HP HIGH POWER MICROWAVE ABSORBER

ETS-Lindgren High Power Microwave Absorber is fabricated from high temperature materials.



ETS-Lindgren's high-power absorber is a honeycomb substrate made from a phenolic-based material. Lossy films are coated on the walls of the honeycomb for effective absorption of incident electromagnetic waves. The hollow network of honeycombs allows air to be drawn through them while the phenolic-based material withstands high temperatures. The benefit is that electromagnetic energy flux can be loaded to the absorber at much higher power densities than conventional absorbers made with polyurethane material.

Based on a recent high power absorber study, our phenolicbased material can withstand up to 2.0 W/in2, and maximum temperatures up to 250 degrees Celsius (482 degrees F) without forced airflow. With forced airflow, this absorber can withstand much higher electromagnetic field power densities. Our design engineers are ready to bring additional expertise on both RF and mechanical details to make our high power test systems achieve the design goals and safe operation required for your specific needs.

Key Features

- Extremely Low Flammability
- Fire Retardant
- Numerically Optimized Design
- Rapid "Pump-down" for High Vacuum Applications

- Honeycomb Structure
- Stable up to 250°C (482°F)

Specifications

Electrical Specifications

Maximum Reflections at Normal Incidence

	120 MHz	200 MHz	300 MHz	500 MHz	1-2 GHz	2-4 GHz	4-8 GHz	8-12 GHz	12-18 GHz	18-40 GHz
HP3PCL							-25 dB	-35 dB	-40 dB	-40 dB
HP5PCL						-25 dB	-35 dB	-40 dB	-45 dB	-45 dB
HP8PCL					-25 dB	-35 dB	-40 dB	-45 dB	-45 dB	-45 dB
HP12PCL					-30 dB	-35 dB	-40 dB	-45 dB	-45 dB	-45 dB
HP18PCL				-25 dB	-35 dB	-40 dB	-45 dB	-45 dB	-45 dB	-45 dB
HP24PCL		-15 dB	-25 dB	-30 dB	-35 dB	-45 dB	-45 dB	-45 dB	-45 dB	-45 dB

Physical Specifications

Dimensions by Model

Model	Overall Height	Base Height	Pyramid Height	Nominal Weight	Pyramids Per Absorber
HP-3PCL	8.25 cm (3.25 in)	1.9 cm (0.75 in)	6.4 cm (2.52 in)	1 kg (2.20 lb)	256
HP-5PCL	12.7 cm (5.00 in)	2.5 cm (0.98 in)	10.2 cm (4.02 in)	1.6 kg (3.53 lb)	144
HP-8PCL	26.1 cm (10.28 in)	5.1 cm (2.01 in)	16.5 cm (6.50 in)	2.8 kg (6.17 lb)	64
HP-12PCL	31.1 cm (12.24 in)	5.7 cm (2.24 in)	25.4 cm (10.00 in)	3.8 kg (8.38 lb)	36
HP-18PCL	46.4 cm (18.27 in)	5.7 cm (2.24 in)	40.6 cm (15.98 in)	4.6 kg (10.14 lb)	16
HP-24PCL	61 cm (24.02 in)	10.2 cm (4.02 in)	50.8 cm (20.00 in)	6.1 kg (13.45 lb)	9



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