

## Broadband 470 – 520 GHz AMC Type 1215B-S

### Product Description

**1215x series** of Signal sources are designed to provide RF-signal at MM-Waves. The source consists of a Voltage-Controlled Oscillator (VCO), followed by an Amplifier/Multiplier Chains (AMCs). The AMC applies ACST High-Power Multiplier Technology resulting in best available performance with respect to output power, bandwidth and spectral purity.



Fig. 1: Optical view of the product

Output signal frequency is defined by tune voltage applied at the V-tune port. Based on a modular design, each AMC from this series is integrated in an esthetic metallic housing featuring standard input and output interfaces. They are fixed tuned and do not require any adjustment for proper operation. All required voltage biases and current sources are provided by an integrated Power Supply Unit (PSU). The module only needs electrical powering of 15-18V DC, which is provided by a universal AC/DC adapter, usually included in delivery package. Options like Horn antenna (for coupling the output signal to free space), Waveguide sections compatible with the output RF-port, and input TTL-port for ON/OFF modulation up to ~kHz may be integrated on customer request.

**Type 1215B-S** module requires input signal within voltage range of 5.5 to 8 V, generating output signal within frequency range of 470 to 520 GHz.

In addition to standard options for 1215x series, a variable 1-25dB attenuator is offered for this type for user-controlled output power. Additional options are passive frequency multipliers, which can easily be connected directly to the RF-output of the module to extend the frequency of the output signal to higher frequency bands. One multiplier is available:

- A Tripler of type 231B for extending output signal to 1420-1560GHz frequency range (TBC).

## Product Highlights

- High output power
- Broadband frequency range
- Flat frequency response
- Modular design
- Adjustable height control of housing.

## Optional features (to be indicated in PO)

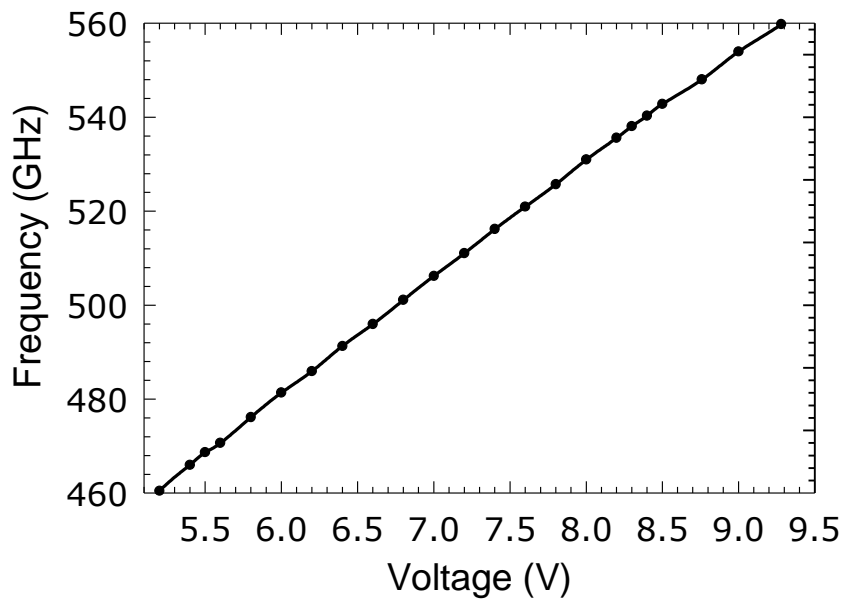
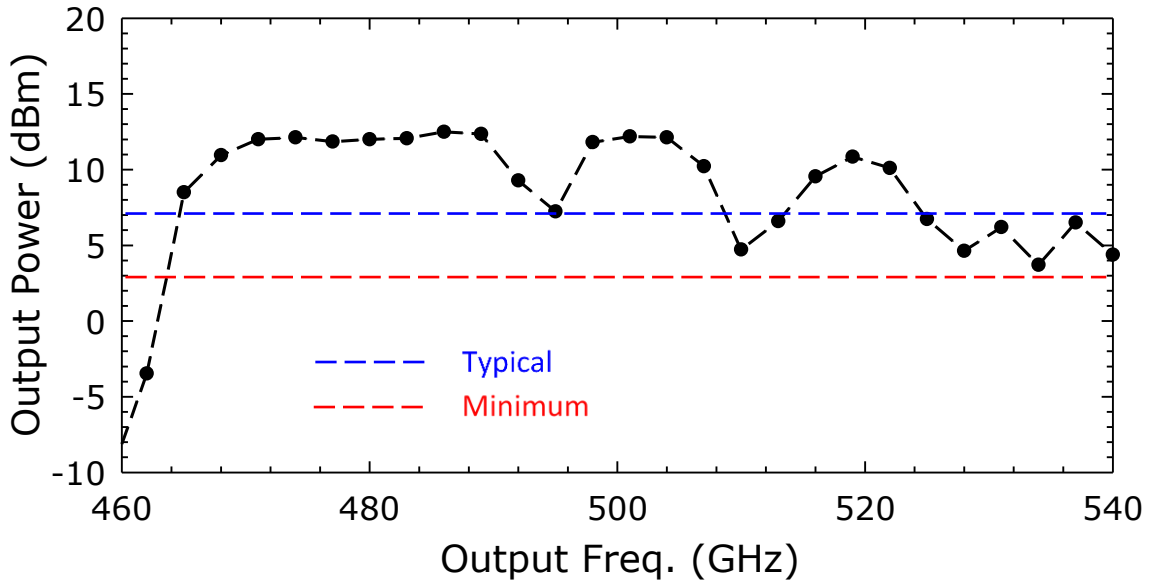
- Pyramidal horn antenna
- 25/50mm output waveguide sections.
- TTL-port for ON/OFF modulation
- Variable Attenuator typically ~1-25dB
- Frequency Tripler of type: 231B (1420-1560GHz) (TBC).

