SMT Gasket

SMD is an abbreviation of Surface-Mounted Devices and means a surface mount element.
SMT GASKET is a conductive gasket using for circuit ground SMT (Surface Mount Technology) to reduce the electrical / electronic malfunction and its EMI noise. Existing EMI shielding gaskets are produced in wrapping the foam with conductive fabric but it does not have high temperature resistance. SMT Gaskets have the excellent electrical conductivity, high heat resistance and SMT mountable characteristics for automatic soldering procedure.
DooSung developed SMT gasket to follow such electronics industry trend.
SMT gasket is superior grounding gasket to existing one at the electrical and physical characteristics, and an up-graded product of *EX-FLEXIL* by the integrated process technology of DooSung, the leader of the EMI gasket technology.

This SMT Gasket has developed to go with the trend of environment restriction.

※ This product is patented for unique technology.

Patent No. : 1047057, 0988890, 0813095, 0920469, 1054251

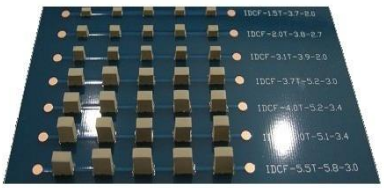
Apply for patents : PCT /KR2010/003114 , Europe (10777921.7), USA (13/321,303), Japan, China

IDSMT series

Wrapping type

Coating type

IDCF series

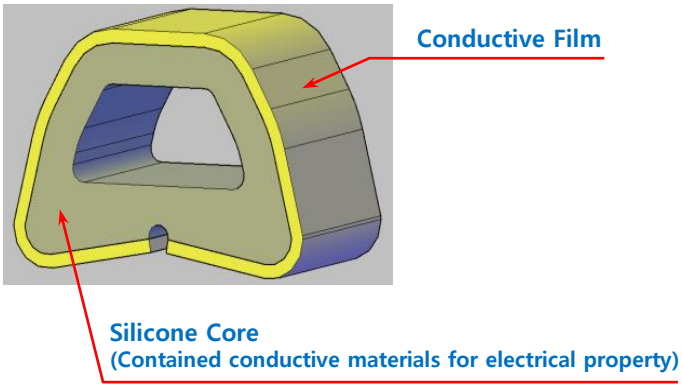


IDSMT – W series

Features and use

- Excellent grounding characteristics from a wide area of grounding
- Excellent electrical conductivity
- The stabilization of components due to mounting levelly
- Excellent reliability (repeated compression, brine-atomizing test pass)
- Precise reel packaging for the accurate work
- Superior thermo-stable characteristics
- High adhesion after SMT
- EMI Shielding
- Impedance matching function of PCB or FPCB
- Excellent Thermal Transfer
- Excellent ESD (Electrostatic discharge)
- Cushion and anti-shock after SMT
- EMI noise attenuation its power loss property

Structure



Specifications

Item		Test Method	Properties
Material Description	Base Material	-	Silicone rubber / PI Film
	Filler (Core)	-	Carbon
	Color	Visual	Silver
Heat Resistance (℃)		Internal Test Method	400
Service Temp (℃).		Internal Test Method	- 40 ~ + 280
Electric Resistance (Ω)	Origin	HIOKI 3540 mΩ HITESTER	Max. 0.1
	Thermo-hygrostat		Max. 0.1
	Brine Atomizing		Max. 0.1
	Thermal Shock		Max. 0.1
Adhesion Strength (gf/cm)		UTM	Min. 1500
Compression-Deflection Rate (%)		20% Compression 10,000times	Min. 95
Flammability		UL 94	UL 94-V1
RoHS & Halogen Free		Pb, Cd, Hg, Cr^{+6}, PBBs, PBDEs, Br, Cl	N.D.

IDSMT – W series

How to Order

P/N : IDSMT - W - AAA - BBB - CCC – DDD
(1) (2) (3) (4) (5) (6)

(1) Serial Number
(2) W : Wrapping
(3) Width (mm)
(4) Height (mm)
(5) Length (mm)
(6) Type : H[Sn plated Film with a hole]
HG[Au plated Film with a hole]
N [without a hole]

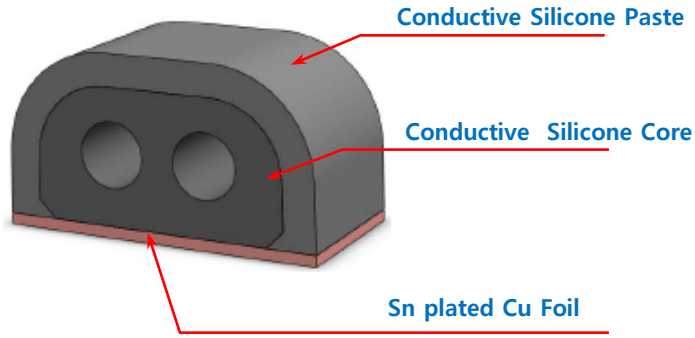
[For Example]
IDSMT-W-4-5-6-HG
- **Wrapping**
- **Width : 4mm**
- **Height : 5mm**
- **Length : 6mm**
- **Type : HG**

IDSMT – S series

Features and use

- Excellent grounding characteristics from a wide area of grounding
- Excellent electrical conductivity
- The stabilization of components due to mounting levelly
- Excellent reliability (repeated compression, brine-atomizing test pass)
- Precise reel packaging for the accurate work
- Superior thermo-stable characteristics
- High adhesion after SMT
- EMI Shielding
- Impedance matching function of PCB or FPCB
- Excellent Thermal Transfer
- Excellent ESD (Electrostatic discharge)
- Cushion and anti-shock after SMT
- EMI noise attenuation its power loss property

Structure



Specifications

Item		Test Method	Properties
Material description	Base Material	-	Conductive Silicone & Sn plated Cu Foil
	Color	Visual	Dark gray/Gray
Standard Size	Width	Projector	Customized
	Height		
	Length		
Service Temp.		Internal Test method	- 40 ~ +280 ℃
Electric Resistance	Origin	HIOKI 3540 mΩ HITESTER	Max. 1.0 Ω
	2nd Reflow (After IPA cleaned)		Max. 1.0 Ω
	Temp. & Humi. (50℃/95%RH)		Max. 1.0 Ω
	Salt Spray		Max. 1.0 Ω
	Thermal Shock		Max. 1.0 Ω
Adhesion Strength		Push Pull Gauge Speed : 0.5mm/sec	Length: Min. 300gf / Width: Min. 400gf
Compression-Deflection Rate (%)		30% Compression, RT x 48hr	Min. 95%
		30% Compression, 10,000 number of repeating	Min. 95%
RoHS		Pb, Cd, Hg, Cr^{+6}, Br, PBBs, PBDEs,	N. D

IDSMT – S series

How to Order

P/N : IDSMT - S - AAA - BBB - CCC – DDD
(1) (2) (3) (4) (5) (6)

(1) Serial Number
(2) S : Standard
(3) Width (mm)
(4) Height (mm)
(5) Length (mm)
(6) Type : H[Gray color/hole]
BH[Black color/hole]
N [without a hole]

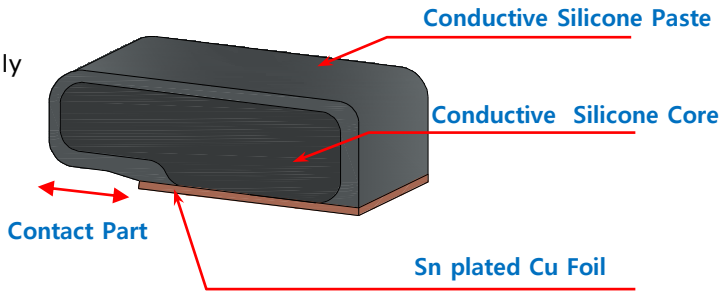
[For Example]
IDSMT-S-2-1.1-1-BH
- **Standard**
- **Width : 2mm**
- **Height : 1.1mm**
- **Length : 1mm**
- **Type : BH**

IDSMT – S series (Side contact type)

Features and use

- Side-Bottom contact type
- Excellent grounding characteristics from a wide area of grounding
- Excellent electrical conductivity
- The stabilization of components due to mounting levelly
- Excellent reliability (repeated compression, brine-atomizing test pass)
- Precise reel packaging for the accurate work
- Superior thermo-stable characteristics
- High adhesion after SMT
- EMI Shielding
- Impedance matching function of PCB or FPCB
- Excellent Thermal Transfer
- Excellent ESD (Electrostatic discharge)
- Cushion and anti-shock after SMT
- EMI noise attenuation its power loss property

Structure



Specifications

Item		Test Method	Properties
Material description	Base Material	-	Conductive Silicone & Sn plated Cu Foil
	Color	Visual	Dark gray/Gray
Standard Size	Width	Projector	Customized
	Height		
	Length		
Service Temp.		Internal Test method	- 40 ~ +280 ℃
Electric Resistance	Origin	HIOKI 3540 mΩ HITESTER	Max. 1.0 Ω
	2nd Reflow (After IPA cleaned)		Max. 1.0 Ω
	Temp. & Humi. (50℃/95%RH)		Max. 1.0 Ω
	Salt Spray		Max. 1.0 Ω
	Thermal Shock		Max. 1.0 Ω
Adhesion Strength		Push Pull Gauge Speed : 0.5mm/sec	Length: Min. 300gf / Width: Min. 400gf
Compression-Deflection Rate (%)		30% Compression, RT x 48hr	Min. 95%
		30% Compression, 10,000 number of repeating	Min. 95%
RoHS		Pb, Cd, Hg, Cr^{+6}, Br, PBBs, PBDEs,	N. D

IDSMT – S series (Side contact type)

How to Order

P/N : IDSMT - S - AAA - BBB - CCC – DDD
(1) (2) (3) (4) (5) (6)

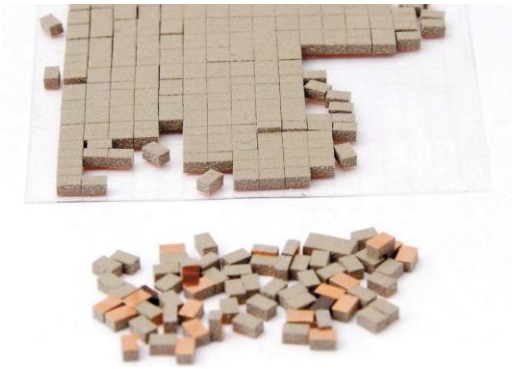
(1) Serial Number
(2) S : Standard
(3) Width (mm)
(4) Height (mm)
(5) Length (mm)
(6) Type : H[Gray color/hole]
BH[Black color/hole]
N [without a hole]
BN[Black color/without a hole]

[For Example]
IDSMT-S-2.9-1-1.9-BN
- **Standard**
- **Width : 2.9mm**
- **Height : 1mm**
- **Length : 1.9mm**
- **Type : BN**

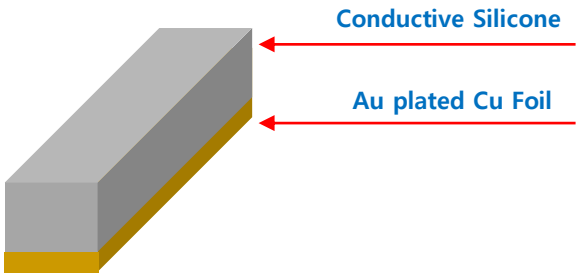
IDCF series

Features

IDCF is recently developed by DSIC from SMD Finger Strip for the use PCB featuring excellent resilience and electrical properties.



