275 – 315 GHz Source
Type 1211A

Fig. 1: Optical view of the product

Product Description

275-315 GHz Source represents an Active Multiplier Chain based on high performance Microwave/MM-Wave components. Combining High Power Amplifier technology of ERAVANT with High Power multiplier technology of ACST provides State-of-the-Art performance at MM/SubMM-Waves. The source is designed and manufactured as a bench top unit to extend the low frequency synthesizer or sweeper without losing all of the functionalities and features. The source is fixed tuned and does not require any adjustment for proper operation. All required voltage biases and current sources are provided by a dedicated power supply unit, which only needs a standard AC power. A TTL modulation port and/or an user-controlled attenuator can be integrated on customer request.

Application Areas

- MM-wave FMCW-Radar
- Active imaging
- LO Source for MM/SubMM wave receiver arrays
- High-bit rate data transmission systems

Product Features

- High power & Efficiency
- Large bandwidth
- Flat response
- TTL-modulation port (optional)
- User controlled attenuation (optional)

* Lower output power may be expected near the band edges.

ACST GmbH | Josef-Bautz-Str. 15 | DE-63457 Hanau
Phone: +49-6181-9669 860 | E-Mail: sales@acst.de
http://www.acst.de

Tab. 1: Technical Specifications

Technical Specifications	Minimum	Typ.	Maximum
Output Frequency (GHz)	110		170
Output Power (dBm)*	8	10	14
Output Port (UG 387/U-M)		WR-6.5	
Tune Voltage V-tune (V)	6		20
V-tune Port		SMA (female)	
Freq. Drift Rate (MHz/°C)	2	13	25
TTL Port Voltage (V) (Optional)	0 (ON-Mode)		5 (OFF-Mode)
TTL Port Speed (kHz) (Optional)		1	10
Variable Attenuator (dB) (Optional)	1		25
Pyramidal feed horn gain (dBi) (optional)		24	25
Operating temperature range (°C)	5	22	35
Total power consumption (W)			30
Overall weight (Kg)			2

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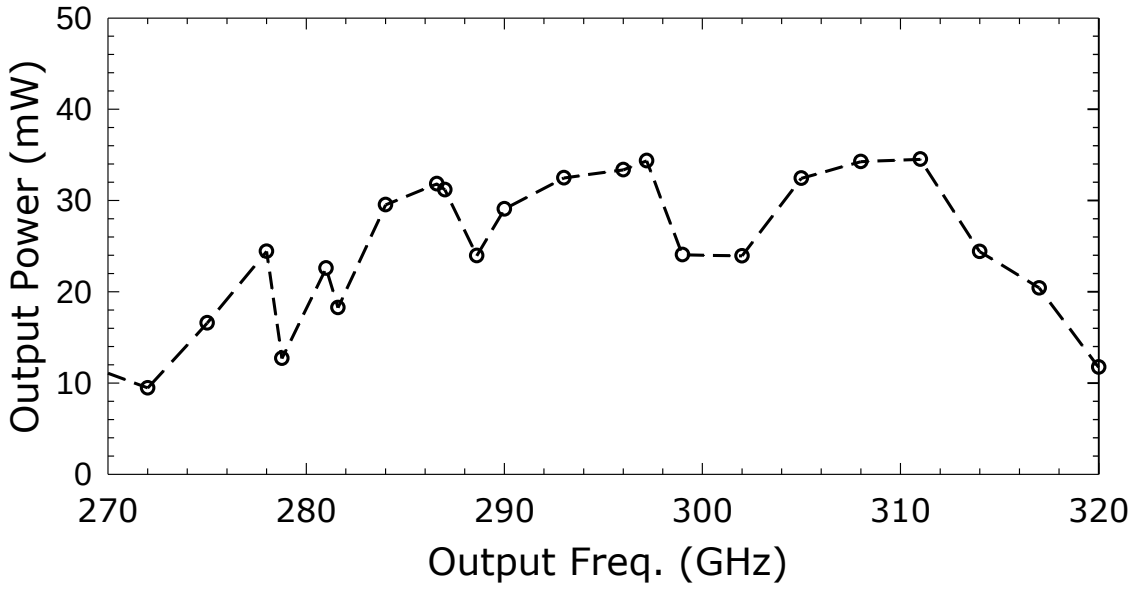
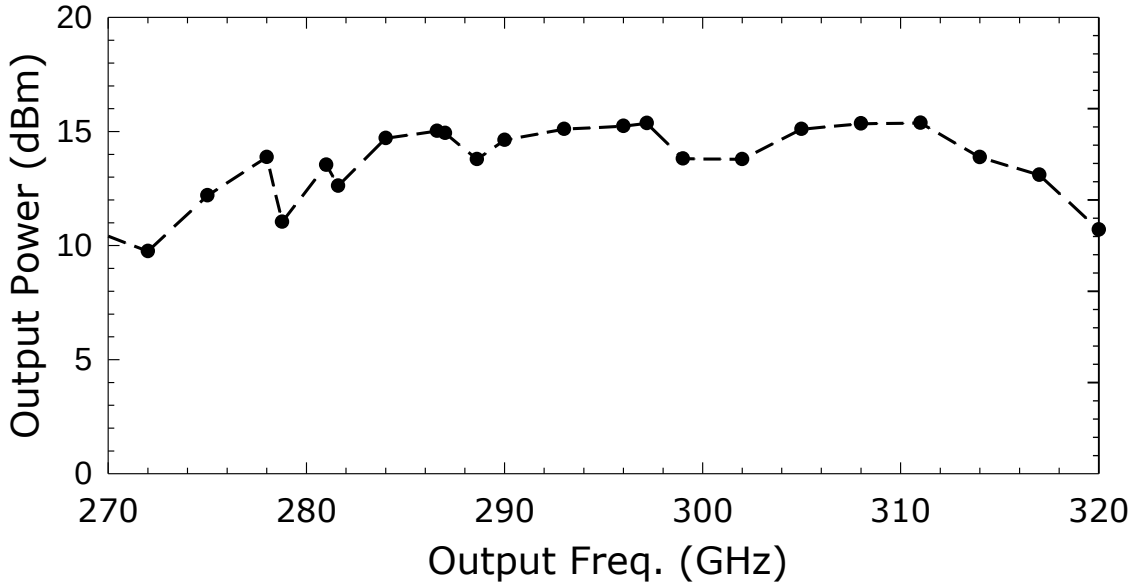
Typical Performance





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Notes

- All values presented based on finished design and experimental experiences.
- All tests are carried out at a room temperature of 24 °C.

Caution

- Absolute maximum ratings should not be used under normal operating conditions. Exceeding maximum ratings may lead to permanent failure.
- Any foreign body inserted into the waveguide will cause a loss of performance and may damage the device.

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