



Radio wave absorbers

For EMC anechoic chambers/For microwave anechoic chambers

IP-BLB/IP/IP-BX/ITF/IB/IS/IS-SM/IS-V series

Radio Wave Absorbers

The compatibility of electronic devices with various electromagnetic environments has become an important issue in recent years. This in turn has greatly increased the number applications which require radio wave absorbing materials in frequencies ranging from the MHz range to the GHz range and even to the milli-wave zone.

Applications for such materials include measures for reducing the radiated noise and improving the noise resistance of electronic devices

(such as communication devices, office electronics, computers, home appliances, and devices mounted on automobiles) and facilities for evaluating EMI measures (such as anechoic chambers).

TDK offers a wide range of radio wave absorbing materials based on our long tradition of developing electrical and magnetic material technologies as well as electronic and radio wave technologies.

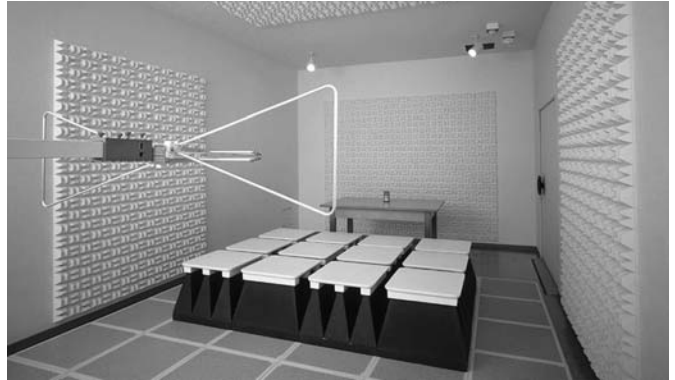
APPLICATION EXAMPLES OF ELECTROMAGNETIC ABSORBERS

ANECHOIC CHAMBERS

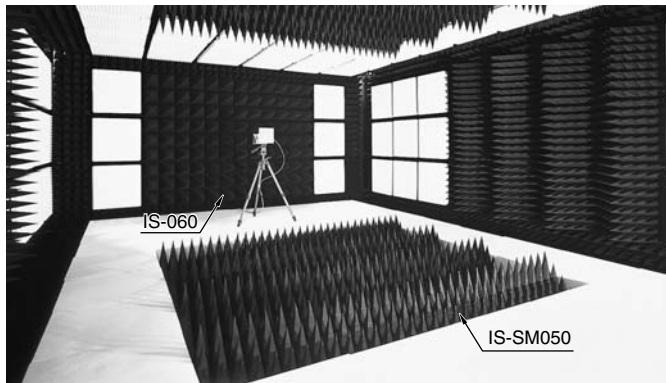
TDK's radio wave absorbing materials are widely used in anechoic chamber applications. The photos shown here are some examples.



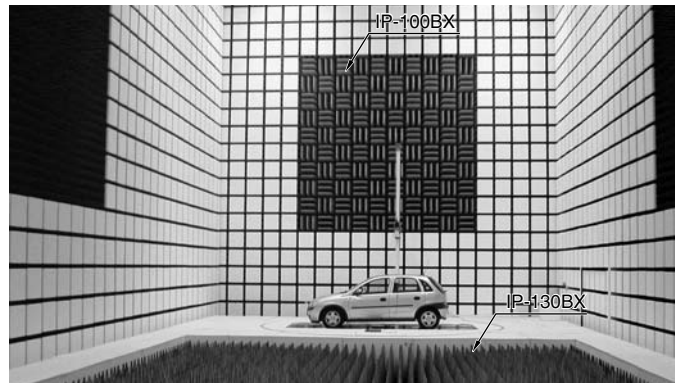
10-meter test range anechoic chamber (uses IP material for radio wave absorption)




Small-scale anechoic chamber



Anechoic chamber for antenna evaluation (uses IS and IS-SM materials for radio wave absorption)



Anechoic chamber for antenna evaluation (uses IP-BX material for radio wave absorption)

 Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.

A key factor in absorbing unwanted electromagnetic energy efficiently and completely is selecting the most appropriate materials for the application. This selection process must take into account the device or system being interfered with, its operating conditions, and the ambient environment. It is not sufficient to merely choose any products, which absorb electromagnetic energy of the correct frequency range.