Structure



Specifications

Item		Test Method	Properties
Material description	Base Material	-	Conductive Silicone & Au plated Cu
	Color	Visual	gray
Standard Size	Width	Projector	Customized
	Height		
	Length		
Service Temp.		Internal Test method	- 40 ~ +280 ℃
Electric Resistance	Origin	HIOKI 3540 mΩ HITESTER	Max. 1.0 Ω
	2nd Reflow (After IPA cleaned)		Max. 1.0 Ω
	Temp. & Humi. (50℃/95%RH)		Max. 1.0 Ω
	Salt Spray		Max. 1.0 Ω
	Thermal Shock		Max. 1.0 Ω
Adhesion Strength		Push Pull Gauge Speed : 0.5mm/sec	Min. 150gf/mm
Compression-Deflection Rate (%)		30% Compression, RT x 48hr	Min. 90%
		30% Compression, 10,000 number of repeating	Min. 90%
RoHS		Pb, Cd, Hg, Cr^{+6}, Br, PBBs, PBDEs,	N. D

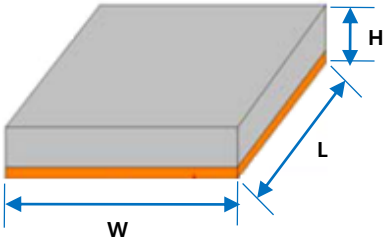
IDCF series

How to Order

P/N : IDCF - AAA - BBB T- CCC - DDD - EEE - FFF

(1) (2) (3) (4) (5) (6) (7)

(1) Serial Number
(2) None : Hard Type , C : Soft Type
(3) Height(mm)
(4) Conductive Silicone Type : SC
(5) Width (mm)
(6) Length (mm)
(7) G : Au Plated Cu Foil



[For Example]

IDCF-0.7T-SC-2.5-1-G
- **Hard Type**
- **Width : 2.5mm**
- **Height : 0.7mm**
- **Length : 1mm**
- **Type : G**

IDCF-C-0.4T-SC-2-1-G
- **Soft Type**
- **Width : 2mm**
- **Height : 0.4mm**
- **Length : 1mm**
- **Type : G**

Electromagnetic Wave Absorber

Our Absorbers effectively suppress radiated noise on various frequency ranges.

These Series improve the distance of electromagnetic signal recognition.

Our Absorbers can be customized according to frequency range and absorbing rate.

Various shapes & sizes are available on request.

Standard EMI Absorber

- **IDA series**

High thermal resistance type EMI Absorber

- **IDSOB series**

High frequency band EMI Absorber

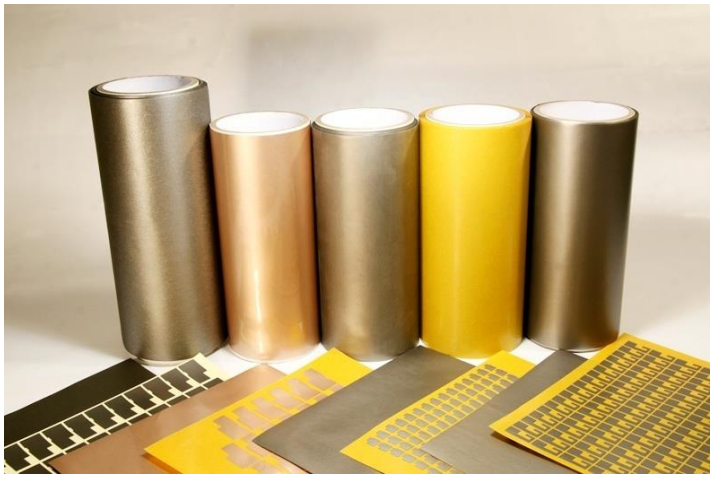
- **IDCI series**

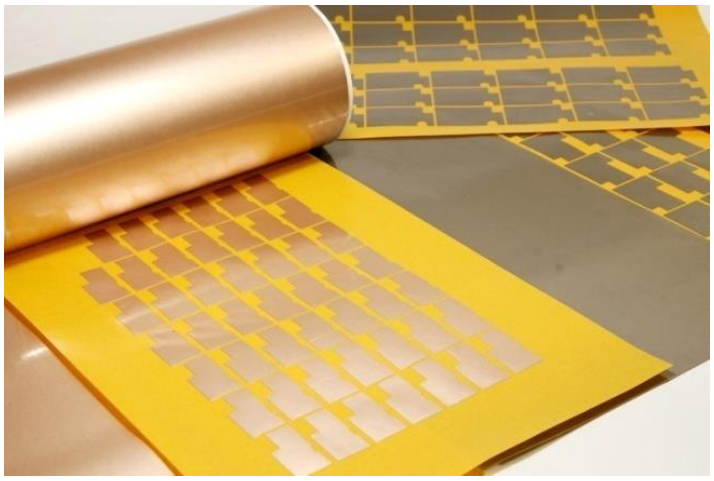
Double and Wide band EMI Absorber

- **IDCIM series**

Thermal EMI Absorber

- **IDCI-T series**
- **IDCI-F series**





Introduction

The compatibility of electronic devices with various electromagnetic environment has become an important issue in recent years.

DooSung has developed the IDA-series Absorbers manufactured based on our technologies and know-how accumulated, which are lightweight and flexible. Much absorption loss provides you with wide applications in the EMI/EMC field such as mobile phones, LCD cables, military applications and the SAR issues.

Applications

- Suppressing radiated noise and its internal interference of electronic devices
- Intra-system application to suppress noise in quasi-microwave range
- Improving the distance of electromagnetic signal recognition and preventing interference between loop antennas and adjacent metal objects
- Communication devices, office electronics, computers, home appliances, and devices mounted on automobiles, radar and TV ghost measures, ETC (the electronic toll collection system), wireless equipment, military applications, etc.

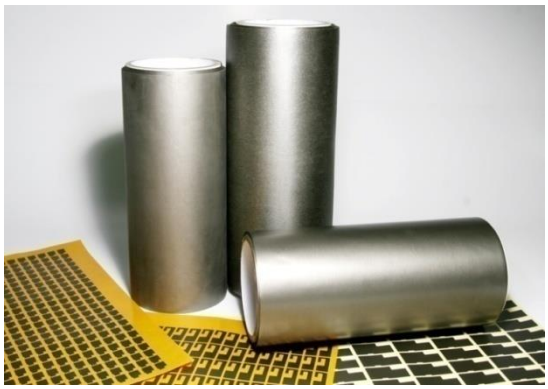
Features

- Excellent electromagnetic absorption performance in the microwave ranges
- Thin, lightweight, flexible; reliable in wide applications
- High permeability performed excellently in noise suppression
- The applicable frequency range; quasi-microwave band, C(4~8GHz), X(8~12.5GHz), Ka, K band
- High electrical & thermal resistance
- Various shapes and sizes are available on request.

IDA series - Standard EMI Absorber

Features

- Roll type product filled with high efficiency metal; excellent function of absorption and suppression of electromagnetic wave noise
- Feasible to cope with optimum product by frequency band as application of various fillers.
- Thin, lightweight, flexible; reliable in wide applications
- Possible to supply eco-friendly products as developing halogen free product



Structure

Specifications

Item / Content	EMI Absorber										NFC/RFID			GHz band
	L	P	N	N(V0)	VHFR	VHF	FM	FM(V0)	N2	FML	R	RP	RQ	WP
Target frequency	10MHz ~ 4GHz										13.56MHz			1GHz ~ 10GHz
Material	Soft magnetic metal powder + Rubber										Complex sheet			
Thickness (mm)	0.05 ~ 1.0	0.1 ~ 0.5	0.1 ~ 1.0		0.1 ~ 0.5	0.1 ~ 1.0			0.05 ~ 0.5		0.10 ~ 0.5	0.1 ~ 1.0	0.05 ~ 0.3	0.05 ~ 0.3
Standard size	Roll (210mm X M), Custom size					210mm X 300mm, 300mm X 420mm, Custom size			300mm X 300mm		Roll (210mm X M)	300mm X 420mm, Custom size	300mm X 300mm	300mm X 300mm
Permeability	20	30	30	20	50	50	100	75	110	150	30	55	65	25
Environment	RoHS		RoHS / Halogen Free								RoHS / Halogen Free			
Service temp. (℃)	-25 ~ 85		-25 ~ 90			-25 ~ 150			-25 ~ 90		-25 ~ 90	-25 ~ 120	-25 ~ 90	

How to Order

P/N : IDA - AAA - BBB - CCC - DDD – EEE - FFF
(1) (2) (3) (4) (5) (6)

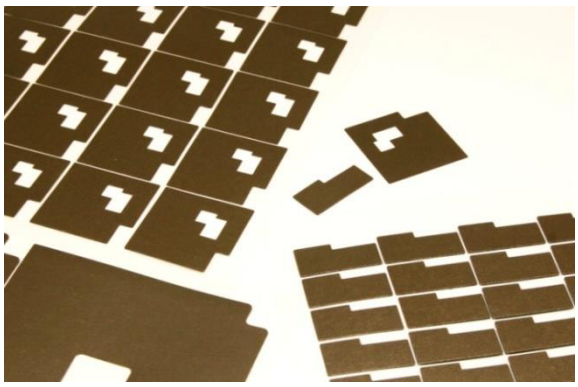
(1) Serial Number : L, P, N, N(V0), VHFR, VHF, FM, FM(V0), N2, FML, R, RL, RP, RQ
(2) Thickness (mm) : 100 = 1.00mm, 010 = 0.10mm, 001 = 0.01mm
(3) Width (mm)
(4) Length (mm)
(5) Tape Type : A(100㎛), A1(50㎛), A2(30㎛), A3(20㎛), C(none)
(6) None : Rectangular type, S : Shape type

[For Example]
IDA-N2-100-210-300-A-S
- **Thickness : 1.00mm**
- **Width : 210mm**
- **Length : 300mm**
- **Tape Type : A**
- **S : Shape type**

IDSOB series - High thermal resistance type EMI Absorber

Features

- A composite body in the form of a sheet made with blending and dispersing micron-sized magnetic fillers in a polymeric binder system
- The applicable frequency range is from 10MHz to 18GHz, or so.
- Electromagnetic noise reduction for the internal EMI and resonance of electronic equipment



Structure

Absorbing Layer

Adhesive Tape

Specifications

Item / Content	IDSOB series			
	V0 (for 800MHz)	V1 (for 1.5GHz)	V2 (for 2.5GHz)	V3 (for 3.5GHz)
	These frequencies can be applied at 1.0mm thick of respective absorbers.			
Material	Microwave absorbing material + Elastomer (High thermal resistance type)			
Thickness (mm)	0.15 ~ 10.0			
Frequency Range	400MHz ~ 6GHz			
Standard Size (mm × mm)	210 X 300 (If you want different thickness and shape of IDSOB, please contact us)			
Surface Resistance (Ω)	Min 1.0×10^3			
Hardness (Shore A)	85 (±5)			
Density (g/cm³)	3.8 (±0.5)			
Service Temp. (℃)	-30 ~ 150			
Tensile Strength (kgf/cm² / psi)	V0 (20 / 284.2), V1 (28 / 397.9), V2 (35 / 497.4)			
Flammability	Non Flammable			
Option	Adhesive Tape / Conductive Mesh Tape			

How to Order

P/N : IDSOB - AAA - BBB - CCC - DDD – EEE - FFF

(1) (2) (3) (4) (5) (6) (7)

(1) Serial Number
(2) Thickness (mm) : 100 = 1.00mm, 010 = 0.10mm, 001 = 0.01mm
(3) Frequency : V0(800MHz), V1(1.5GHz), V2(2.5GHz), V3(3.5GHz)
(4) Width (mm)
(5) Length (mm)
(6) Tape Type : A(100㎛), A1(50㎛), A2(30㎛), A3(20㎛), C(none)
(7) None : Rectangular type, S : Shape type

[For Example]

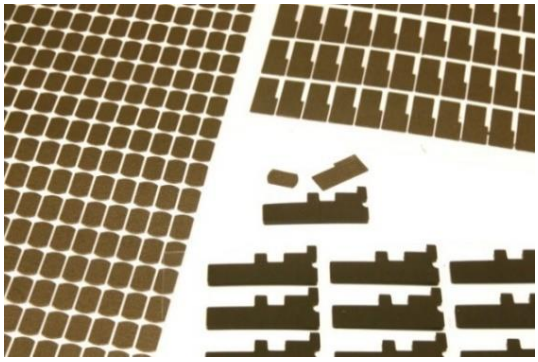
IDSOB-150-V0-210-300-A

- **Thickness : 1.50mm**
- **Frequency : V0(800MHz)**
- **Width : 210mm**
- **Length : 300mm**
- **Tape Type : A**
- **None : Rectangular type**

IDCI series - High frequency band EMI Absorber

Features

- The frequency range : (0.5~8GHz), X(8~12GHz), Ka, K band
- Excellent absorbing performance at the wide frequency.
- Flexible and easy to apply



