

## STE-KF415-13-S1-C

V-Band ACCESS X4 Full Band Frequency Extender,  
45 to 80 GHz, +13 dBm Pout

**STE-KF415-13-S1-C** is a compact X4 frequency extender. The extender delivers frequency of 45 to 80 GHz with a typical output power of +13 dBm for an input signal within 11.25 to 20 GHz range. The extender has a typical harmonic suppression of -20 dBc. The compact design offers a practical solution for microwave frequency extension of signal generators, such as Eravant synthesizer **STL-SG-022203-S1**. The input port configuration is a female K connector and the output is a WR-15 waveguide with a UG-385/U anti-cocking flange. Calibration data stored in the device memory can be directly accessed via USB-C cable. An AC to DC Power adapter and a **Proxi-Flange™ Contactless Flange (STQ-WG-15010-FB-CF)** is also included.



## Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Output Frequency	45 GHz		80 GHz
Input Frequency	11.25 GHz		20 GHz
Output Power		+13 dBm	
Input Power	-3 dBm	+0 dBm	+5 dBm
Return Loss		15 dB	
Harmonic Suppression		-20 dBc	
Multiplication Factor		4	
Power Supply	100 V <sub>AC</sub>		240 V <sub>AC</sub>
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

## Mechanical Specifications:

Item	Specification
Output Port	WR-15 Waveguide with UG-385/U Anti-Cocking Flange
Input Port	K (F)
DC Bias Port	2.5 mm DC Jack (AC-to-DC power converter included)
Memory Port	USB-C Socket
DC Bias Switch	On-Off Latching Switch with Indicator Light
Enclosure Material	Black Anodized Aluminum
Weight	1.5 lbs.
Size	2.36" (W) x 3.15" (L) x 4.25" (H)
Outline	TE-WG-A-C-2

## ECCN

3A001.b.4

## FEATURES

- 45-80 GHz Extended Coverage
- Low Harmonic Emission
- Built-in Memory Cal Data
- Compact Size
- Forced Air Cooling
- Input Voltage: 100 to 240 V<sub>AC</sub>

## APPLICATIONS

- Signal Generator Frequency Extension
- Antenna Range

## RECOMMENDED PAIRINGS

- [Waveguide Quick Connects](#)
- [Cable: SCW-SMSM040-F1-A](#)
- [Coax Adapters](#)
- [Waveguide to Coax Adapters](#)

## RECOMMENDED RESOURCES

- [Contactless WG Flange & mmW Sub-THz Test Setup Applications](#)
- [Proxi-Flange: Conference Papers](#)