SELECTION GUIDELINE OF ELECTROMAGNETIC ABSORBERS

Application		TDK material name	
Anechoic chambers	EMC anechoic chambers	3-meter, 10-meter test range	IP-BLB, ITF, IB
		Compact (3-meter test range)	IP-BLB, ITF, IB, IS-V
	Microwave anechoic chambers	EN, ETS	IP, IB
		Car antenna	IP-BX, IB, IS
	Antenna evaluation	IS, IS-SM	

TDK ELECTROMAGNETIC ABSORBERS FOR ANECHOIC CHAMBERS

TDK material name	IP-BLB, IP, IP-BX	ITF	IB
Features	Ultra wideband Fire retardant	Ultra wideband Fire retardant Lightweight	Wideband Nonflammability Thin type
Applicable frequency range	30MHz min.	30MHz min.	30MHz to 1GHz
Basic composition	Carbon+ styrofoam	Conductive fiber-containing resistance film + Styrofoam support material	Sintered ferrite
Composite material	IB	IB	IP, IP-BX, ID, ICM
Standard shape	Wedge form Pyramid form	Original multifaceted	Board
Standard dimension (mm)	600×600×T	600×600×T	100×100×T
Operating temperature range (°C)	-40 to +60	-40 to +60	-40 to +60

TDK material name	IS, IS-SM	IS-V
Features	Ultra wideband Fire retardant	Ultra wideband Fire retardant Small and lightweight
Applicable frequency range	100MHz min.	30MHz min.
Basic composition	Carbon+ polyethylene	Carbon+ polyethylene
Composite material	—	IB
Standard shape	Pyramid form Special pyramid form	Wedge form Pyramid form
Standard dimension (mm)	600×600×T 600×840×T	600×600×T
Operating temperature range (°C)	-40 to +60	-40 to +60

FOR EMC ANECHOIC CHAMBERS

IP-BLB MATERIAL

Made of base material of styrofoam combined with IP radio wave absorber, which is known for its ohmic loss properties, and IB material, which is a ferrite radio wave absorber, these products were developed for anechoic chambers.

Our composite absorbers fully utilize the features of each loss material. In the 30 to 500MHz range the IB electromagnetic absorbers, and in the higher range of 500MHz and higher the IP electromagnetic absorbers, are designed to provide efficient electromagnetic absorption and deliver excellent electromagnetic absorption performance for frequencies as low as 30MHz.

* Used in combination with ferrite radio wave absorber IB material.

IP-090BLB, IP-130BLB

TDK's composite electromagnetic absorbers highly praised around the world. These unit-configured electromagnetic absorbers are small, lightweight, inexpensive and deliver excellent electromagnetic absorption performance over a wide bandwidth. They are used widely in anechoic chambers for 3- and 10-meter ranges as well as in large anechoic chambers designed for specific applications.

FEATURES

- Ultra-wideband electromagnetic absorber.
- Stable against acids, bases and water vapor, and offers long service life.
- Uses materials that, when burned, emit gases that are relatively harmless to humans.
- Fire retardant (NRL Classes 1, 2 and 3; UL-94HBF).
- White end caps (sold separately) improve the illumination inside the chamber.

STANDARD MATERIALS

Material name	Length (cm)	Standard weight* (kg)	Applicable anechoic chambers
IP-030C	30	2	Compact, 3-meter test range
IP-045C	45	3	Compact (3-meter test range), 3-meter test range (EMS floors available)
IP-045BLB	45	1.5	Compact (3-meter test range), 3-meter test range
IP-065BLB	65	2	3-meter and 10-meter test ranges
IP-090BLB	93	3	3-meter and 10-meter test ranges
IP-130BLB	128	3.5	10-meter test ranges

* Not including the mass of ferrite

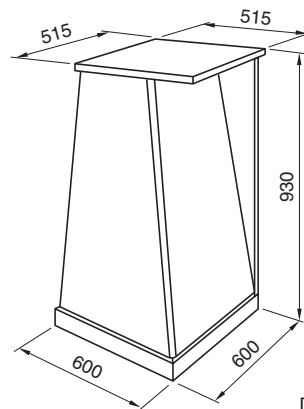


PRODUCT IDENTIFICATIONS

I P - 090 BL B
 (1) (2) (3) (4) (5)