Structure

Absorbing Layer

Adhesive Tape

Specifications

Item / Content	IDCI series							
	IDCI-050	IDCI-100	IDCI-150	IDCI-200	IDCI-250	IDCI-300	IDCI-350	IDCI-400
Thickness (mm)	0.5(±0.1)	1.0 (±0.1)	1.5 (±0.2)	2.0 (±0.2)	2.5 (±0.3)	3.0 (±0.3)	3.5 (±0.4)	4.0 (±0.4)
Frequency Range	5GHz ~ 40GHz				500MHz ~ 20GHz			
Hardness (Shore A)	70 ± 10 (for Standard type)							
Service Temp. (℃)	- 30 ~ 150							
Standard Size	210mm X 300mm							
Flammability	Non Flammable							
Surface Resistance (Ω)	Min 1.0×10^{8}							
Density (g/cm^3)	3.8 ± 1.0 (for Standard type)							

How to Order

P/N : IDCI - AAA - BBB - CCC - DDD – EEE - FFF

(1) (2) (3) (4) (5) (6) (7)

(1) Serial Number
(2) Thickness (mm) : 100 means 1.00mm
(3) Frequency : required to have working frequency ranges
(4) Width (mm)
(5) Length (mm)
(6) Tape Type : A(100㎛), A1(50㎛), A2(30㎛), A3(20㎛),C(none)
(7) Non : Rectangular type, S : Shape type

[For Example]

IDCI-150-8G-210-300-A-S

- **Thickness : 1.5mm**
- **Frequency : 8GHz**
- **Width : 210mm**
- **Length : 300mm**
- **Tape Type : A**
- **S : Shape type**

IDCI-T, F series – Thermal EMI Absorber

Features

- Dual function of thermal interface material and Electromagnetic wave absorber
- Product does not require peel and stick adhesive when used like a traditional thermal interface material
- Possible to adjust to rugged surface due to flexible material
- Various shapes and sizes due to flexible material

Structure

Protect Film (Embossing)

IDCI-T, F(Thermal+ Absorbing)

PET Film (Transparent)

Specifications

Item / Content	IDCI-T		IDCI-F	
	T100	T150	F200	F300
Color	Gray	Gray	Black	Black
Thermal Conductivity (W/m·K)	1.0	1.5	2.0	3.0
Thickness (㎜)	0.5 ~ 3.0	0.5 ~ 3.0	0.5 ~ 3.0	0.5 ~ 3.0
Hardness (Shore 00)	75 / 55	55	75	75
Volume Resistivity (Ω·㎝)	Min. 1.0 x 10^{10}	Min. 1.0 x 10^{10}	Min. 1.0 x 10^{10}	Min. 1.0 x 10^{10}
Flammability (UL94)	V0	V0	V0	V0
Standard Size (㎜)	210 x 300	210 x 300	210 x 300	210 x 300
Service Temp. (℃)	-30 ~ 120	-30 ~ 120	-30 ~ 150(Max.180)	-30 ~ 150(Max.180)

How to Order

P/N : IDCI - AAA - BBB - CCC - DDD – EEE – FFF – GGG

(1) (2) (3) (4) (5) (6) (7) (8)

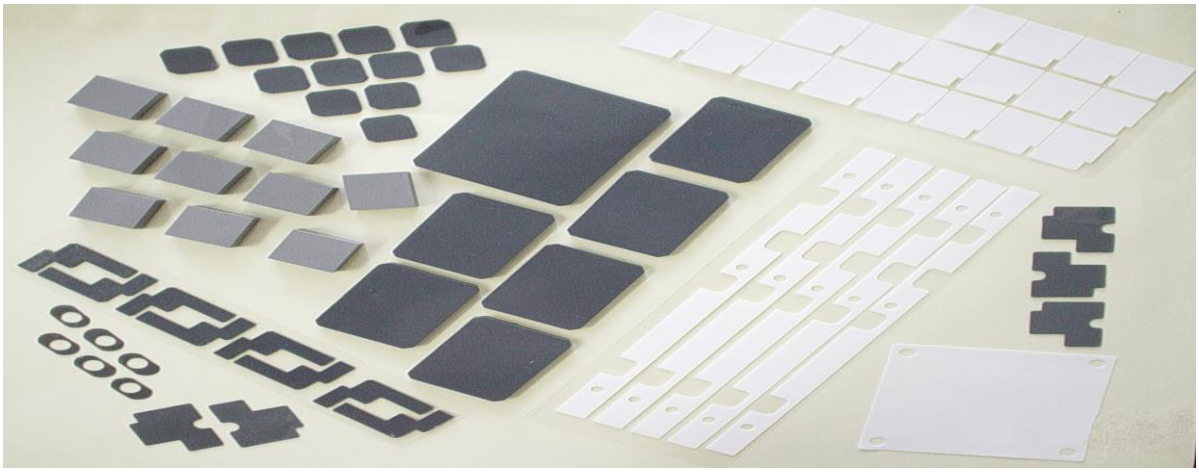
(1) Serial Number
(2) Powder Filler (****) : T100 or F200
(3) Thickness (mm) : 050 means 0.50mm
(4) Width (mm)
(5) Length (mm)
(6) Hardness Type : S(75) or L(55)
(7) Tape type : C(none)
(8) None : Rectangular type, S : Shape type

[For Example]

IDCI-T100-0.5-210-300-S-C

- **Thickness : 0.5mm**
- **Width : 210mm**
- **Length : 300mm**
- **Hardness Type : 55**
- **Tape Type : C(none)**
- **Rectangular type**

Thermal Interface Material

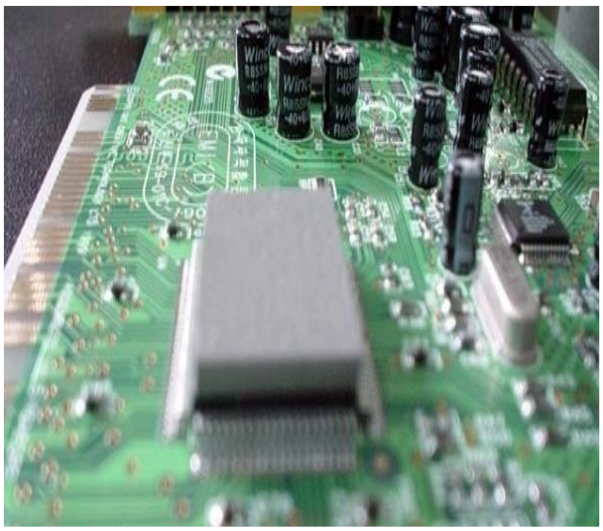


Gel type

- **IDHT G series**

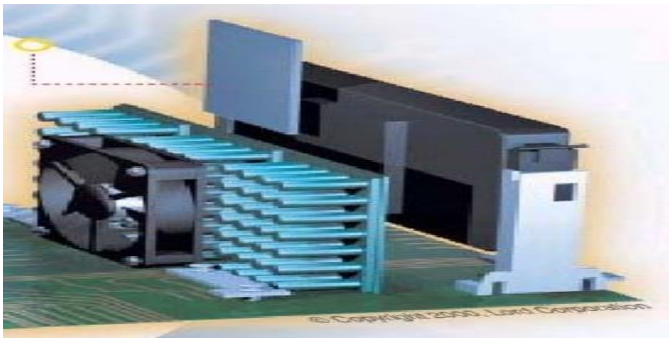
Sheet type

- **IDHT-S series**

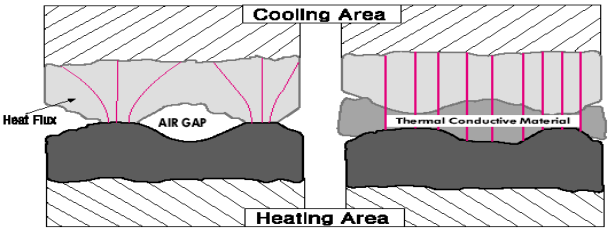


Why is Heat Transfer important?

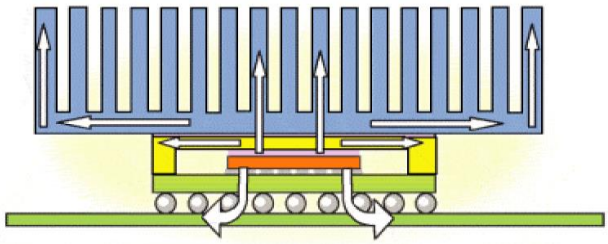
In these days, a lot of electronic devices demand very high levels of thermal management. The objective of all thermal control programs in electronic packaging is the efficient removal of heat from device junctions to the ambient environment, and packaging of portable electronics is slim, which means that components are more closely packed together, so the amount of heat is increased. Clock speed of processor and overall power density are increasing, which means that more heat must be dissipated per volume of electronic equipment than ever before.



Achieving this goal requires a thorough understanding of heat transfer process : key physical properties affect and knowledge of interface material available. Attaching heat sink to a semiconductor package surface requires two commercial grade surfaces to be brought into intimate contact. These surfaces are usually characterized by a microscopic surface, roughness, superimpose, & macroscopic non-planarity that can give the surfaces a concave, convex or twist shape. When two such surfaces are joined, contact occurs only at the high points. The low points form air-filled voids. Typical contact area can consist of more than 90 percent air voids, which represents a significant resistance to heat flow. IDT Series is used to eliminate these interstitial air gaps from the interfaces. Because the material has greater thermal conductivity than through air it replaces, the resistance across the joints decreases, while the component junction temperature will be reduced.

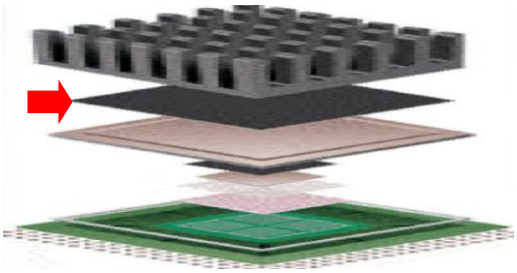


IDT Series is DooSung's thermal management product made of high thermal conductivity and superior flame-retardant which specified organic properties.
If you focus to maximizing the heat transfer, IDT Series meets the specification : UL approval for 94V-0 flame class.



Properties of Thermal Interface Materials

Thermal impedance is the measure of the total resistance to the flow of heat from a hot surface through an interface material into a cold surface. It is measured according to the ASTM D5470 test method. Although the current version of this method is specific to high durometer insulating pad materials tested at high clamping forces, the method has been successfully adapted for use with low durometer materials as well as fluid compounds.



IDHT G series - Gel type TIM

Features

- IDHT G series is very soft, freestanding gap filler that is more compressible than any other gap filler.
- IDHT-G series has not only good thermal conductivity of 1.5~6.0W/m·K but also high compressibility, which leads to low thermal impedance.
- IDHT-G series is inherently sticky, so not necessary to use additional adhesive coating which deteriorates thermal performance.
- IDHT-G series is electrically insulated and stable from −30℃ to 200℃.

