

ELVA-1

46 Robezu str. • LV-1004 Riga • Latvia
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 Mm-wave Division In St.Petersburg, Russia
 FAX: +7-812-326-10-60, Att. D. Korneev
 E-mail: korneev@exch.nnz.spb.su
 INTERNET: <http://www.elva-1.spb.ru>

TITLE		
94 GHz FMCW Radar Module		
Part No. FMCW-10/94/200/200		
DATE	SHEET	SPEC. NO.
10.12.01	1 OF 5	45CR0904

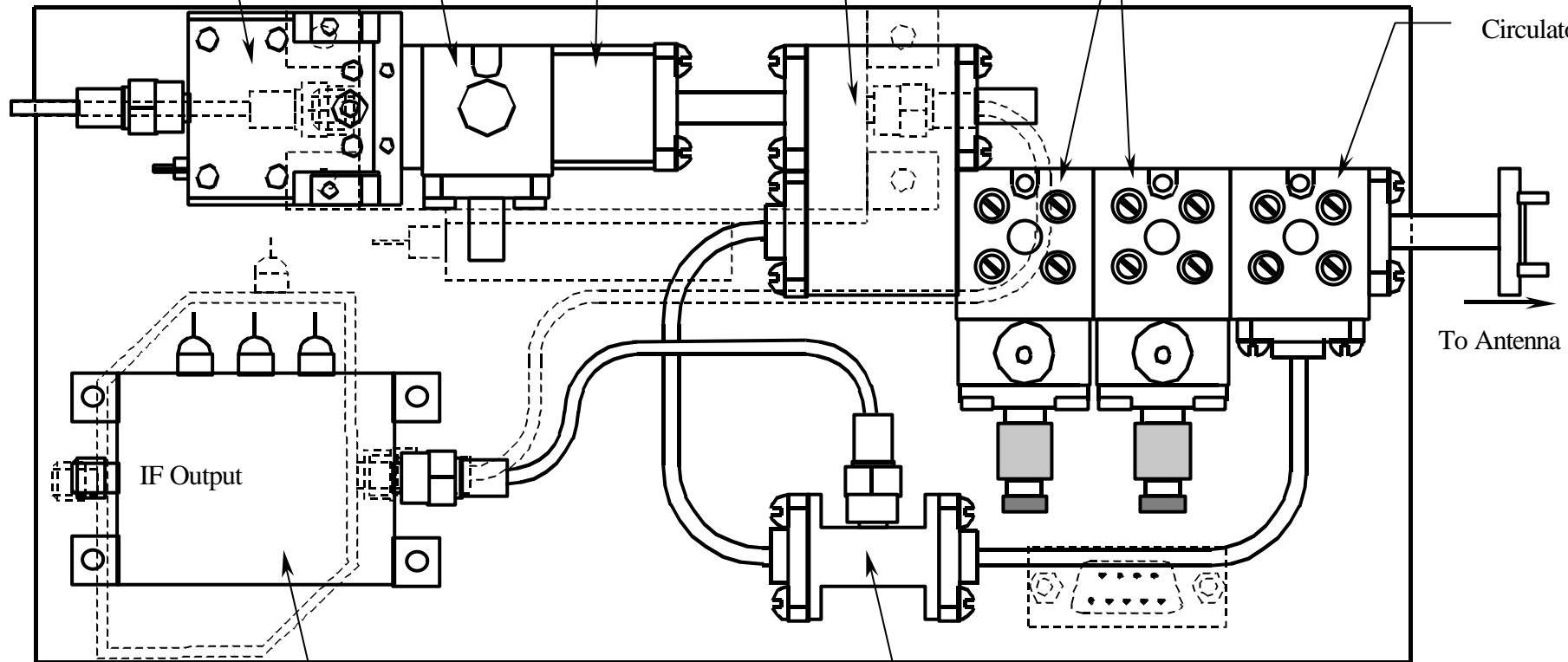
IMPATT Active
Frequency Multiplier

Isolator

Bandpass Filter
Power Divider

Injection Locked
Amplifier

Circulator

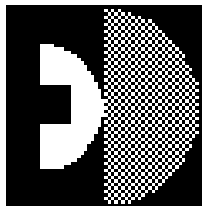


To Antenna

Waveguide WR-10
Flange UG-387/U
IF Connector SMA (F)