- (1) TDK electromagnetic absorbers
- (2) Base material code (P: Styrofoam)
- (3) Length dimensional code (090: 93cm)
- (4) Structure code
- (5) Version code

SHAPES AND DIMENSIONS



Dimensions in mm

TYPICAL ABSORPTION CHARACTERISTICS (VERTICAL INCIDENCE)

Material name	30MHz	50MHz	100MHz	500MHz	1GHz	5GHz	18GHz	40GHz
IP-030C	15	18	15	15	16	23	30	30
IP-045C	18	18	15	20	20	30	40	40
IP-045BLB	18	22	18	18	18	16	18	18
IP-065BLB	18	22	20	18	18	18	20	20
IP-090BLB	22	23	20	20	20	20	20	20
IP-130BLB	24	28	25	22	23	25	20	20

Unit: dB

• 200v/m Can be applied to EMS tests

FOR EMC ANECHOIC CHAMBERS

ITF MATERIAL

It is a composite type radio wave absorber that combines Styrofoam as a support material, a radio wave absorber ITF material that utilizes the ohm loss of the resistance film, and a radio wave absorber material IB material that utilizes the magnetic loss of ferrite.

Resistive film is a material that contains conductive fibers in a mixed organic / inorganic base material and is flame-retardant.

The composite type absorber is designed so that the radio wave absorber IB material efficiently absorbs radio waves in the low frequency region of about 30 to 500 MHz and the ITF material efficiently absorbs radio waves in the high frequency region of 500 MHz or more, making the best use of the characteristics of each loss material. It has excellent radio wave absorption performance from low frequency 30MHz.

* Used in combination with ferrite radio wave absorber IB material.



ITF-090, ITF-130

It is a newly developed TDK compound radio wave absorber. It is a unit configuration type radio wave absorber that has excellent radio wave absorption characteristics over a wide band and has achieved compactness, weight reduction, and price reduction.

Widely used in 3m / 10m method anechoic chambers and large anechoic chambers for special purposes.

FEATURES

- Ultra-wideband electromagnetic absorber.
- Lightweight.
- Long service life.
- Fire retardant (UL94HBF)
- The exterior is white, creating a bright interior space.

STANDARD MATERIALS

Material name	Length (cm)	Standard weight* (kg)	Applicable anechoic chambers
ITF-045	45	1	Compact (3-meter test range), 3-meter test ranges
ITF-090	95	1.5	3-meter and 10-meter test ranges
ITF-130	130	2	10-meter test ranges
ITF-160	160	2.5	10-meter test ranges

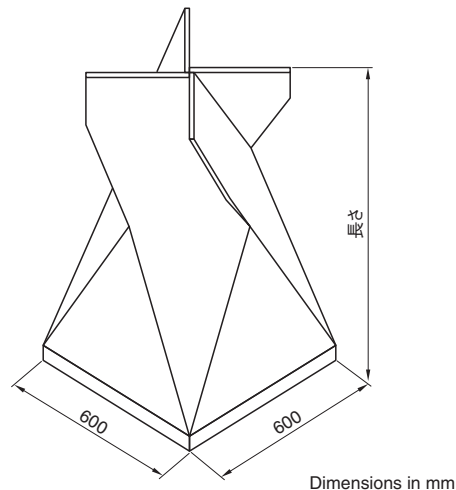
* Not including the mass of ferrite

PRODUCT IDENTIFICATIONS

I TF - 090
(1) (2) (3)

- (1) TDK electromagnetic absorbers
- (2) Base material code (TF: Styrofoam with resistance film)
- (3) Length dimensional code (090: 95cm)

SHAPES AND DIMENSIONS



Dimensions in mm

TYPICAL ABSORPTION CHARACTERISTICS (VERTICAL INCIDENCE)

Unit: dB

Material name	30MHz	50MHz	100MHz	500MHz	1GHz	5GHz	18GHz	40GHz
ITF-045	18	25	18	18	18	18	18	18
ITF-090	24	22	20	20	20	20	20	20
ITF-130	28	22	28	22	23	20	20	20
ITF-160	28	23	25	23	25	20	20	20

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FOR EMC ANECHOIC CHAMBERS

IB MATERIAL

An electromagnetic absorber utilizing the magnetic resonance loss characteristic of ferrite. The sintered ferrite has been baked at a temperature of over 1000°C and possesses physical properties equivalent to those of external porcelain tiles.