Applications

- Cooling Components to the Chassis or Frame
- High Speed Mass Storage Drives
- RDRAM Modules
- Micro Processors, Memory Chips and Chipsets
- Thermal Solution for Heat Pipe
- Automotive Engine Control Units
- Telecommunication Hardwares

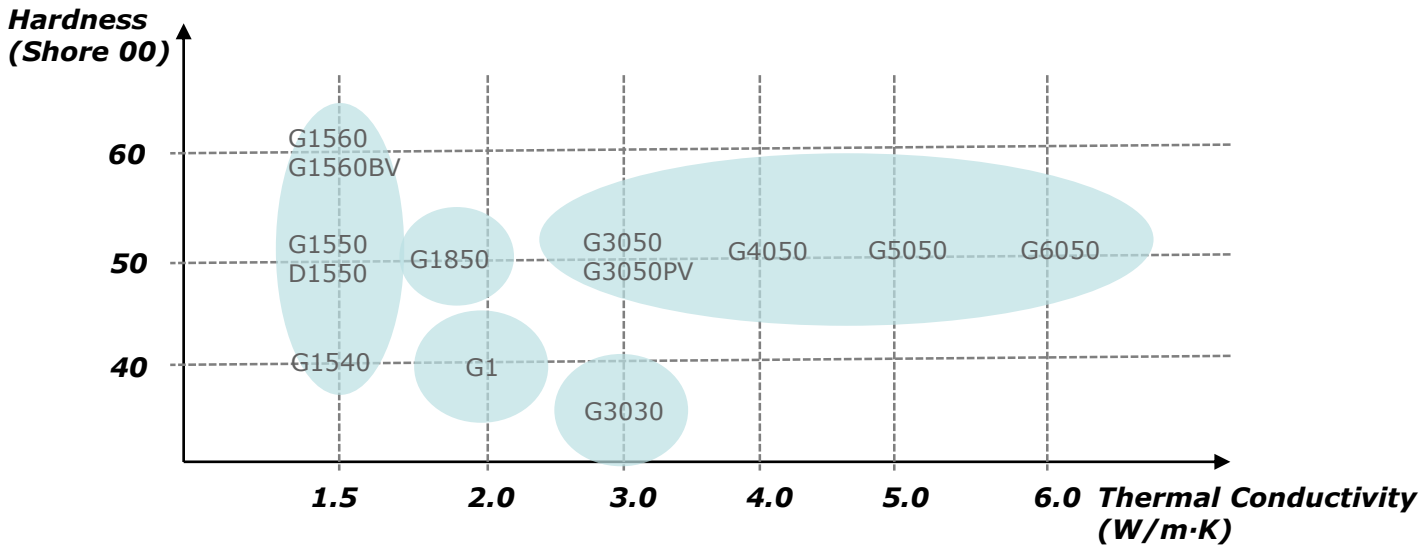
Specifications

Item / Content	IDHT G Series (1.5~2.0W/m·K)						
	(S)-G1540	(S)-G1550	(S)-D1550	G1560	G1560BV	(S)-G1850	G1
Color	Gray	Gray	Dark Gray	Gray	Sky Blue	Gray	Gray
Thickness (mm)	0.2~20.0	0.2~20.0	0.2~20.0	0.5~10.0	0.5~15.0	0.2~20.0	0.5~10.0
Thermal Conductivity (W/m·K)	1.5					1.8	2.0
Hardness (Shore 00)	40	50	50	60	60	50	< 40
Specific Gravity	2.6	2.57	2.57	1.8	1.8	2.57	2.5
Volume Resistivity (Ω·cm)	-	1.0×10^{14}	1.0×10^{14}	1.0×10^{11}	1.0×10^{11}	1.0×10^{14}	1.0×10^{11}
Voltage Breakdown (kV)	-	-	-	5.1	5.1	-	> 6
Service Temp. (℃)	-60 ~ 200	-60 ~ 200	-60 ~ 200	-30 ~ 200	-30 ~ 200	-60 ~ 200	-30 ~ 200

Item / Content	IDHT G Series (3.0~6.0W/m·K)								
	G3030	G3050	G3050PV	(S)-G3060	G4050	G5050	(S)-G5070	G6050	G6050BV
Color	Gray	Gray	Pink	Gray	Gray	Gray	Gray	Gray	Sky Blue
Thickness (mm)	0.5~10.0	0.5~3.5	0.5~3.5	0.25~11.0	0.5~10.0	0.5~10.0	0.5~20.0	0.5~10.0	0.5~10.0
Thermal Conductivity (W/m·K)	3.0				4.0	5.0		6.0	
Hardness (Shore 00)	30	50	50	60	50	50	70	50	50
Specific Gravity	2.8	2.86	2.86	2.95	2.97	3.0	3.15	3.0	3.0
Volume Resistivity (Ω·cm)	1.0×10^{11}	1.0×10^{11}	1.0×10^{11}	1.0×10^{12}	1.0×10^{11}	1.0×10^{11}	1.0×10^{13}	1.0×10^{11}	1.0×10^{11}
Voltage Breakdown (kV)	> 6	> 6	> 6	-	-	-	-	-	-
Service Temp. (℃)	-30 ~ 200	-30 ~ 200	-30 ~ 200	-30 ~ 200	-30 ~ 200	-30 ~ 200	-40 ~ 200	-30 ~ 200	-30 ~ 200

IDHT G series - Gel type TIM

Selection Guide



How to Order

P/N : IDHT - AAA – G - BBB - CCC - DDD – EEE – FFF - GGG - HHH

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

(1) Heat Transfer : none or (S)
(2) Thickness (mm)
(3) Type (G : gel type)
(4) Powder Filler (****)
(5) Width (mm)
(6) Length (mm)
(7) Tape type : A(100㎛), A1(50㎛), C(none)
(8) Tacky Type : O(One Side Tacky), B(Both Side Tacky)
(9) None : Rectangular type, S : Shape type

[For Example]

IDHT(S)-0.5-G1550-210-300-C

- **Thickness : 0.5mm**
- **Powder Filler : G1550**
- **Width : 210mm**
- **Length : 300mm**
- **Tape Type : C(none)**
- **Rectangular type**

[For Example]

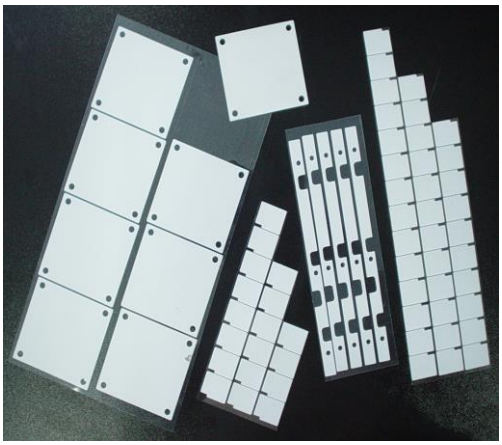
IDHT-0.5-G1560-210-300-A-S

- **Thickness : 0.5mm**
- **Powder Filler : G1560**
- **Width : 210mm**
- **Length : 300mm**
- **Tape Type : A(100㎛)**
- **Shape type**

IDHT-S series - Sheet type TIM

Features

- IDHT-S1 has high thermal conductivity of 4.0W/m·K to produce low thermal impedance.
- IDHT-S1 is electrically insulating, stable from −30℃ to 200℃.
- Available in various thickness from 0.1mm to 0.35mm
- IDHT-S1 does not require reinforcement.
- Not only the lowest thermal resistance but the highest dielectric strength are the distinctive characteristics of IDHT-S1.



Applications

- CPU / Heat Sink
- Power Devices, Voltage Regulators / Heat Sink
- PCB / Heat Sink
- PCB / Case or Chassis
- CD ROM drive / Case
- PCB / PCB

Specifications

Content	*IDHT-S1*
Color	White
Thickness (mm)	0.1 ~0.35
Hardness (Shore A)	60
Specific Gravity	2.7
Thermal Conductivity (W/m·K)	4.0
Volume Resistivity (Ω·cm)	1.0×10^{11}
Voltage Breakdown (kV)	5.1
Tensile Strength (MPa)	15
Service Temp. (℃)	- 30 ~ 200

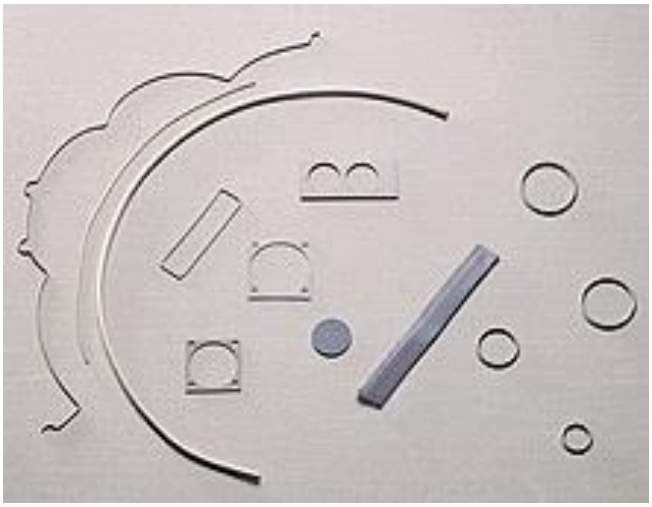
How to Order

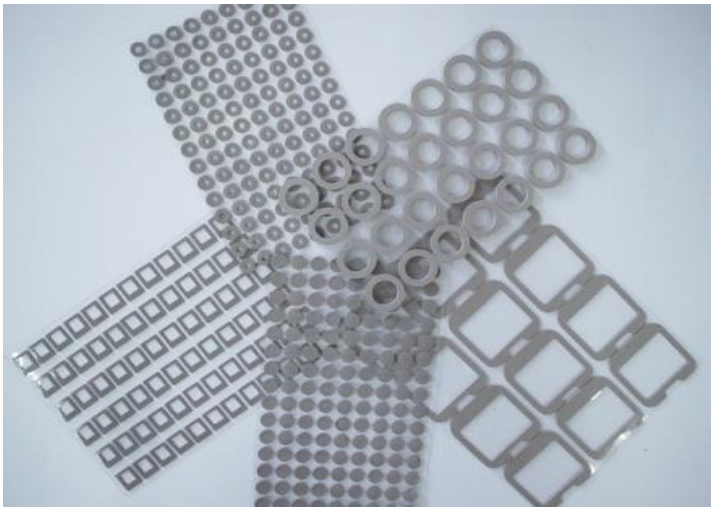
P/N : IDHT - AAA – S1 - BBB - CCC - DDD – EEE
(1) (2) (3) (5) (6) (7) (8)

(1) Heat Transfer
(2) Thickness (mm)
(3) Type (S1 : sheet type)
(4) Width (mm)
(5) Length (mm)
(6) Tape type : A(100㎛), A1(50㎛), C(none)
(7) None : Rectangular type, S : Shape type

[For Example]
IDHT-0.1-S1-210-300-A-S
- **Thickness : 0.1mm**
- **Type : S1**
- **Width : 210mm**
- **Length : 300mm**
- **Tape Type : A(100㎛)**
- **Shape type**

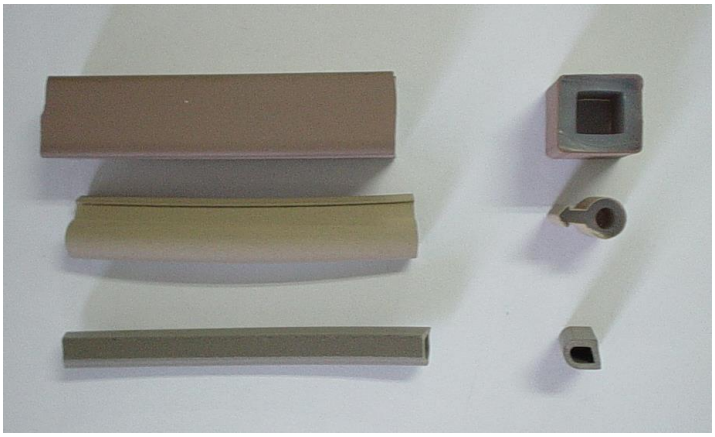
Conductive Elastomer

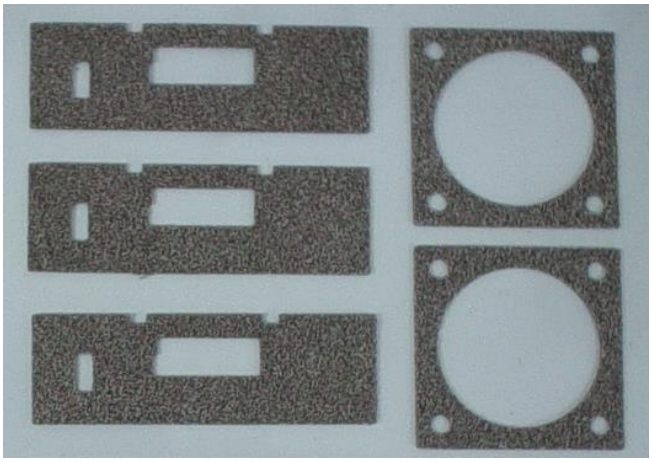


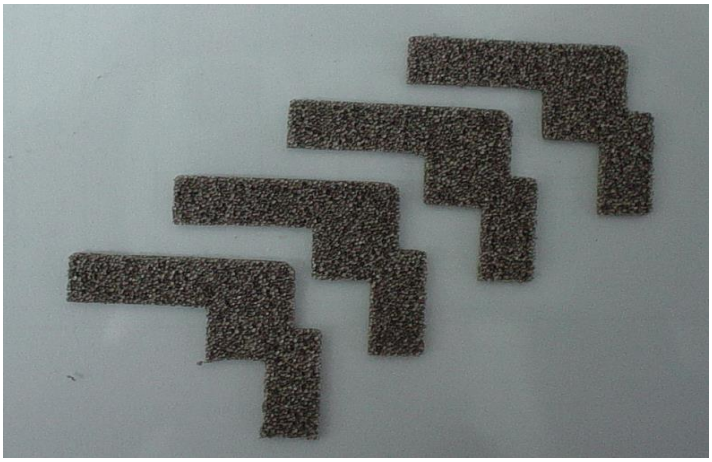


Conductive Silicone

- **Mold Type**



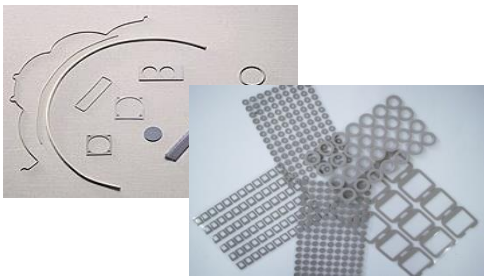




Conductive Silicone

Introduction

The Conductive Silicone is filled with metal filler. It provides high electric conductivity, shielding and moisture sealing. This item is manufactured in sheets, molded type, extrusion type and film type by request.