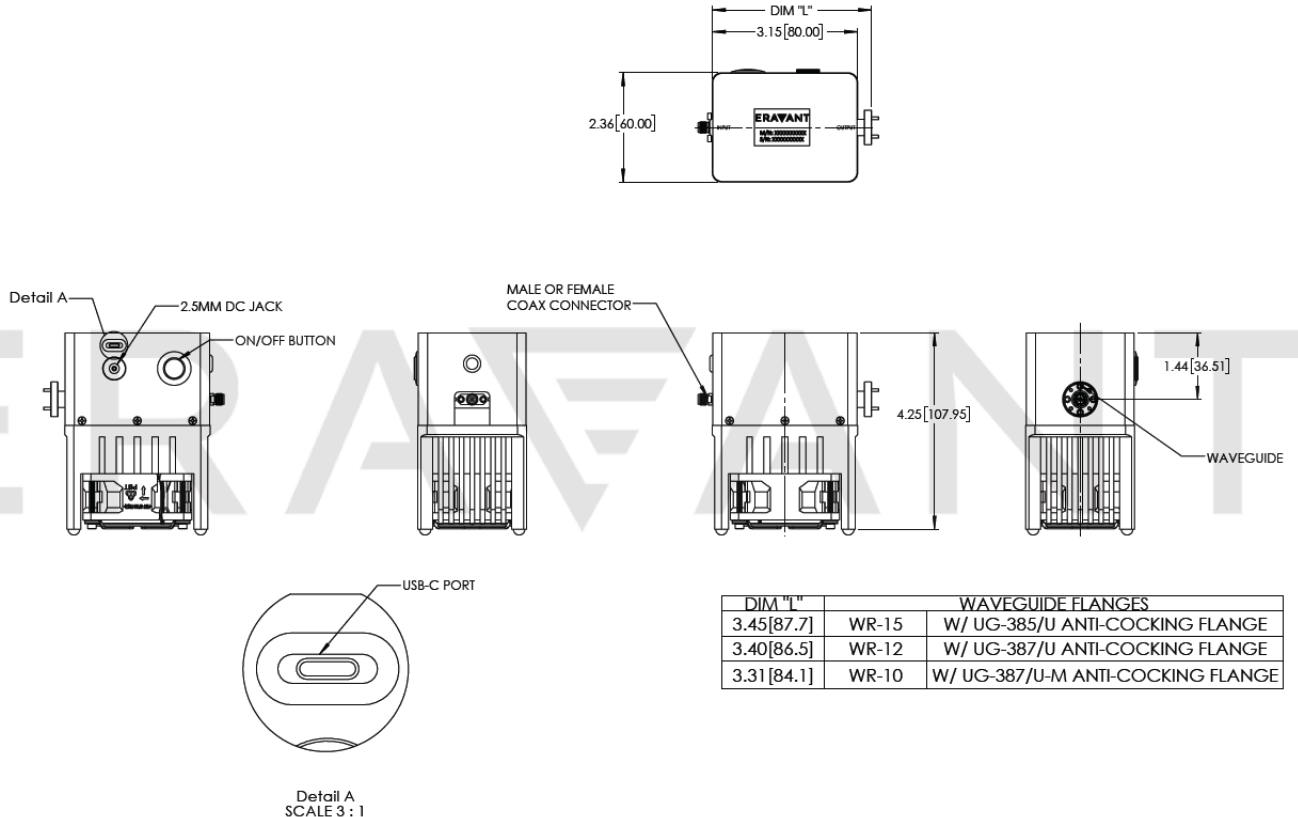


**Components Included:**

Item	Eravant Model Number	Quantity
Proxi-Flange™ Contactless Flange, 1.0" Long	STQ-WG-15010-FB-CF	1
Waveguide Screws, 3/32 Hex Head	SWH-332-SS-10	1 (10 Screws Total)
Waveguide Screwdriver, 3/32 Hex Head	SWH-332-DS	1
Waveguide Screw, 5/64 Hex Head	SWH-564-SS-10	1 (10 Screws Total)
Waveguide Screwdriver, 5/64 Hex Head	SWH-564-DS	1
USB-C Cable	PES-AEUSUS164-1	1
Coax Connector Torque Wrench	SCH-08008-S1	1
AC-to-DC Power Adapter	PEP-PJ2555-1	1

**Note:** Connecting cables are not included. Eravant coaxial cable, model **SCW-SMSM040-F1-A** is highly recommended.

**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])



**NOTE:**

- Performance plots shown above represent a sample lot performance. Actual data may show some unit-to-unit variation.
- Eravant offers calibration services. It is recommended that calibration be performed every 12 months to ensure equipment compliance.
- Connecting cables are not included. The use of Eravant coaxial cables (model **SCW-SMSM040-F1-A**) is highly recommended.
- Coaxial adapters may be necessary, depending on the connector type of the signal source. Appropriate Eravant adapters are recommended.
- To test a DUT with a coaxial interface, use suitable Eravant waveguide-to-coaxial adapters.
- Operation outside the specified frequency range may result in degraded performance.
- Eravant reserves the right to modify product information without prior notice.

**CAUTION:**

- Any foreign objects in the waveguide may cause performance degradation and damage the unit.
- Exceeding the absolute maximum ratings of the device may cause permanent damage to the extenders.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied:  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm). Torque wrench model **SCH-08008-S1** is highly recommended.

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