IB-017

A sintered ferrite delivering excellent electromagnetic absorption performance particularly in the VHF band. This extremely thin electromagnetic absorber is 6 mm or less thick.

FEATURES

- This is a thin-type wide-band electromagnetic absorber.
- This is highly weather resistant.
- Can be used as building material.

PRODUCT IDENTIFICATIONS

I	B	- 017	100×100×5.2	WH
(1)	(2)	(3)	(4)	(5)

- (1) TDK electromagnetic absorbers
 (2) Base material code (B: Sintered ferrite)
 (3) Material code
 (4) Dimension
 (5) With hole

PHYSICAL PERFORMANCES

Bending strength (Pa)	1.4×10^8
Tensile strength (Pa)	3.1×10^9
Compression hardness (Pa)	7.8×10^{10}
Thermal expansion coefficient (K ⁻¹)	1.1×10^{-5}
Thermal conductivity (W/(m • K))	4
Specific heat (J/(kg • K))	640

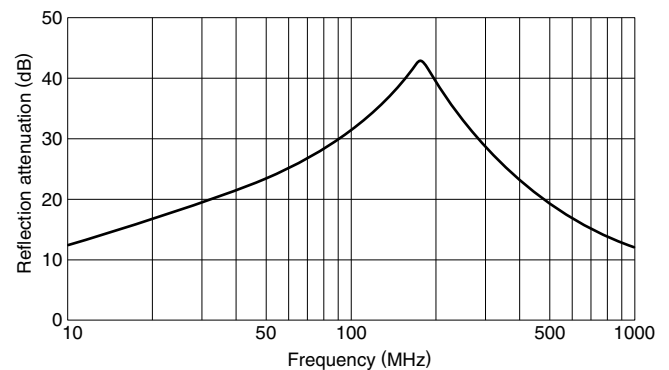
STANDARD MATERIALS

Material name	Standard dimensions (mm)	Standard weight (g)	Applications
IB-017	100×100×5.2WH	100×100×5.5 270	EMC anechoic chambers, VOR and others



REFLECTION ATTENUATION vs. FREQUENCY CHARACTERISTICS (Measured using coaxial tube)

IB-017



FOR EMC ANECHOIC CHAMBERS

IS-V MATERIAL

It is a composite type radio wave absorber that uses foamed polyethylene as a base material and combines the radio wave absorber IS-V material that utilizes the ohm loss of carbon and the radio wave absorber material IB material that utilizes the magnetic loss of ferrite. The composite type absorber makes the best use of the characteristics of each loss material so that the radio wave absorber IB material efficiently absorbs radio waves in the low frequency region of about 30 to 500MHz and the IS-V material efficiently absorbs radio waves in the high frequency region of 500 MHz or more. It is designed and has excellent radio wave absorption performance from a low frequency of 30MHz.

* Used in combination with ferrite radio wave absorber IB material.

IS-V010

It is a composite type electromagnetic wave absorber for ECM anechoic chambers of 10cm length. It is compact and lightweight, and is ideal for small anechoic chambers such as in-vehicle component testing applications.

IS-V023A2

It is a composite radio wave absorber with a length of 23 cm. It can be used both as a floor radio wave absorber for EMS tests from 80 MHz

FEATURES

- Ultra-wideband electromagnetic absorber.
- Small and lightweight.
- Stable against chemicals and offers long service life.
- Uses materials that, when burned, emit gases that are relatively harmless to humans.
- Fire retardant (UL94 HBF equivalent)

and as a CISPR standard floor radio wave absorber at 1 GHz and above.