Applications

This Gasket can be used in applications where it is needed for excellent shielding, high conductivity and long term stability. For example, telecommunication, information technology, medical and industrial electronic equipment markets are major applicable fields.

Specifications

Electrically Conductive Silicone

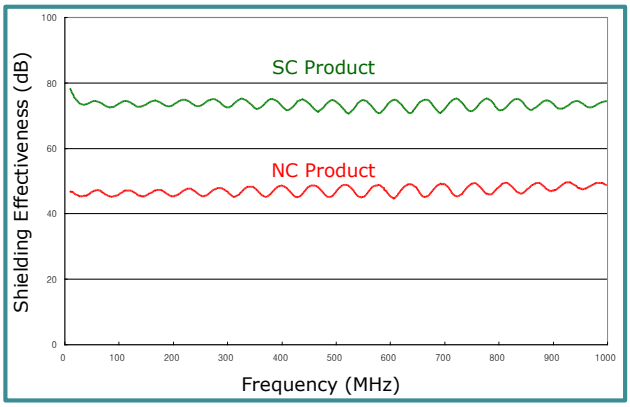
Conductive Filler		SC	NC
Binder		Silicone	Silicone
Electrical Properties	Volume Resistivity (Ω·cm)	0.02	0.10
	Shielding Effectiveness (dB)	> 60	> 40
Physical Properties	Specific Gravity	3.7 (±0.3)	2.0 (±0.3)
	Hardness (Shore A)	65 (±5)	60 (±5)
	Tensile Strength (kgf/㎠)	30 (430psi)	20 (285psi)
	Tear Strength (kN/m)	6	6
	Elongation (%)	200	200
	Service Temp. (℃)	- 50 ~ 120	- 50 ~ 120
Thermal Conductivity	Vertical (W/m·K)	1.1	0.8
	Horizontal (W/m·K)	1.3	1.6

* The values in this table are properties of only conductive silicone.

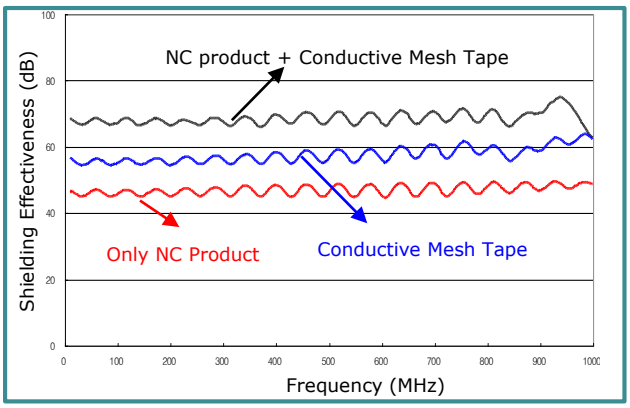
* Material
  - SC : Silver coated Copper
  - NC : Nickel coated Graphite

Quality Performance (SE)

Conductive Silicone

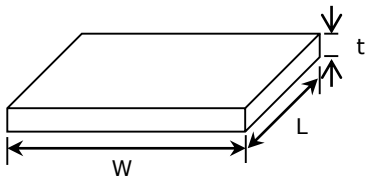


Conductive Silicone with Conductive mesh tape



Mold Type

Sheet Gasket

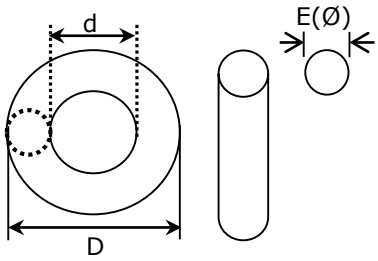


P/N : IDSG - AAA - BBB - CCC - DDD - EEE - FFF

(1) (2) (3) (4) (5) (6) (7)

(1) Serial Number
(2) Thickness : mm
(3) Material : SC, NC
(4) Outer Size (mm) or Width (mm) - sheet type
(5) Inner Size (mm) or Length (mm) - sheet type
(6) Tape (sheet type) : C (None Adhesive), D (Silicone Mesh tape)
(7) S : Refer to Drawing

O-Ring Gasket Ⅰ

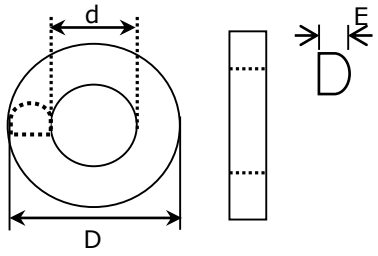


P/N : IDOG - AAA - BBB - CCC - DDD - EEE

(1) (2) (3) (4) (5) (6)

(1) Serial Number
(2) Thickness (mm) or Diameter (Ø)
(3) Material : SC, NC
(4) Outer Size (mm)
(5) Inner Size (mm)
(6) S : Refer to Drawing

O-Ring Gasket Ⅱ

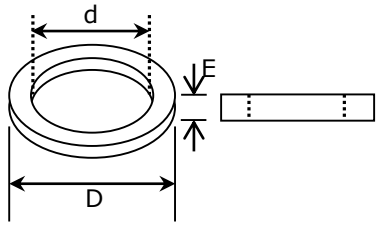


P/N : IDDG - AAA - BBB - CCC - DDD - EEE

(1) (2) (3) (4) (5) (6)

(1) Serial Number
(2) Thickness (mm) or Diameter (Ø)
(3) Material : SC, NC
(4) Outer Size (mm)
(5) Inner Size (mm)
(6) S : Refer to Drawing

Washer Gasket

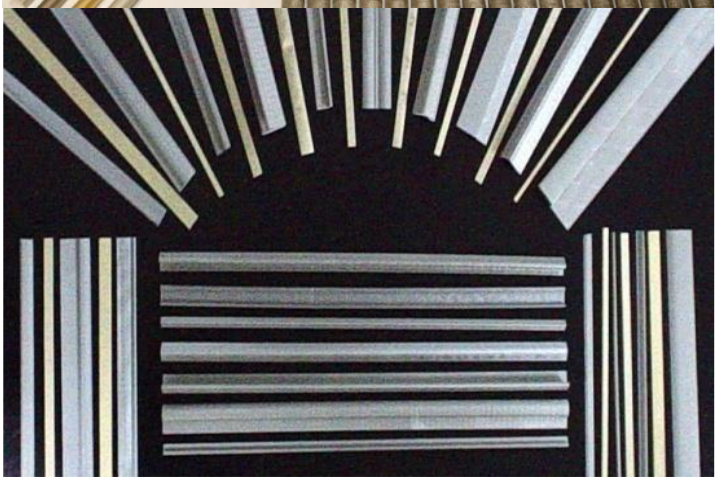


P/N : IDWG - AAA - BBB - CCC - DDD - EEE - FFF

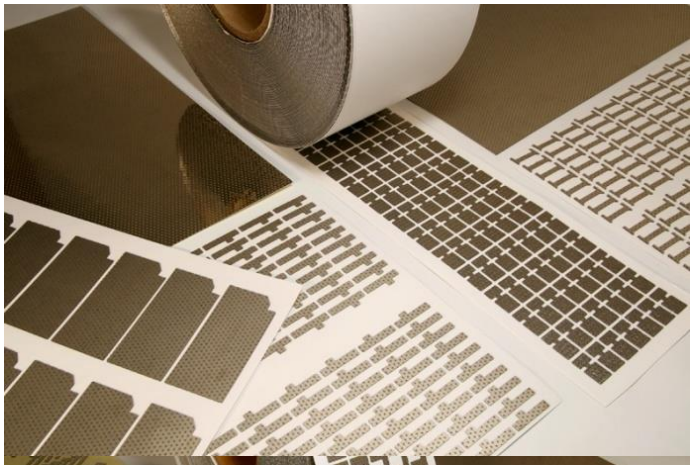
(1) (2) (3) (4) (5) (6) (7)

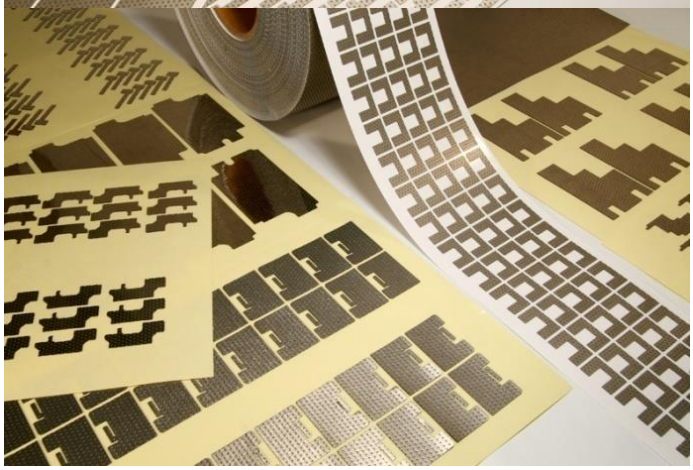
(1) Serial Number
(2) Thickness (mm)
(3) Material : SC, NC
(4) Outer Size (mm) or Width (mm) - sheet type
(5) Inner Size (mm) or Length (mm) - sheet type
(6) Tape (sheet type) : C (None Adhesive)
D (Silicone Mesh tape : ID-20N41)
(7) S : Refer to Drawing

Shielding Gasket



Fabric Gasket





Cushion Gasket

Introduction

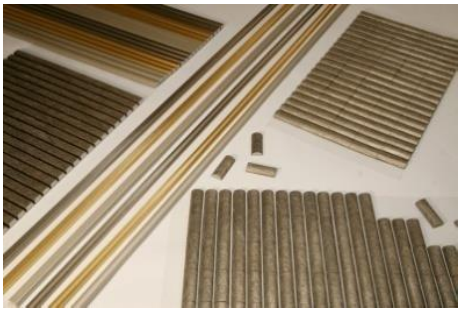
Nowadays, with the rapid development of mobile communication technologies, we are facing a lot of serious problems related to electromagnetic waves from IT products. To cope with these problems, it is necessary to use the **EMI Shielding** products.

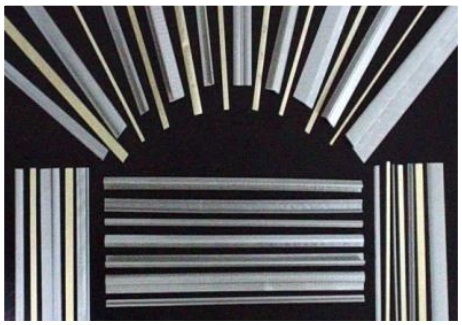
Doo Sung manufactures a wide range of EMI Shielding and Conductive Products, related to the computer, telecommunications, military equipment, general electronics, medical equipments and automotive industries. These include **Fabric Gasket**, and **Cushion Gasket**.

Doo Sung EMI Shielding Products have been awarded **ISO 9001** and **14001** certification and have patents unique designed to perform good shielding effects, and they have meet **UL** requirements.
This catalogue is designed to provide technical specifications and material characteristics for all categories of shielding gaskets and conductive products available from **DooSung**.
These products' list is as follows.

