HIGH PERFORMANCE MICROWAVE & SUB-TERAHERTZ RF ABSORBERS



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ELEKTRONIK

EMC Elektronik uses different materials to provide excellent absorption performance at frequencies from 0.07 GHz to 330 GHz. Sub-Terahertz absorbers are produced with balanced formulate of carbon black and fire-retardant materials in pyramidal shape of polyurethane foam base material. It is ideal to suppress side lobe of antennas and isolate the antennas.

Measured Results of Reflection Loss in dB at UNM Antennas RF Lab										
	Frequency, GHz									
Height (")	10	18	26	<i>33</i>	40	60	90	140	220	330
0.5	4	6	7	9	10	15	20	25	30	30
1	6	10	12	15	17	20	25	30	35	35
2	15	20	23	25	28	30	35	35	35	35
3	25	30	35	38	43	45	45	45	40	40
4	35	38	40	43	45	45	45	45	40	40

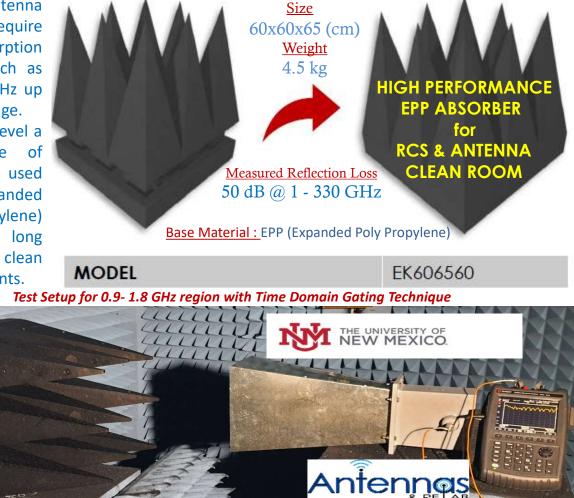
Test Setup for 220-330 GHz region



HQ: Haskoy San Sit Idari Bina No 19 Gebze Kocaeli - 41470 TURKIYE +90 262 502 81 19 www.emcelectronic.com

US & CANADA Sales Rep: TRF Electronics email: info@trf-elc.com +1 347 674 1618

RCS and Antenna Chambers require high absorption performance such as 50 dB from 1 GHz up to millimeter range. To achieve this level a special mixture of carbon black is used on EPP (Expanded Poly **Propylene**) material for long durability and clean room requirements.



 Measured Reflection Loss

 8 dB
 @
 70
 MHz

 17 dB
 @
 500
 MHz

 25 dB
 @
 1000
 MHz

 25 dB
 @
 1-18
 GHz

Size 30x30x100 (cm) <u>Weight</u> 1 kg Base Material:

Glass Fiber & Cardboard

Main Advantages:

- Lightweight
- Lower Volume
- Lower Height
- Fire Retardant

AbsorbEMC MPFR TECHNOLOGY

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HIGH PERFORMANCE CF THIN LAYER ABSORBER

for Automotive EMC CHAMBER