PRODUCT IDENTIFICATIONS

I	S-V	023	A2
(1)	(2)	(3)	(4)

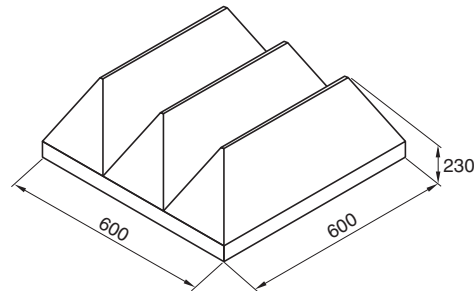
(1) TDK electromagnetic absorbers

(2) Base material code (S-V: Polyethylene foam (For IB material combination))

(3) Length dimensional code (023: 23cm)

(4) Version code

SHAPES AND DIMENSIONS



Dimensions in mm

STANDARD MATERIALS

Material name	Length (cm)	Standard weight* (kg)	Shape and number of columns	Applicable anechoic chambers
IS-V010	10	1.3	Wedge 5row	Compact
IS-V023	23	2.3	Wedge 3row	Compact
IS-V023A2	23	1.8	Pyramids 8row×8row	Compact (3-meter test range), 3-meter test range, 10-meter method floor

* Not including the mass of ferrite

TYPICAL ABSORPTION CHARACTERISTICS (VERTICAL INCIDENCE)

Unit: dB

Material name	30MHz	50MHz	100MHz	500MHz	1GHz	5GHz	18GHz	40GHz
IS-V010	15	20	20	12	13	13	20	20
IS-V023	15	22	18	13	15	20	25	25
IS-V023A2	15	22	20	12	15	15	20	20

FOR EMS FLOORS

IS-S MATERIAL

An electromagnetic absorber consisting of a polyethylene foam base and utilizing the ohmic loss of carbon.

Specifically designed for oblique incidence, the IS-S electromagnetic absorber provides excellent oblique incidence characteristics and can be used as electromagnetic absorbent flooring material for EMS tests from frequencies as low as 80MHz. It can also be used in microwave anechoic chambers.

IS-080S

A specially designed wedged-shaped absorber with a length of 80cm. It can be used as electromagnetic absorbent flooring material for EMS tests from frequencies as low as 80MHz.

It delivers excellent oblique incidence performance starting at low frequencies.

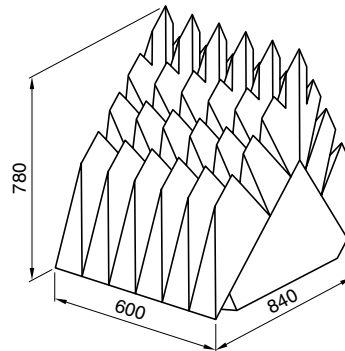


PRODUCT IDENTIFICATIONS

I S - 080 S
(1) (2) (3) (4)

- (1) TDK electromagnetic absorbers
- (2) Base material code (S: Polyethylene foam)
- (3) Length dimensional code (080: 78cm)
- (4) For diagonal incidence

SHAPES AND DIMENSIONS



Dimensions in mm

TYPICAL ABSORPTION CHARACTERISTICS (45° INCIDENCE ANGLE)

Unit: dB

Material name		80MHz	100MHz	300MHz	500MHz	800MHz	1GHz	2GHz	3GHz
IS-080S	TE	15	15	25	27	35	35	37	55
	TM	15	15	25	27	30	35	40	55

- Representative power withstand performance: 50mW/cm² (200v/m Can be applied to EMS tests)

FOR MICROWAVE ANECHOIC CHAMBERS

IS MATERIAL

An electromagnetic absorber consisting of a polyethylene foam base and utilizing the ohmic loss of carbon. Not only is the IS electromagnetic absorber capable of absorbing microwaves, it also delivers excellent electromagnetic absorption performance through millimeter and submillimeter waves (through 1THz).

IS-030A2

A 30-cm long pyramidal electromagnetic absorber. It delivers excellent electromagnetic absorption performance over a wide band between 0.8 and 110GHz.

It is optimally suited for applications in a wide range of wireless access applications and microwave anechoic chambers for conducting cellular phone related tests.

FEATURES

- Ultra-wideband electromagnetic absorber.
- Excellent electromagnetic absorption performance in the millimeter wave band.
- The tip is designed to reduce creep and deliver stable performance.
- Stable against chemicals and offers long service life.
- Uses materials that, when burned, emit gases that are relatively harmless to humans.
- Fire retardant (NRL Classes 1, 2 and 3; UL-94HBF).
- Walking material are also available.
- Available white end caps can be used to improve the indoor illumination.