IF Amplifier

Balanced Mixer



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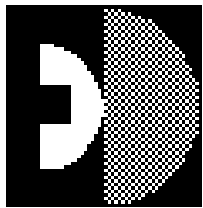
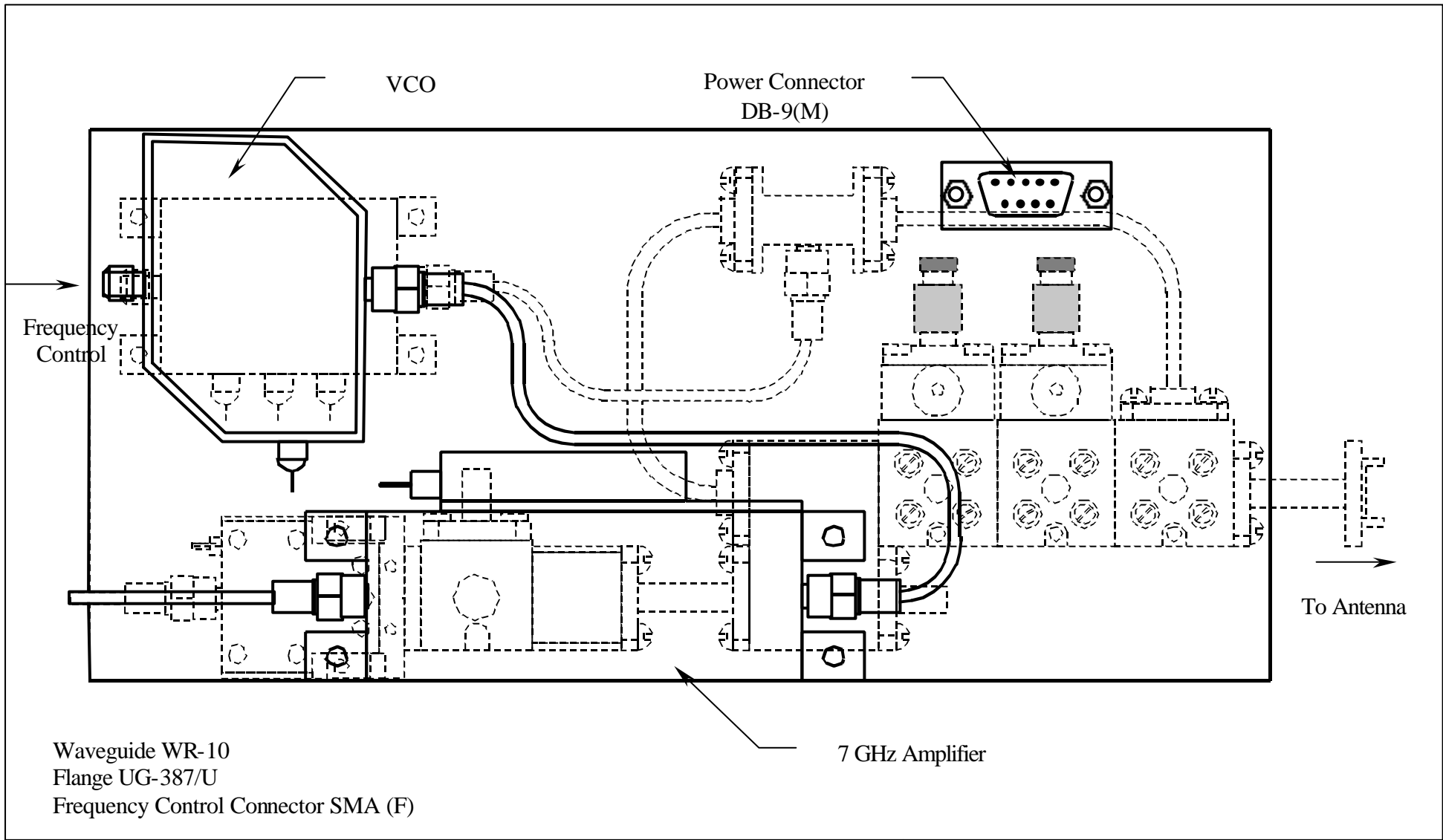
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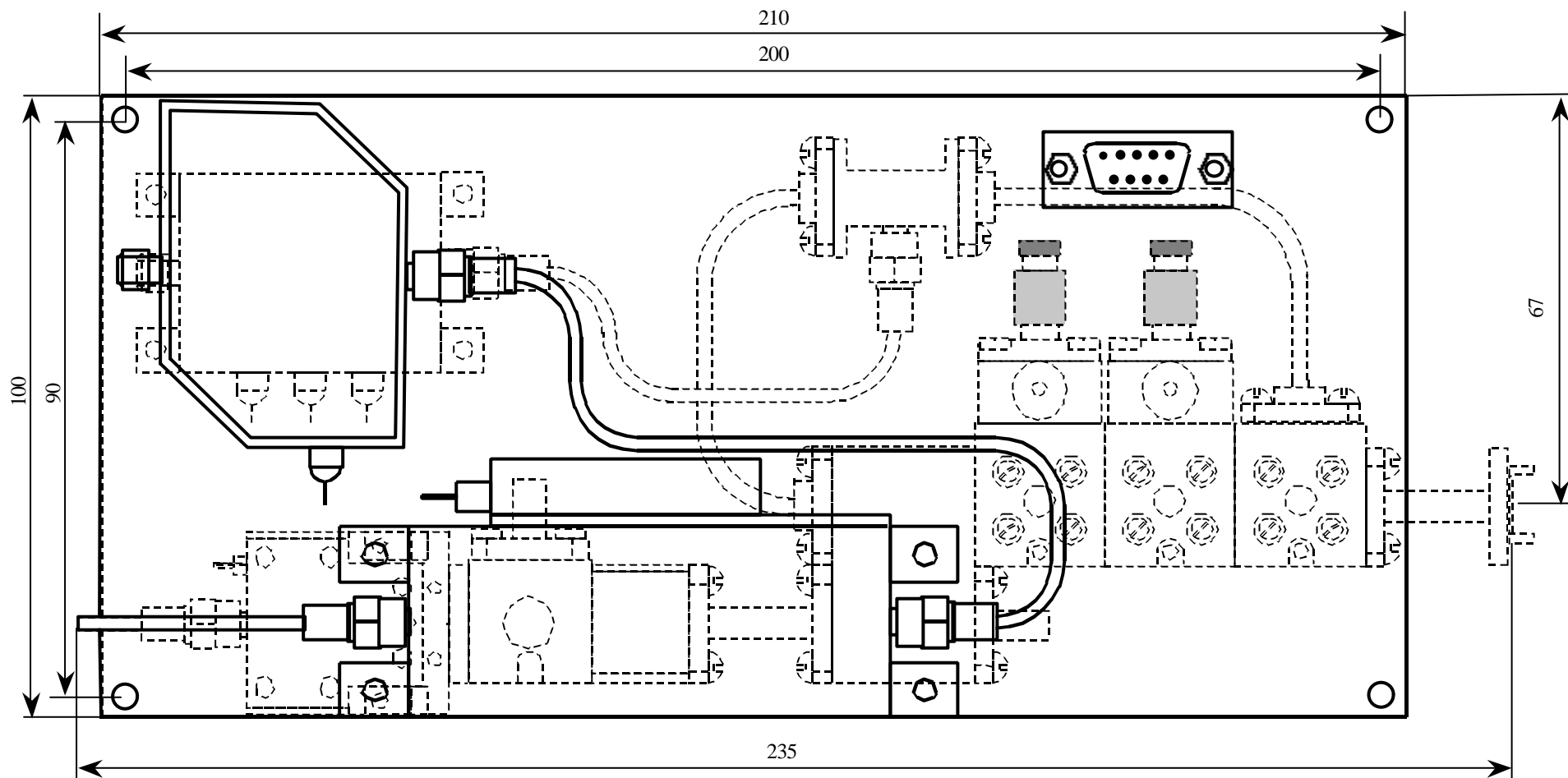
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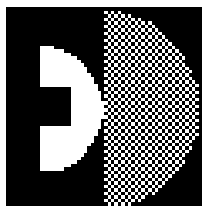
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All Dimensions in mm



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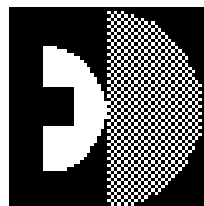
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Specifications:

Center Frequency	94 GHz
Frequency Stability	$5 \cdot 10^{-6}$ 1/°C
Sweep range	200 MHz (min)
Minimal Sweeping Time	100 uSec (max)
Linearity	0,7% (max)
Tuning sensitivity	>50 MHz/V
Output RF Power	+23 dBm (min)
Reverse Isolation	25 dB (min)
IF Frequency	4 kHz to 2 MHz
RF to IF Gain	32 dB (typ)
Noise Figure	20dB (max)*
Waveguide	WR-10
Flange	UG-387/U
IF and Frequency Control Connectors	SMA (F)
DC Power	+12 VDC 500 mA -12 VDC 100 mA +27 VDC 600 mA +27 V 500 mA (heater)
Dimensions	210x100x50 mm
Mass	1500 gram (max)
Storage Temperature	-40 to +85 deg.
Operating Temperature	-40 to +50 deg.

*The data valid for antenna with VSWR 1.2:1 max.



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