Fabric Gasket

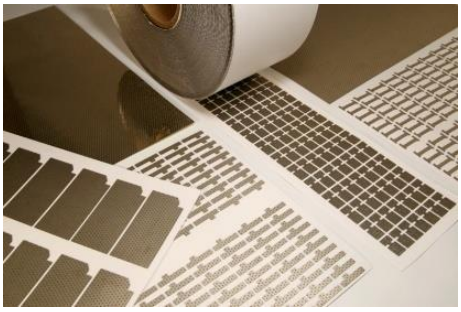
DooSung's ID Series, Fabric Gaskets consist of an electrically conductive fabrics on a highly compressed elastomer foam core. These have been designed to meet commercial EMI Shielding applications where wide tolerance exists.

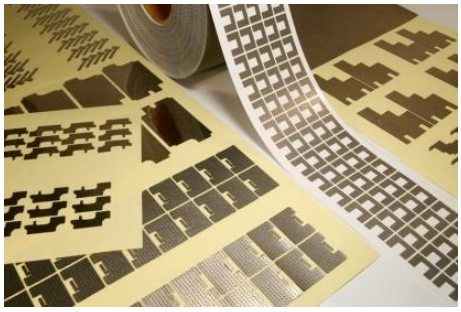




Cushion Gasket

DooSung has developed EMI Cushion Gasket which is composed of a conductive foam.
The innumerable cells of foam are plated with Cu-Ni and it is very flexible and provides good SE (shielding effectiveness).
It is very easy to mount on the substrates due to conductive tape attached to the rear side of Cushion Gasket.
Therefore, it can be widely applied because various shapes are available.

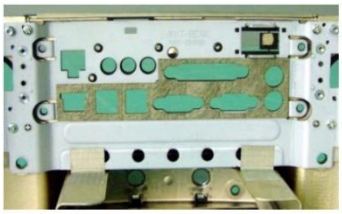


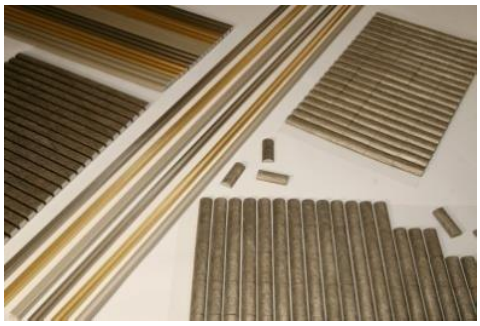


Fabric Gasket

Applications

- Shielding for Electronic case & Frames
- EMI Countermeasures for PC and etc.






Features

- Excellent EMI Shielding Effectiveness
- Good electric contact due to using of adhesive tape
- Grounding effect owing to direct contact with conductive fabric in embossing type
- Reasonable cost

Specifications (Standard Type of Fabric Gasket)

• Elastomer

Content	*Specification*		*Remarks*
Raw Material	PU (polyurethane) Foam		
Density (kg/m³)	32±3	45±3	Halogen-Free
Tensile Strength (kgf/cm² [psi])	≥ 0.8 [11.4]	≥ 2.0 [14.2]	
Elongation (%)	≥ 150	≥ 100	
Tear Strength (N/m)	≥ 0.4	≥ 1.0	
Compression Set (%)	≤ 10	≤ 10	ASTM D395B

• Pressure Sensitive Adhesive (PSA)

Type	*Thickness (mm)*	*Contact Resistivity (Ω/in2)*	*Service Temp. (℃)*	*Adhesive Strength (gf/25mm) [180 Peel-off, @ 300mm/min]*	*Remarks*
Conductive	0.11	0.05	≤ 105	≥ 1000	ID-23N11
Non-conductive	-	-	≤ 105	≥ 1500	

How to Order

• Standard Products

P/N : ID – 45Q NK Z – XX – RS YY – ZZ – 23 – C 8 - S
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

(1) Serial Description

(2) Type of Sponge

Sponge Part No	Description	Sponge Part No	Description
32B	32kg/㎥ PU Foam Black	**45B**	45kg/㎥ PU Foam Black
32Q	32kg/㎥ PU Foam Brown (Halogen-Free)	**45Q**	45kg/㎥ PU Foam Brown (Halogen-Free)
		45W	45kg/㎥ PU Foam White

(3) Type of Fabric

Fabric Part No	Description	Fabric Part No	Description
NK	Nickel Fabric (Plain Woven)	**NRA**	Nickel Fabric (Ripstop)
A	Al Fabric(ALH3)	**CK**	Carbon Coated Fabric (Plain Woven)

(4) Type of Hotmelt

Hotmelt Part No	Description	Hotmelt Part No	Description
H	Hotmelt (Normal)	**Z**	Flame Retardant Hotmelt (Halogen-Free)
F	Flame Retardant Hotmelt		

(5) Width of Fabric Gasket (mm)

(6) Type of Fabric Gasket Shape

None : Rectangular Type (Standard), RN, RS, RF, LS, LN, N, F Type

(7) Height of Fabric Gasket (mm)

(8) Length of Fabric Gasket (mm)

(9) Type of Pressure Sensitive Adhesive (PSA)

PSA Part No	Description	PSA Part No	Description	PSA Part No	Description
00	110QJ	A	ID-A11	2300	ID-23N11+110QJ
23	ID-23N11	AF	ID-A33	A00	ID-A11+110QJ
23F	ID-23N33	N	Without PSA		

(10) Position of PSA

Part No	*Description*	*Part No*	*Description*
C	Center(Standard)	UL	Double Side
B	Dual Side	D	Refer to Drawing
S	Side		

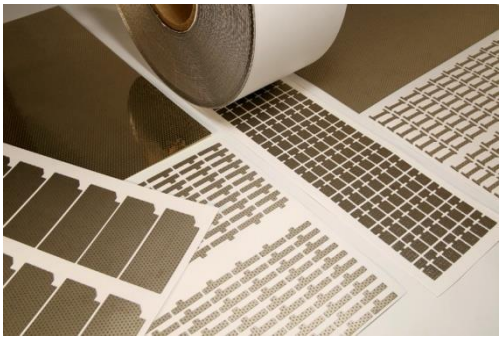
(11) Width Dimension of PSA (※None : Standard)

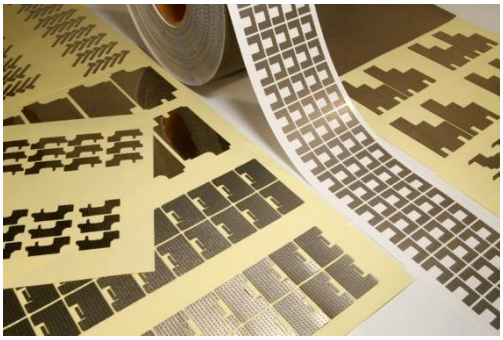
(12) S : Press (None : Non Press)

Cushion Gasket - NOF series & SOF series

■ Applications

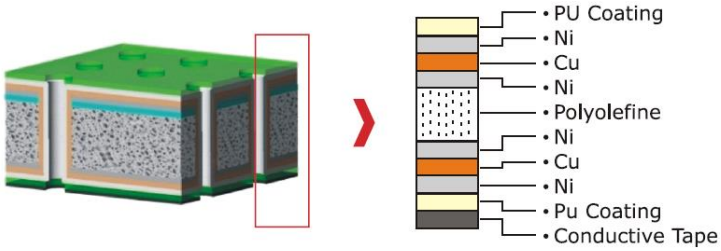
- Display Part of Mobile Phones
- Speaker Ear & Hole for Mobile Phones





■ N0F&SOF Series

• Material & Structure



• Characteristics

Part No	Thickness	Contact Resistivity	Adhesive Strength	Shielding Effectiveness	Remark
Unit	mm	Ω/in²	gf/25mm	dB	-
NOF01	0.4, 0.6, 1.1	Max0.1	Min1,000	Min. 60	-

• How to order

➢ **Order by Shape or Sheet Type**

P/N : ID – NOF01 – 0.4 T– 210 – 300 –S
(1) (2) (3) (4) (5) (6)

(1) Serial Number
(2) Part Number
(3) Thickness (mm)
(4) Width (mm)
(5) Length (mm)
(6) Type : S (Shape)
D (Refer to drawing)
None (Rectangular)

[For Example]
ID-NOF01-0.4T-210-300
▶ **Thickness : 0.40mm**
▶ **Width : 210mm**
▶ **Length : 300mm**
▶ **None : Rectangular type**

➢ **Order by Roll Type**

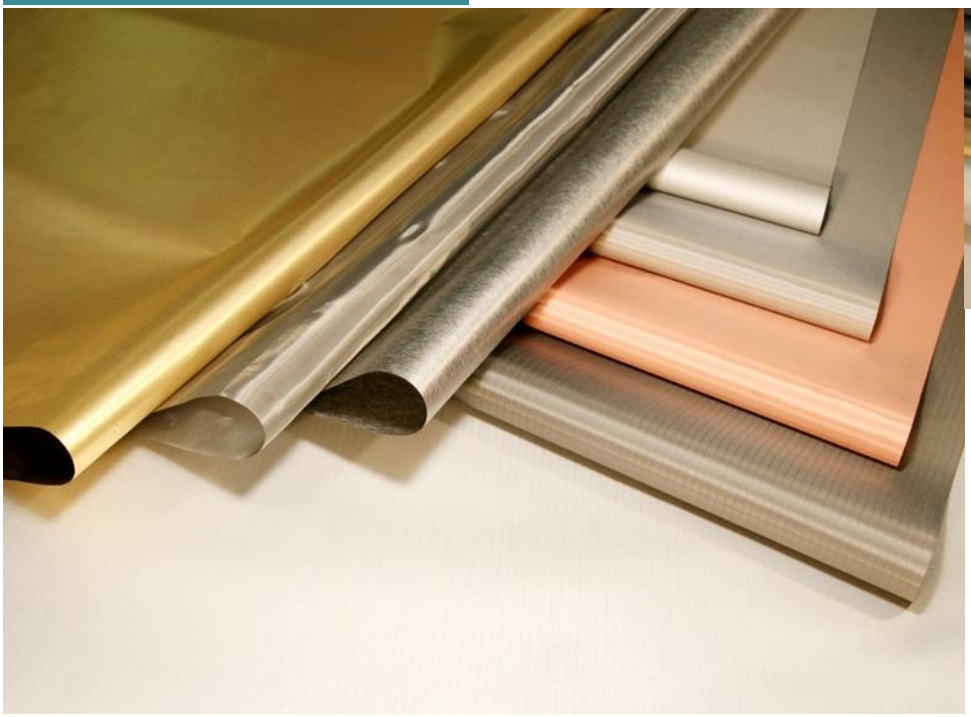
P/N : ID – NOF01 – 0.6 T – 500 – 50M
(1) (2) (3) (4) (5)

(1) Serial Number
(2) Part Number
(3) Thickness (mm)
(4) Width (mm)
(5) Length (M)

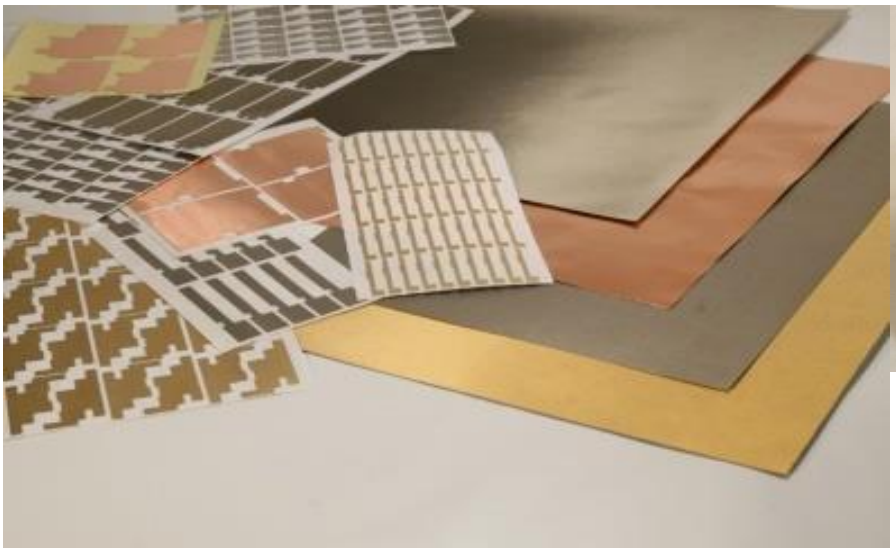
[For Example]
ID-NOF01-0.6T-210-50M
▶ **Thickness : 0.60mm**
▶ **Width : 210mm**
▶ **Length : 50M**

Conductive Fabric & Tape

Conductive Fabric



Conductive Tape



Introduction

Nowadays, with the rapid development of mobile communication technologies, we are facing a lot of serious problems related to electromagnetic waves from IT products. To cope with these problems, it is necessary to use the EMI shielding products.

