

ECCOSORB® VHP-4

E&C Engineering K.K.

KC bldg.3-16-1

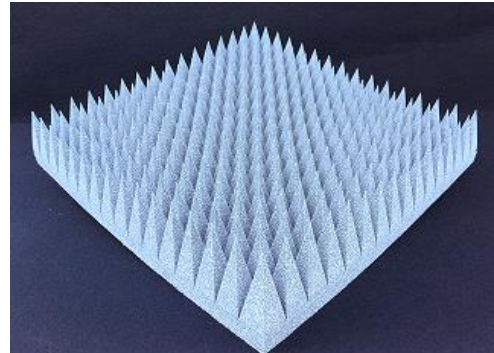
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**Pyramidal broadband absorber applicable
for 5th-Generation wireless system**

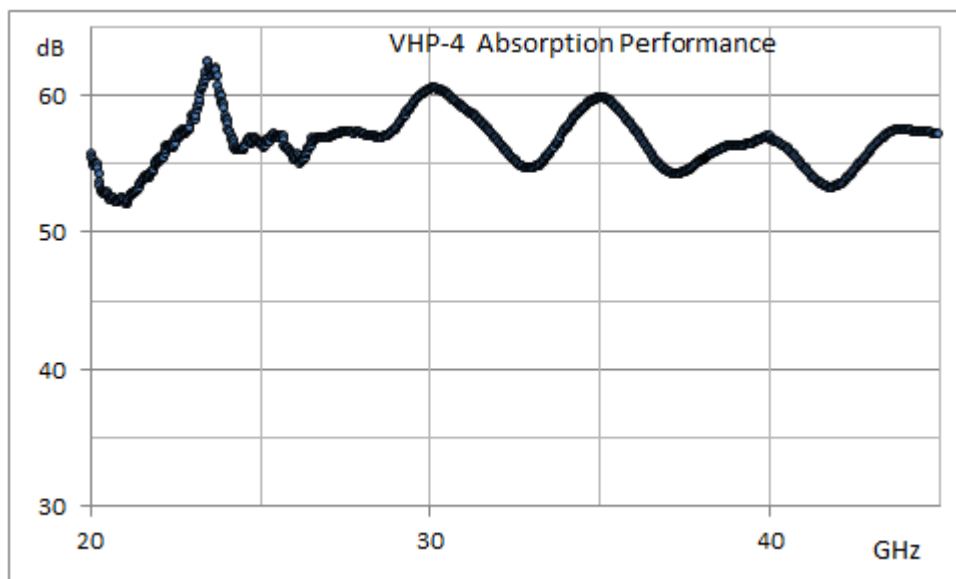
ECCOSORB® VHP-4 is known as broadband pyramidal absorber. This time, We have improved quasi-millimeter and millimeter band reflectivity. By the improvement VHP-4 has more wide band capability. We do not apply physical change but did compensate dielectric constants and impregnation process. The standard absorber color is light blue and standard sheet size is 61 cm x 61 cm (2 ft. x 2 ft.).



With regard to physical characteristics, ECCOSORB® VHP-4 is in the form of an array of sharp pointed pyramids made of carbon impregnated urethane foam.

As a result it is light weight, flexible and tolerant of physical abuse.

The recommended mounting is chloroprene or silicone adhesion. ECCOSORB® VHP-4 is also available at slight additional cost with Velcro zippers for ease of attachment and removal. Products conform to non-flammability requirements of ASTM D-1692-74. Improved processing procedures make it possible to offer ECCOSORB® VHP-4 to meet all requirements of Test 1, 2, and 3 of NRL Report No. 7793 September 13, 1974, and in addition, to meet most of the toxic-gas limits set by this report.