PRODUCT IDENTIFICATIONS

I S - 030 A

(1) (2) (3) (4)

- (1) TDK electromagnetic absorbers
 (2) Base material code (S: Polyethylene foam)
 (3) Length dimensional code (030: 30cm)
 (4) Version code

TYPICAL ABSORPTION CHARACTERISTICS (VERTICAL INCIDENCE)

Unit: dB

Material name	0.1GHz	0.3GHz	0.5GHz	0.8GHz	1GHz	3GHz	5GHz	10GHz	30GHz	50GHz	110GHz
IS-005A	—	—	—	—	—	15	20	30	50	50	50
IS-012A	—	—	—	20	20	30	40	55	55	55	50
IS-015A	—	—	—	20	20	35	40	55	55	55	50
IS-023A	—	—	—	23	30	45	50	55	55	55	50
IS-030A2	—	—	—	30	35	45	50	55	55	55	50
IS-045A	—	—	30	35	40	45	50	55	55	55	50
IS-060	—	—	32	37	42	50	55	55	55	55	50
IS-075	—	25	35	40	45	55	55	55	55	55	50
IS-100	—	30	40	45	50	55	55	55	55	55	50
IS-150	30	35	40	40	45	55	55	55	55	55	50

• Representative power withstand performance: 50mW/cm²

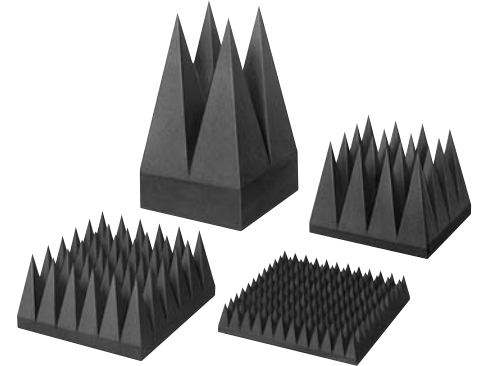
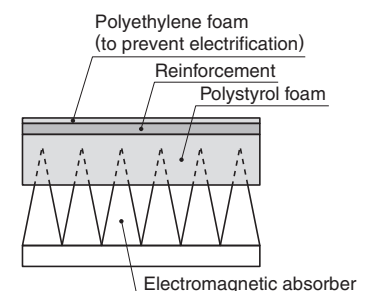
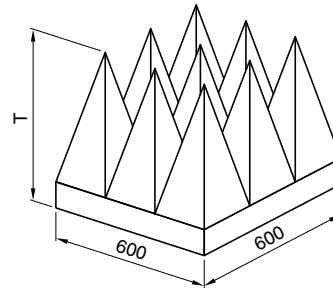
Material name	Length (mm)	Standard weight (kg)	Number of pyramids
IS-005A	50	0.7	24row×24row=576
IS-012A	120	1.6	15row×15row=225
IS-015A	150	2.2	15row×15row=225
IS-023A	230	3.0	8row×8row=64
IS-030A2	300	3.3	6row×6row=36
IS-045A	450	4.8	4row×4row=16
IS-060	600	6.0	3row×3row=9
IS-075	750	7.0	2row×2row=4
IS-100	1000	10.5	2row×2row=4
IS-150	1500	9.0	1row×1row=1

ABSORBERS FOR WALKING MATERIAL**PRODUCT IDENTIFICATIONS**

I S - ○○○ FL

(1) (2) (3) (4)

- (1) TDK electromagnetic absorbers
 (2) Base material code (S: Polyethylene foam)
 (3) Length dimensional code
 (4) Type (FL: walking material)

SHAPES AND DIMENSIONS**SHAPES AND DIMENSIONS**

Dimensions in mm

DESIGNED SPECIFICALLY FOR OBLIQUE INCIDENCE

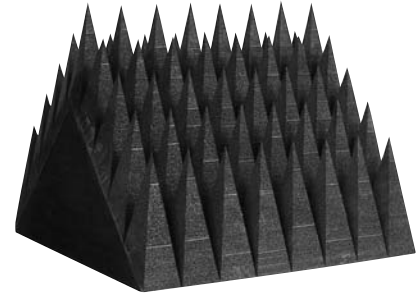
IS-SM MATERIAL

An electromagnetic absorber consisting of a polyethylene foam base and utilizing the ohmic loss of carbon. Not only is the IS-SM absorber, which is designed specifically for oblique incidence, capable of absorbing microwaves, it also delivers excellent electromagnetic absorption performance through millimeter waves.