Doo Sung manufactures a wide range of **EMI Shielding** and **Conductive Products**, related to the computer, telecommunications, military applications, general electronics, medical equipments and automotive industries. These include **Conductive Fabric** and **Conductive Tape**.

Doo Sung EMI Shielding Products have been awarded **ISO 9001** and **14001** certification and have patents unique designed to perform good shielding effects, and they have meet **UL** requirements.

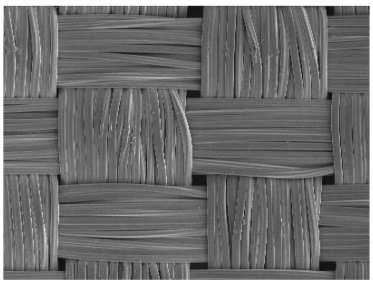
This catalogue is designed to provide technical specifications and material characteristics for all categories of **Conductive Fabric** and **Conductive Tape** available from **Doo Sung.**

These products' list is as follows.

Conductive Fabric

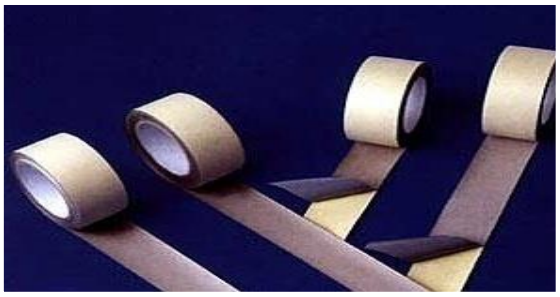
Conductive Fabric is manufactured with Ni and Cu plated on polyester fabrics. The base layer is the highly conductive Cu, with or without an outer layer of Ni for corrosion resistance.

Ni/Cu/Ni coated polyester fabrics offer excellent electric conductivity, SE and anticorrosion for a diverse range of requirements.



Conductive Tape

Conductive Tapes are composed of a conductive substrate and adhesive. These products have been designed to meet commercial EMI shielding and grounding properties. Furthermore, these can offer inflammability and durability in a thin, lightweight and flexible shielding design.



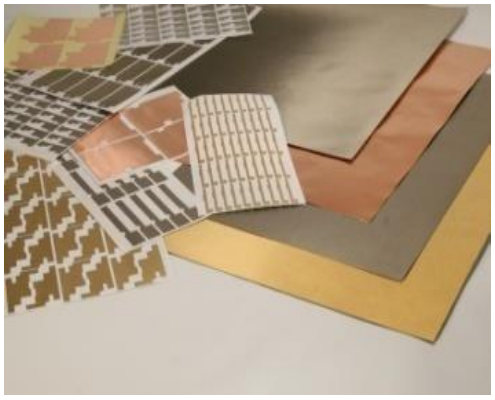
• Conductive Fabrics (Base Material : Polyester)

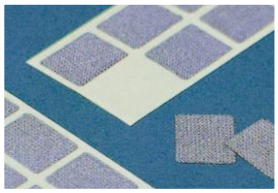
P/N	Structure of PET Plating Metal	Width (mm)	Thickness (mm)	Surface Resistivity (Ω/□)	Shielding Effectiveness (dB)	Remarks
IDF-NRA	NI+Cu+Ni	1000	0.100	≤ 0.08	≥ 60	Ripstop
IDF-NK	Ni+Cu+Ni	1000	0.100	≤ 0.08	≥ 60	Woven
IDF-NW(0.03t)	Ni+Cu+Ni	1000	0.030	≤ 0.08	≥ 60	Non-Woven
IDF-23N	Ni+Cu+Ni	1000	0.080	≤ 0.08	≥ 60	Woven
IDF-20N	Ni+Cu+Ni	1000	0.080	≤ 0.10	≥ 60	Mesh
IDF-CK	Ni+Cu+Ni+Carbon	1000	0.100	≤ 0.08	≥ 60	Carbon Coating

Conductive Tape

■ Applications

- Wire Harness
- Special Type Gasket
- Washer
- Grounding
- Various Shielding and etc.





■ How to Order

➢ Order by Shape or Sheet Type

P/N : ID – NK01 – 0.13 T – 210 – 300 - S
(1) (2) (3) (4) (5) (6)

(1) Serial Number
(2) Part Number
(3) Thickness (mm)
(4) Width (mm)
(5) Length (mm)
(6) Type : S (Shape)
D (Refer to drawing)
None (Rectangular)

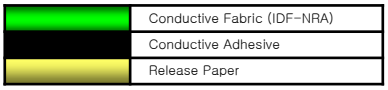
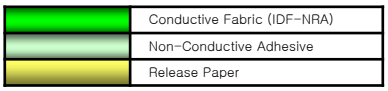
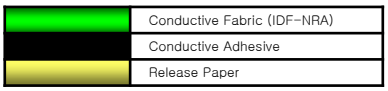
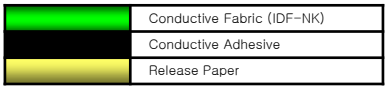
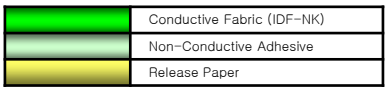
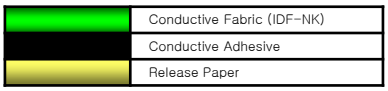
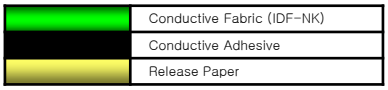
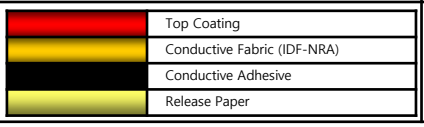
➢ Order by Roll Type

P/N : ID – NK01 – 0.13 T – 1000 – 50M
(1) (2) (3) (4) (5)

(1) Serial Number
(2) Part Number
(3) Thickness (mm)
(4) Width (mm)
(5) Length (M)

Specifications

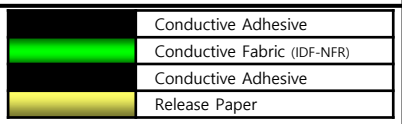
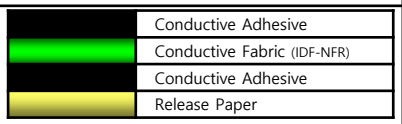
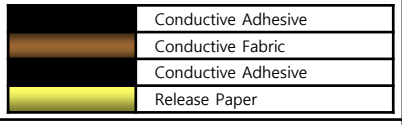
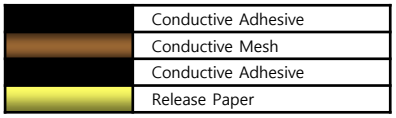
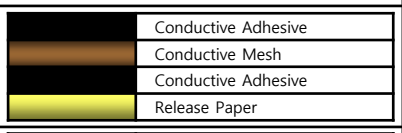
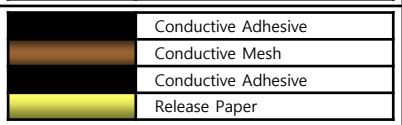
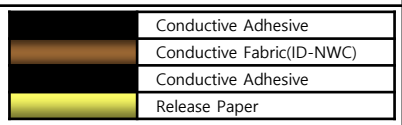
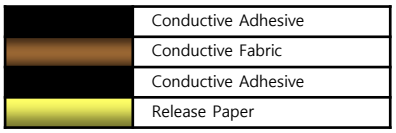
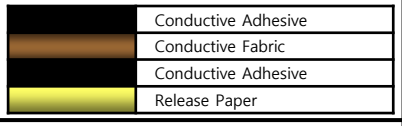
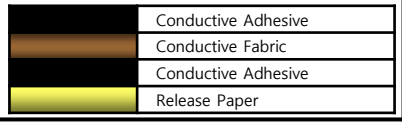
• Conductive Fabric Tape (Single Side Series) I

P/N	Structure & Dimension	T (mm)	W (mm)	L (M)	Contact Resistivity (Ω)	Adhesive Strength (gf/25mm)	Remarks
ID-NRA01 (102)		0.12	1000	50	≤ 0.1	≥ 1,000	Halogen-Free
ID-NRA02 (1020)		0.12	1000	50	-	≥ 1,500	Halogen-Free
ID-NRA03 (1026)		0.14	1000	50	≤ 0.2	≥ 1,000	Flame Retardant
ID-NK01 (K102)		0.13	1000	50	≤ 0.1	≥ 1,000	Halogen-Free
ID-NK02 (K1020)		0.13	1000	50	-	≥ 1,000	Halogen-Free
ID-NK03 (K1026)		0.14	1000	50	≤ 0.2	≥ 1,000	Flame Retardant
ID-NKZ03		0.13	1000	50	≤ 0.1	≥ 1,000	Flame Retardant(Halogen-Free)
ID-NK(T)Z03		0.13	1000	50	≤ 0.1	≥ 1,000	Flame Retardant (Halogen-Free)

Conductive Tape

Specifications

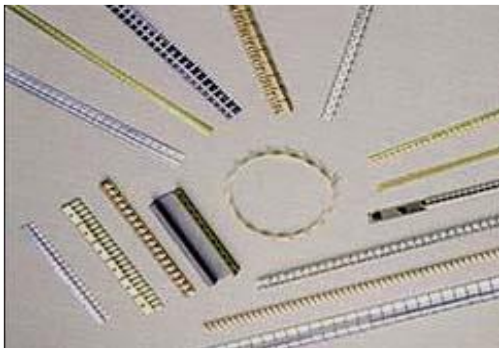
• Conductive Fabric Tape (Double Side Series)

P/N	Structure & Dimension	T (mm)	W (mm)	L (M)	Contact Resistivity (Ω)	Adhesive Strength (gf/25mm)	Remarks
ID-NFR11 (SF1045)		0.065	500	50	≤ 0.03	≥ 1,000	Halogen-Free
ID-NFRT11 (FT1045)		0.05	1000	50	≤ 0.03	≥ 1,000	Halogen-Free
ID-23N11 (1045)		0.11	1000	50	≤ 0.05	≥1,000	Halogen-Free
ID-23NT11 (T1045)		0.08	1000	50	≤ 0.07	≥ 1,000	Halogen-Free
ID-20N11 (1042)		0.11	1000	50	≤ 0.10	≥ 1,000	Halogen-Free
ID-13N11 (T1042)		0.08	1000	50	≤ 0.07	≥ 1,000	Halogen-Free
ID-NW11		0.03	1000	50	≤ 0.05	≥500	Halogen-Free
ID-23N33		0.11	1000	50	≤ 0.2	≥1,000	Flame Retardant
ID-23NZ33		0.11	1000	50	≤ 0.05	≥1,000	Flame Retardant (Halogen-Free)
ID-ND17		0.14 0.20	1000	50	≤ 0.1	≥500 ±200 ≥1,000	Flame Retardant (Halogen-Free)

Metal Clip

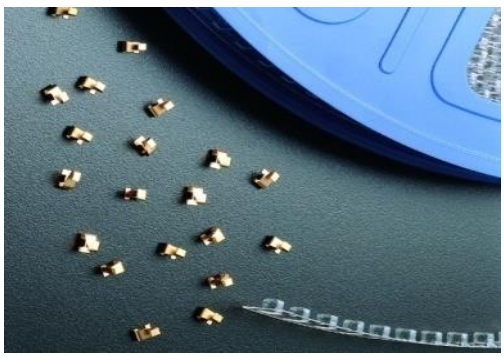
Finger Strip

DooSung's Finger Strip is made of stainless steel or phosphor bronze, beryllium copper. It depends on the customers' demand about the plating metal such as Nickel, Tin or Gold. Finger Strip provides excellent EMI Shielding due to its high electric conductivity and strong elastic property as a gasket.