Reflectivity at quasi-millimeter and millimeter range

Absorption performance of ECCOSORB® VHP in angle near normal incidence

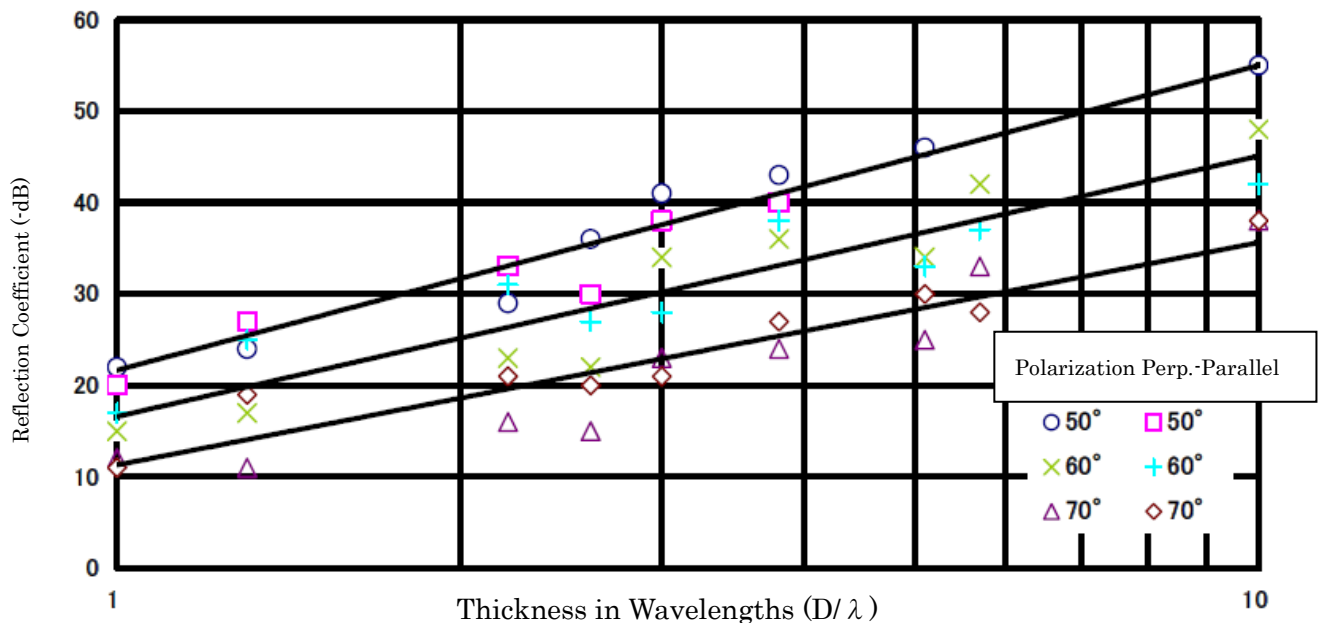
VHP TYPE	Height of Pyramid cm(inch)	Nominal Weight per Piece 0.37 sq. m. kg)	VHF 200 MHz	UHF 300 MHz	UHF 500 MHz	L UHF 1GHz	S SHF 3GHz	C SHF 5GHz	X SHF 10GHz	Ku SHF 15GHz	K SHF 24GHz
VHP-45	114(45)	8.1	30	35	40	45	50	50	50	50	50
VHP-26	66(26)	4.6		30	35	40	50	50	50	50	50
VHP-18	45(18)	3.3			30	40	45	50	50	50	50
VHP-12	30(12)	2.2				35	40	50	50	50	50
VHP-8	20(8)	1.8				30	40	50	50	50	50
VHP-4	11(4)	1.3					30	40	45	50	50

Reflection Coefficient vs angle of incidence of ECCOSORB® VHP

D/λ	1.0		1.3		2.2		2.6		3.0		3.8		5.1		5.8		10	
Incidence angle	⊥	//	⊥	//	⊥	//	⊥	//	⊥	//	⊥	//	⊥	//	⊥	//	⊥	//
50°	22	20	24	27	29	33	36	30	41	38	43	40	46	-	-	-	55	-
60°	15	17	17	25	23	31	22	27	34	28	36	38	34	33	42	37	48	42
70°	12	11	11	19	16	21	15	20	23	21	24	27	24	30	33	28	38	38

Reflection Coefficient vs Thickness

Wide Angle Performance



Note: Every piece is measured to establish compliance with the nominal minimum performance given in the table above. Also note this test was performed in the case of metal back.