IS-SM050

A special pyramidal electromagnetic absorber with a length of 50cm. It provides excellent oblique incidence characteristics for a wide band between 0.8 and 110GHz. It is optimally suited for applications in a wide range of wireless access operations and as side-wall panels in microwave anechoic chambers for conducting cellular phone related tests.

Our line up includes IS-SM080 and IS-SM100 that deliver excellent electromagnetic absorption performance starting at low frequency ranges.



FEATURES

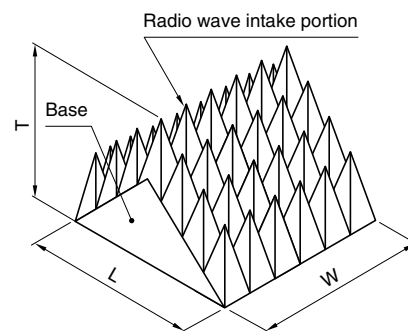
- Ultra-wideband electromagnetic absorber.
- Excellent electromagnetic absorption performance for oblique incidences.
- The product can be made thinner than pyramidal absorbers.
- The tip is designed to reduce creep and deliver stable performance.
- Stable against chemicals and offers long service life.
- Uses materials that, when burned, emit gases that are relatively harmless to humans.
- Fire retardant (NRL Classes 1, 2 and 3; UL-94HBF).

PRODUCT IDENTIFICATIONS

I S - SM 050
(1) (2) (3) (4)

- (1) TDK electromagnetic absorbers
- (2) Base material code (S: Polyethylene foam)
- (3) Designed specifically for oblique incidence.
Supports millimeter waves.
- (4) Length dimensional code (050: 50cm)

STANDARD DIMENSIONS



Material name	Standard dimensions(mm) [L×W×T]	Standard weight (g)
IS-SM050	600×600×500	4.8
IS-SM080	840×600×800	10.0
IS-SM100	840×600×1000	12.5

TYPICAL ABSORPTION CHARACTERISTICS (50° INCIDENCE ANGLE)

Unit: dB

Material name		0.3GHz	0.5GHz	0.8GHz	1GHz	3GHz	5GHz	10GHz	30GHz	50GHz	110GHz
IS-SM050	TE	—	—	35	40	45	50	55	55	55	50
	TM	—	—	30	35	45	50	55	55	55	50
IS-SM080	TE	—	30	40	40	55	55	55	55	55	50
	TM	—	30	40	45	55	55	55	55	55	50
IS-SM100	TE	30	35	40	45	55	55	55	55	55	50
	TM	20	30	40	45	55	55	55	55	55	50

• Representative power withstand performance: 50mW/cm²

FOR FM BAND AND MICROWAVE ANECHOIC CHAMBERS

IP-BX MATERIAL

A composite electromagnetic absorber made by combining the IP-BX electromagnetic absorber, which consists of a styrofoam base and utilizes the ohmic loss of carbon, and an electromagnetic absorber that uses the magnetic loss of ferrite. Each of the loss material are matched for impedance to deliver excellent electromagnetic absorption performance from as low as the 70MHz FM band.

* Used in combination with a ferrite radio wave absorber.

IP-100BX, IP-130BX

TDK composite electromagnetic absorbers praised highly in tests for automobile antennas. IP-100BX delivers excellent electromagnetic absorption performance for vertical incidences starting at the FM band to the microwave range.

IP-130BX delivers excellent electromagnetic absorption performance for oblique incidences starting at the FM band to the microwave range.

These products are used widely in anechoic chambers for testing automobile antennas and large special purpose anechoic chambers.



FEATURES

- Ultra-wideband electromagnetic absorber.
- Stable against acids, bases and water vapor, and offers long service life.
- Uses materials that, when burned, emit gases that are relatively harmless to humans.
- Fire retardant (NRL Classes 1, 2 and 3; UL-94HBF).

