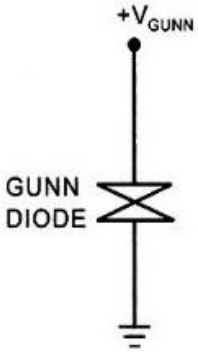




Note: Customised performance and outline envelope available e.g. greater bandwidth, smaller outline/ mass

WR 12 Varactor Tuned Gunn oscillator – Grounded

Model G VS12 (G NV12S)

The unit utilises a GaAs Gunn device and a GaAs varactor diode in a waveguide cavity. By appropriate selection the frequency can be altered remotely. This is essentially achieved by the application of a DC tuning voltage which effectively perturbs the electric field within the waveguide cavity.

This circuit is ideal for a robust solution for volume manufacture

The tuning voltage allows a convenient way to alter the frequency of operation; high modulation schemes can be applied thus enabling frequency agility.

A clean and stable DC power supply will enhance performance and spectral purity

Applications:-

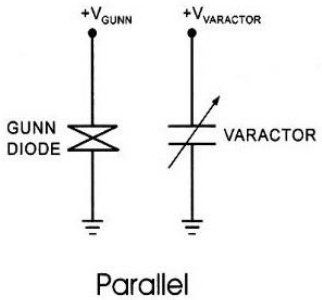
Educational
Communications
Research
Imaging/ Sensors

Frequency	Power		Voltage	Bandwidth		Tuning voltage
(GHz)	mW	dBm	volts	(MHz)		(volts)
84	10	10	+ 5.1	500	1500	0 to +13 / 15
84	20	13	+ 5.1	500	1250	0 to +13 / 15
84	30	14.8	+ 5.1	500	1000	0 to +13 / 15
84	40	16.0	+ 5.1	500	750	0 to +13 / 15
84	50	17.0	+ 5.1	400	750	0 to +13 / 15

Alternative centre frequency available.

Specifications at + 32ºC case temperature

DC input : SMA female
RF output : UG-387/U flange compatible



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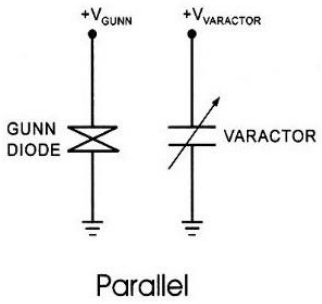
Frequency	Power		Voltage	Bandwidth		Tuning voltage
(GHz)	mW	dBm	volts	(MHz)		(volts)
80	10	10	+ 5.3	500	1500	0 to +13 / 15
80	20	13	+ 5.3	500	1250	0 to +13 / 15
80	30	14.8	+ 5.3	500	1000	0 to +13 / 15
80	40	16.0	+ 5.3	500	750	0 to +13 / 15
80	50	17.0	+ 5.3	400	750	0 to +13 / 15

Alternative centre frequency available.

Specifications at + 32ºC case temperature

DC input : SMA female
RF output : UG-387/U flange compatible



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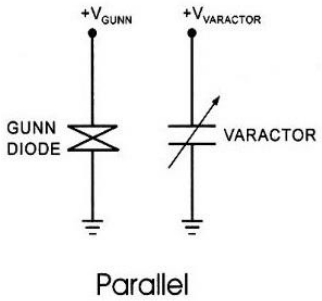
Frequency	Power		Voltage	Bandwidth		Tuning voltage
(GHz)	mW	dBm	volts	(MHz)		(volts)
76.5	10	10	+ 5.5	500	1500	0 to +13 / 15
76.5	20	13	+ 5.5	500	1250	0 to +13 / 15
76.5	30	14.8	+ 5.5	500	1000	0 to +13 / 15
76.5	40	16.0	+ 5.5	500	750	0 to +13 / 15
76.5	50	17.0	+ 5.5	400	750	0 to +13 / 15

Alternative centre frequency available.

Specifications at + 32ºC case temperature

DC input : SMA female
RF output : UG-387/U flange compatible



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WR 12 Varactor Tuned Gunn oscillator – Relative

Model G V12 (G NV12)

The unit utilises a GaAs Gunn device and a GaAs varactor diode in a waveguide cavity. By appropriate selection the frequency can be altered remotely. This is essentially achieved by the application of a DC tuning voltage which effectively perturbs the electric field within the waveguide cavity.

This circuit offers a versatile solution where wide bandwidths are required e.g. 4 GHz

The tuning voltage allows a convenient way to alter the frequency of operation; high modulation schemes can be applied thus enabling frequency agility.
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Applications:-

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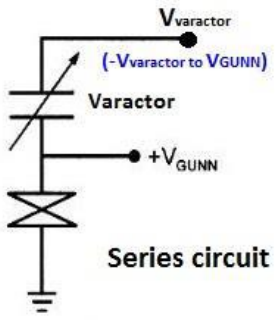
Research
Imaging/ Sensors

Frequency	Power		Voltage	Bandwidth		Tuning voltage Relative
(GHz)	mW	dBm	volts	(MHz)		(volts)
84	10	10	+ 5.1	1000	4000	0 to -25
84	20	13	+ 5.1	1000	3000	0 to - 25
84	30	14.8	+ 5.1	1000	2000	0 to -25
84	40	16.0	+ 5.1	500	1500	0 to - 25
84	50	17.0	+ 5.1	500	750	0 to -25

Alternative centre frequency available.
Specifications at + 32ºC case temperature

DC input : SMA female
RF output : UG-387/U flange compatible



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Frequency	Power		Voltage	Bandwidth		Tuning voltage Relative
(GHz)	mW	dBm	volts	(MHz)		(volts)
80	10	10	+ 5.3	1000	4000	0 to -25
80	20	13	+ 5.3	1000	3000	0 to - 25
80	30	14.8	+ 5.3	1000	2000	0 to -25
80	40	16.0	+ 5.3	500	1500	0 to - 25
80	50	17.0	+ 5.3	500	750	0 to -25

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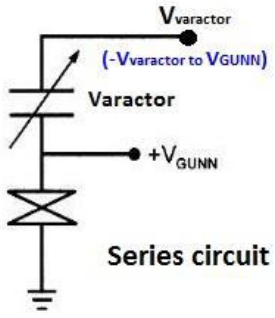

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Frequency	Power		Voltage	Bandwidth		Tuning voltage Relative
(GHz)	mW	dBm	volts	(MHz)		(volts)
76.5	10	10	+ 5.5	1000	4000	0 to -25
76.5	20	13	+ 5.5	1000	3000	0 to - 25
76.5	30	14.8	+ 5.5	1000	2000	0 to -25
76.5	40	16.0	+ 5.5	500	1500	0 to - 25
76.5	50	17.0	+ 5.5	500	750	0 to -25

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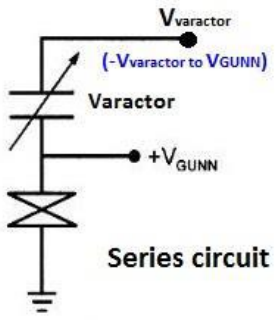

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