

WAVASORB® HFX / HFS

High-Power Broadband Pyramidal Absorber

WITH RESPECT FOR THE ENVIRONMENT: REACH & RoHS COMPLIANT



- ✓ WAVASORB® HFX / HFS is a series of hollow, pyramidal-shaped absorbers for high- and medium-power applications.
- ✓ The hollow nature of the absorber makes them lightweight rf-absorbers that enhance the convection process;
- ✓ Premium performance in the operating frequency range from 80 MHz to 40 GHz, obtained by optimization of the geometry of each absorber type.
- ✓ Certified to fire-retardancy and environmental specifications through containing an advanced chemical composition.
- ✓ Excellent power-handling capability assured under continuous wave exposure.
- ✓ Designed and quality controlled using original test techniques.

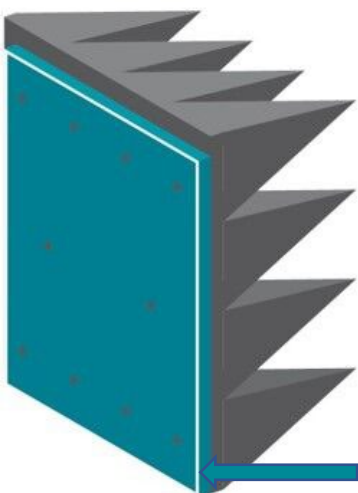
WAVASORB® HFX / HFS

Installation Methods and Chamber Validation

WAVASORB® HFX / HFS is installed by perforated Plate & Rail mountings. This mounting system ensures:

- Easy exchange and free circulation of air;
- Perfect geometry and alignment compatibility with any type of shielding.

Open cell structure



Perforated Galva plate



Applications

WAVASORB® HFX / HFS is the preferred solution:

- To partially or totally line areas in the anechoic chamber of:
 - ✓ Near-Field facilities;
 - ✓ Compact Antenna test ranges;
 - ✓ Facilities for satellite testing.
- When excellent power handling capability is needed to safely withstand (both without forced airflow):
 - ✓ For WAVASORB® HFX:
an incident CW power density of up to 15 kW/m²;
 - ✓ For WAVASORB® HFS:
an incident CW power density of up to 3 kW/m².

When forced airflow is used, both WAVASORB® HFX & HFS can handle higher incident powers.

The honeycomb structure of WAVASORB® HFX / HFS combines high strength with fire-resistant properties, allowing ventilated air throughout the structure to withstand higher illuminating-power capacities. For more information, contact your sales representative.

WAVASORB® HFX / HFS

Characteristics

Handling Temperature	+5°C to +35°C
Operating Temperature⁽¹⁾	HFX: +200°C HFS: +150°C
Humidity Range	30% to 70%
Frequency Range	80 MHz up to 40 GHz
Maximum Incident Power Density⁽²⁾	HFX: 15 kW/m ² , 9,68 W/in ² , 2378 V/m HFS: 3 kW/m ² , 1,93 W/in ² , 1063 V/m
Fire Retardancy Tests	According to: - DIN 4102-1 Class B2
Environmental Testing	Compliant with: - IEC 60068-2-1 Test Ab - AATCC 30-IV (2004)
REACH compliant	According to EC 1907/2006
RoHS compliant	According to 2015/863/EU
Quality control	IEEE Standard 1128 ISO 9001
Product life	+10 years under controlled environment

⁽¹⁾ Depending on the environmental temperature

⁽²⁾ High-Power values are based on tests without using forced airflow. By using forced airflow, the absorber can handle higher incident power densities; for more information contact your sales representative

Physical properties

	Standard Color	Standard footprint ⁽¹⁾
WAVASORB® HFX	Black	61 cm x 61 cm
WAVASORB® HFS	Black	61 cm x 61 cm

⁽¹⁾ The above-mentioned dimensions have a tolerance of +/- 6 mm

	Total height ⁽¹⁾ (cm)	Nominal weight ⁽²⁾ (kg)	Number of pyramids per piece
WAVASORB® HFX-18	45,7	5,5	16
WAVASORB® HFX-26	66,0	6,0	9
WAVASORB® HFX-36	91,4	6,5	4
WAVASORB® HFS-18	45,7	7,5	16
WAVASORB® HFS-26	66,0	8,5	9
WAVASORB® HFS-36	91,4	9,5	4

⁽¹⁾ The above-mentioned dimensions have a tolerance of +/- 6 mm

⁽²⁾ Weight values are subject to change; weight values include the perforated backing plates



WAVASORB® HFX / HFS

Typical Reflectivity Performance at Normal Incidence & Measurement Techniques

WAVASORB® HFX / HFS is manufactured in well-defined batches and their reflectivity and fire-retardant properties are continuously monitored following internal ISO 9001 procedures.

WAVASORB® HFX / HFS is tested routinely in-house in the frequency range from 30 MHz to 9 GHz using a set of coaxial lines, waveguides and NRL Arch in accordance with the practice recommended in IEEE Standard 1128. In the high-frequency range, measurements are performed in the frequency range of 9 GHz up to 110 GHz inside a compact range facility of an external test house. Furthermore, WAVASORB® HFX / HFS offers favourable reflectivity properties at off normal angles of incidence with almost no reflectivity degradation up to 45 degrees.

	TYPICAL REFLECTIVITY (dB)										
	80 MHz	160 MHz	200 MHz	300 MHz	500 MHz	800 MHz	1 GHz	3 GHz	6 GHz	12-18 GHz	18-40 GHz ⁽¹⁾
WAVASORB® HFX-18				-20 dB	-25 dB	-30 dB	-38 dB	-45 dB	-50 dB	-50 dB	-50 dB
WAVASORB® HFX-26	-6 dB		-18 dB	-25 dB	-30 dB	-35 dB	-42 dB	-45 dB	-50 dB	-50 dB	-50 dB
WAVASORB® HFX-36	-6 dB	-15 dB	-23 dB	-28 dB	-35 dB	-40 dB	-42 dB	-45 dB	-50 dB	-50 dB	-50 dB
WAVASORB® HFS-18				-20 dB	-25 dB	-30 dB	-38 dB	-45 dB	-50 dB	-50 dB	-50 dB
WAVASORB® HFS-26	-6 dB		-18 dB	-25 dB	-30 dB	-35 dB	-42 dB	-45 dB	-50 dB	-50 dB	-50 dB
WAVASORB® HFS-36	-6 dB	-15 dB	-23 dB	-28 dB	-35 dB	-40 dB	-42 dB	-45 dB	-50 dB	-50 dB	-50 dB

⁽¹⁾ For more information, contact your sales representative



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Safety Considerations: It is recommended to consult the E&C ANECHOIC CHAMBERS product literature, including material safety data sheets, prior to use E&C ANECHOIC CHAMBERS products. These may be obtained from your local sales office.

Warranty: Values shown are based on testing of laboratory test specimens and represent data that falls within the normal range of properties of the material. These values are not intended for use in establishing maximum, minimum or ranges of values for specification purposes. Any determination of the suitability of the material or any use contemplated by the user and the manner of such use is the sole responsibility of the user who must assure that the material as subsequently processed meets the needs of this particular product or use.

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