PRODUCT IDENTIFICATIONS

I P - 130 B X
(1) (2) (3) (4) (5)

- (1) TDK electromagnetic absorbers
- (2) Base material code (P: Styrofoam)
- (3) Length dimensional code (130: 130cm)
- (4) Version code
- (5) Ferrite material

STANDARD MATERIALS

Material name	Length (cm)	Standard weight* (kg)	Shapes
IP-045BX	45	3	Wedge form
IP-100BX	100	6	Wedge form
IP-130BX	130	6.5	Pyramid form

* Not including the mass of ferrite

TYPICAL ABSORPTION CHARACTERISTICS (VERTICAL INCIDENCE)

Unit: dB

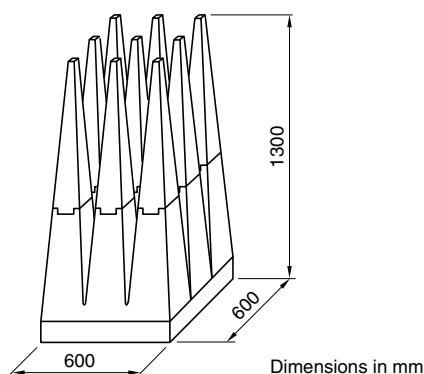
Material name	70MHz	80MHz	100MHz	500MHz	1GHz	5GHz	18GHz	40GHz
IP-045BX	23	25	23	20	22	25	40	40
IP-100BX	25	30	30	30	30	40	40	40


TYPICAL ABSORPTION CHARACTERISTICS (60° INCIDENCE ANGLE)

Unit: dB

Material name		70MHz	80MHz	100MHz	500MHz	1GHz	5GHz	18GHz	40GHz
IP-130BX	TE	10	10	12	35	45	50	50	50
	TM	20	20	20	35	45	50	50	50

SHAPES AND DIMENSIONS



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FOR EMC/MICROWAVE ANECHOIC CHAMBERS

IP MATERIAL

A composite electromagnetic absorber made by combining the IP electromagnetic absorber, which consists of a styrofoam base and utilizes the ohmic loss of carbon, and an electromagnetic absorber that uses the magnetic loss of ferrite.

These composite absorbers fully utilize the features of each loss material. In ranges of 500MHz or lower the IP electromagnetic absorbers, and in the higher range of 500MHz and higher the IP electromagnetic absorbers, are designed to provide efficient electromagnetic absorption.

* Used in combination with a ferrite radio wave absorber.

IP-045E

TDK composite electromagnetic absorbers praised highly for their application in EMC/microwave tests.

IP-045E delivers excellent electromagnetic absorption performance for vertical incidences starting at 30MHz to the microwave range.

Additionally, our line up includes IP-100C and IP-150C that deliver excellent electromagnetic absorption performance starting at low frequency ranges. These are optimally suited for six-sided anechoic chambers (for EN and ETSI compliance).



FEATURES

- Ultra-wideband electromagnetic absorber.
- Stable against acids, bases and water vapor, and offers long service life.
- Uses materials that, when burned, emit gases that are relatively harmless to humans.
- Fire retardant (NRL Classes 1, 2 and 3; UL-94HBF).

PRODUCT IDENTIFICATIONS

I P - 100 C
(1) (2) (3) (4)

- (1) TDK electromagnetic absorbers
- (2) Base material code (P: Styrofoam)
- (3) Length dimensional code (100: 100cm)
- (4) Version code

STANDARD MATERIALS

Material name	Length (cm)	Standard weight* (kg)	Applicable anechoic chambers
IP-045E	45	3	EMC and antenna evaluation etc.
IP-100C	100	6	EN and ETSI compliant
IP-150C	150	8.5	EN and ETSI compliant

* Not including the mass of ferrite

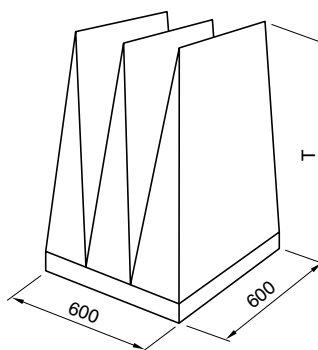
TYPICAL ABSORPTION CHARACTERISTICS (VERTICAL INCIDENCE)

Unit: dB

Material name	30MHz	50MHz	100MHz	500MHz	1GHz	5GHz	18GHz	40GHz
IP-045E	14	14	14	20	30	40	40	40
IP-100C	17	17	18	25	30	40	40	40
IP-150C	20	23	30	30	32	40	40	40

- 200v/m Can be applied to EMS tests

SHAPES AND DIMENSIONS



Dimensions in mm