



CUMING MICROWAVE

C-RAM SFC-HC

RoHS
Compliant

TECHNICAL BULLETIN 390-16

HIGH POWER BROADBAND PYRAMIDAL HONEYCOMB RF ABSORBER

C-RAM SFC-HC is a series of high power pyramidal absorbers made from specially treated honeycomb. Using pyramid design which provides an impedance gradient, C-RAM SFC-HC provides premium performance in anechoic chambers at both normal and off-normal incidence angles.

TYPICAL PROPERTIES

Typically, C-RAM SFC-HC absorbers, with no forced air, can handle up to 10 W/in² of RF energy with our phenolic-coated Honeycomb or 3 W/in² of RF energy with our Neoprene coated Honeycomb.

Cuming Microwave Corporation's high power C-RAM SFC-HC has been fully tested at high power. A complete test report is available which shows watt/in² versus temperature rise in the honeycomb

With forced air cooling through the honeycomb cells, power handling is increased as show in the tables:

Phenolic Coating

| Air Velocity Ft./Min. | Power Watts Per SQ. IN. |
|--------------------------|----------------------------|
| 200 | 20 |
| 300 | 40 |
| 400 | 60 |
| 600 | 80 |

Neoprene Coating

| Air Velocity FT./MIN. | Power Watts Per SQ. IN. |
|--------------------------|----------------------------|
| 100 | 6 |
| 300 | 12 |

AVAILABILITY

Standard sizes of C-RAM SFC-HC are listed in Table 1, ranging from a 4 inch to 24 inch height. C-RAM SFC-HC-4 up through SFC-HC-24 are shaped as conventional pyramids and supplied as square 24 inch (610 mm) panels.

In addition to simply supplying a bill of materials, Cuming Microwave designs and installs complete anechoic chambers. Chambers can be designed to meet your specifications, and an entire kit of materials is supplied, including factory pre-cuts of special fitting parts. We can install all materials or supply technical support to help you complete your own installation.

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METHOD OF APPLICATION

Absorber pieces are generally installed in a chamber using solvent-based neoprene contact adhesive. Higher power applications generally require nylon ties, which fasten the absorber to a screen mesh.

TABLE 1
PHYSICAL CHARACTERISTICS AND
TYPICAL REFLECTIVITY AT NORMAL INCIDENCE

| GRADE | HEIGHT In. (mm) | WEIGHT Lbs. (kg) | TIPS PER PIECE | REFLECTIVITY AT FREQUENCY (GHz) | | | | | | | |
|-----------|--------------------|---------------------|-------------------|---------------------------------|-----|-----|-----|-----|-----|----|----|
| | | | | 0.12 | 0.3 | 0.5 | 1.0 | 3.0 | 6.0 | 10 | 18 |
| SFC-HC-4 | 4.3 (109) | 3 (1.4) | 144 | | | | 20 | 25 | 30 | 40 | 40 |
| SFC-HC-6 | 6 (152) | 3.5 (1.6) | 100 | | | | 23 | 28 | 35 | 40 | 45 |
| SFC-HC-8 | 8 (203) | 4.5 (2.0) | 64 | | | 21 | 25 | 32 | 40 | 45 | 45 |
| SFC-HC-12 | 12 (305) | 6 (2.7) | 36 | | | 24 | 30 | 35 | 40 | 45 | 45 |
| SFC-HC-18 | 18 (457) | 12 (5.4) | 16 | | | 27 | 34 | 38 | 42 | 45 | 45 |
| SFC-HC-24 | 24 (610) | 16 (7.2) | 9 | | | 30 | 35 | 40 | 44 | 45 | 45 |

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