Tab. 1: Technical Specifications

Technical Specifications	Minimum	Typ.	Maximum
Output Frequency (GHz)	470		520
Output Power (dBm)*	3	7	13
Output Port (UG 387/U-M)		WR-1.9	
Tune Voltage V-tune (V)	5.5		8
V-tune Port		SMA (female)	
Freq. Drift Rate (MHz/°C)	10	60	100
TTL Port Voltage (V) (Optional)	0 (ON-Mode)		5 (OFF-Mode)
TTL Port Speed (kHz) (Optional)		1	10
Variable Attenuator (dB) (Optional)	1.2		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

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

Typical Performance



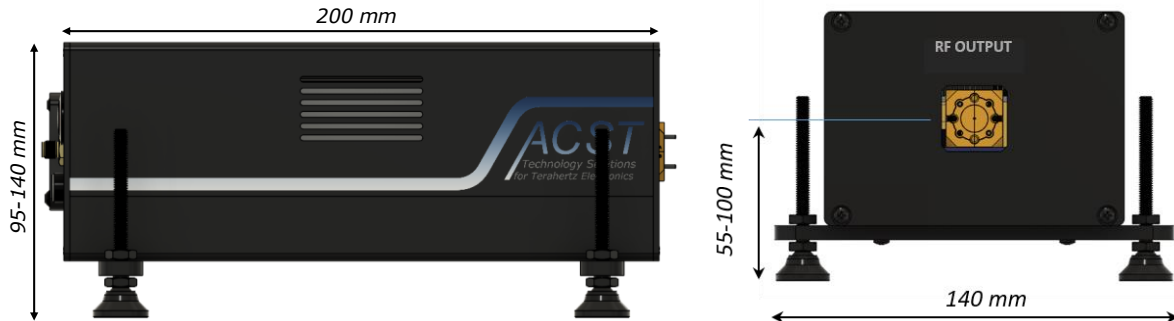


Fig. 2: Overall dimensions.

## Notes

- All plotted data represent typical values. The actual data may vary from unit to unit.
- 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.

## Order information

- Please indicate product name and type.
- Please indicate desired optional features.

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