SMD Finger

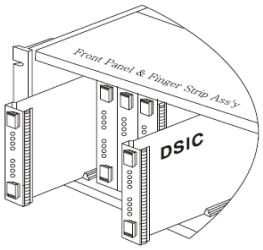
SMD Finger is recently developed for the use of PCB grounding. It shows excellent resilience and electrical properties.Plated Gold has tremendous conductivity, so it is eventually suitable for grounding of various PCBs

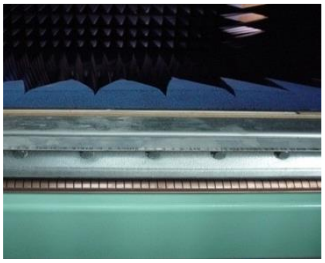


Finger Strip

Applications

- Front Panel Handles
- Chassis Covers
- Plug-in Units
- Back Planes




Specifications

• BeCu Alloy (C17200) & PSA Tape

Chemical Composition		*Mechanical & Electrical Properties*		*PSA*
Be	1.8 ~ 2.0 %	***Tensile Strength***	1220 ~ 1480 kgf/cm^2 [171 ~ 206 ksi]	Acrylic Adhesive
Co + Ni	≥ 0.2 %			
Co + Ni + Fe	≤ 0.6 %	***Yield Strength***	2860 ~ 3570 kgf/cm^2 [400 ~ 508 ksi]	
Pb	≤ 0.02 %	***Hardness***	Rockwell C 36~ 43	
Cu	Balanced	***Temp. Range***	-30 ~ 105℃	

• Plating Finish with Type of Surface

Finish Plating	*Recommended Mating and Mounting Surface*
Cu	Brass, Cu, Ni-Cu Alloy, Monel, Stainless Steel, Ag
Ni	Brass, Carbon Steel, Cu, Fe, Ni, Stainless steel, Sn
Sn	Al, Al alloy, Be, Carbon Steel, Ni, Sn, Zn

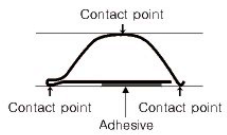
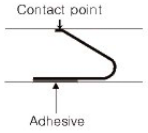
■ Galvanic Potential Difference between Plating Metals

(Unit: V)

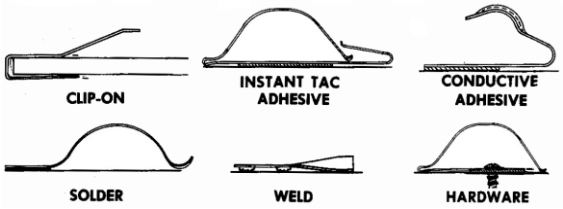
Content		ANODE										
		Mg	Zn	Al	Cd	Sn	Iron, Steel	Cr	Brass	Cu, Bronze	Ni, Monel	SUS
CATHODE	Zn	0.75					→ Recommended in the presence of salts and other electrolytes.					
	Al	1.05	0.029				→ Preferred, in high humidity environment.					
	Cd	1.05	0.029	0.01								
	Sn	1.36	0.060	0.31	0.31							
	Iron, Steel	1.30	0.029	0.32	0.32	0.01						
	Cr	1.39	0.65	0.34	0.34	0.03	0.02					
	Brass	1.54	0.78	0.50	0.50	0.22	0.20	0.02				
	Cu, Bronze	1.58	0.82	0.55	0.55	0.24	0.23	0.11	0.02			
	Ni, Monel	1.58	0.82	0.56	0.56	0.25	0.25	0.12	0.03	0.01		
	SUS	1.67	0.91	0.64	0.64	0.35	0.32	0.20	0.11	0.02	0.08	
	Ag	1.78	1.02	0.75	0.75	0.44	0.43	0.31	0.22	0.21	0.19	0.11

■ Design concept

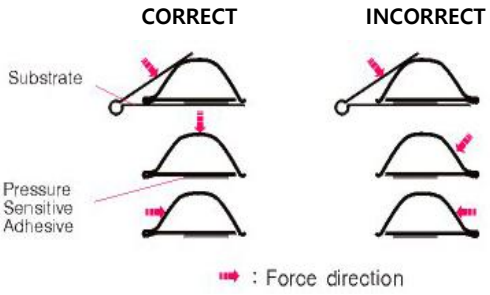
Doo Sung's Finger Strip's Shielding design incorporate two types, namely 3 Points and 2 Points Contact.

Content	3 Points Contact	2 Points Contact
구조		
Application	For area where both surfaces can be connected by contact at least one point of the shielding gasket profile on each surface	For area where both surfaces can be connected by contact at least one point of the shielding gasket profile on one side and the conductive adhesive on the other
Temp. Range (℃)	-30 ~ 105 ℃	

■ How to Fix Finger Strip on Hardware

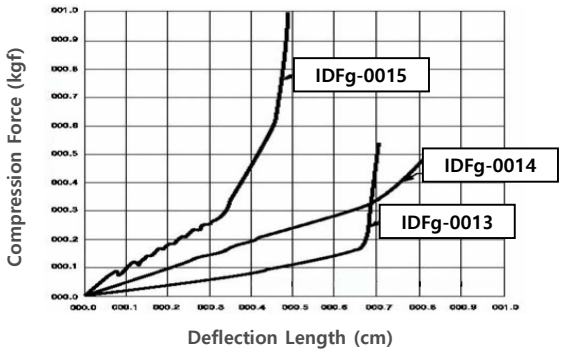


■ Correct 적 용



■ Quality Performance

Compression - Deflection



■ 주문방법

P/N : IDFg – AAA – BBB – CCC – DDE – EEE

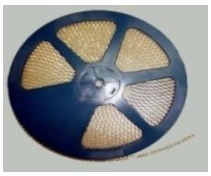
(1) (2) (3) (4) (5)

(1) Serial Number
(2) Length (mm) / Pin
(3) Plating (00 : None, 11 : Tin, 22 : Gold, 33 : Nickel)
(4) Tape
(00 : Double Side Non-Conductive Adhesive, 11: ID-A11,
22 : ID-A11 + Double Side Non-Conductive Adhesive,
33 : None)
(5) Width of Tape (mm)

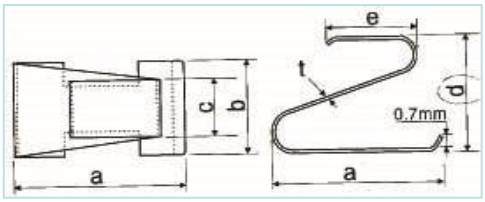
SMD Finger

Applications

- Grounding
- Fixing the Shield Can
- Battery Contacts



Shape and Description



Unit : mm

P/N	a	b	c	d	e	f	g	h	Carrier Width	Carrier Length	Packing In Reel	plating	Base Material
IDFg-0023-01	5.24	3.0	1.8	3.7	2.9	0.1	-	-	3.20	5.20	2,250	Au	BeCu/SUS
IDFg-0023-02	3.94	2.0	1.6	3.1	2.4	0.1	-	-	2.20	4.00	2,750	Au	BeCu/SUS
IDFg-0023-02-1	3.94	2.0	1.6	3.6	2.4	0.1	-	-			3,000	Au	BeCu
IDFg-0023-03	3.74	2.0	1.2	1.5	2.4	0.1	-	-	2.20	3.70	1,250	Au	BeCu
IDFg-0023-05	5.78	3.0	1.8	5.55	2.9	0.1	-	-	3.20	5.70	1,500	Au	SUS
IDFg-0023-06	3.8	2.7	2.1	2.0	2.2	0.1	-	-	2.90	4.00	3,000	Au	BeCu
IDFg-0023-06-1	3.8	2.5	2.1	2.7	1.8	0.1	-	-	2.90	4.00	3,000	Au	BeCu
IDFg-0023-07	5.2	3.4	2.8	4.0	2.0	0.1	-	-	3.70	5.50	1,800	Au	BeCu
IDFg-0023-08	5.24	3.0	1.8	3.7	3.07	0.1	-	-	3.20	5.20	2,250	Au	SUS
IDFg-0023-09	1.17	3.5	2.0	-	-	0.15	-	-	-	-	6,000	Au	BeCu
IDFg-0023-10	5.0	5.0	8.0	2.4	5.0	0.05	-	-	-	-	1,000	Au	BeCu
IDFg-0023-12	5.1	3.4	2.8	5	2.4	0.1	-	-	3.70	5.50	1,600	Au	BeCu
IDFg-0023-13	5.1	3.4	3.2	6.5	2.45	0.1	-	-	3.70	5.50	1,000	Au	BeCu
IDFg-0023-14	3.55	2.7	2.4	3.0	1.8	0.1	-	-	3.20	5.40	2,500	Au	BeCu
IDFg-0023-15	2.4	3.6	0.5	1.8	3.0	-	-	-	-	-	6,000	Au	Phosphor Dronze
IDFg-0023-16	4.7	5.66	2.0	2.7	0.15	1.35	1.6	2.0	-	-	2,000	Au	BeCu
IDFg-0023-18	5.0	1.6	2.6	0.85	1.65	1.2	2.0	1.5	-	-	3,000	Au	SUS
IDFg-0023-19	5.5	5.8	5.9	1.5	5.8	7.2	4.0	0.1	-	-	3,000	Au	BeCu
IDFg-0023-20	2.0	4.5	2.25	1.34	0.9	2.44	0.1	-	-	-	2,500	Au	BeCu
IDFg-0023-21	2.5	7.0	3.65	4.25	0.15	-	-	-	-	-	2,000	Au	BeCu

Characteristics (Be-Cu)

Contents	Properties
Tensile Strength (kgf/㎟)	530~632 (7.53~8.98 ksi)
Yield Strength (kgf/㎟)	430~580 (6.11~8.24 ksi)
Elongation (%)	20 ~ 45

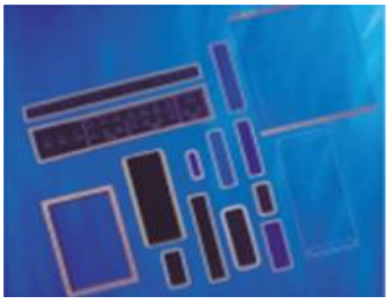
Shield Window

Window (For Various Displays)

Window

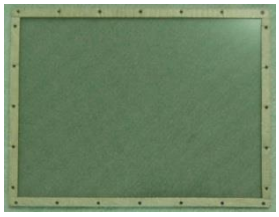
Features

Window is specially designed to feature **Optical Transmission** and **EMI SE**. It consists of two layers of optical substrates with a layer of conductive wire mesh between them. Therefore, it shows remarkable **EMI SE** and **Transparency** in any environment. **Doo Sung's Window** can be economically matched to most display units to minimize image distortion and maximize SE.



Applications

- Control Panels
- Printers
- Peripheral Equipments
- Large Electrode Displays



Specifications

• Transparent Substrate

Properties	Materials	
	Acrylic	Remark
Transmission	92%	
Bending Strength	120 kgf/cm² [1.71 ksi]	
Temp. Rating	85℃	Condition in RH. 65%

Color	Available	Gloss Value (%)
Clear	O	55
Smoke Gray	O	55
Red	O	55
Green	O	55

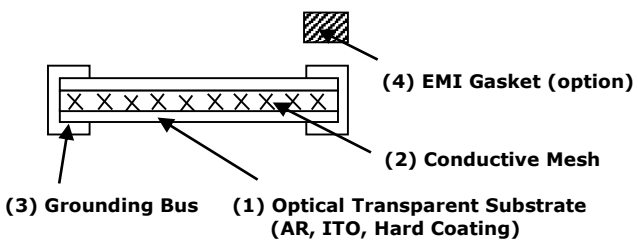
• Conductive Mesh

Mesh Count	Materials
	Blackened Cu + Ni Plated
Woven #80	O
Woven #135	O

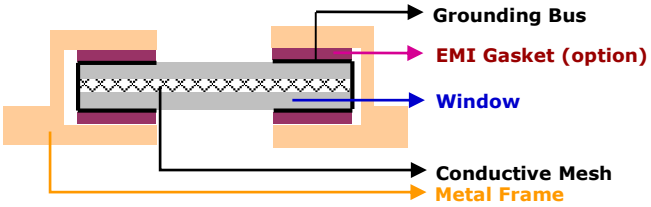
• Grounding Bus

Grounding	Surface Resistivity	Usage
Silver Plating	≤ 0.5Ω/□	Small size window
Copper Plating	≤ 1.0Ω/□	Big size window

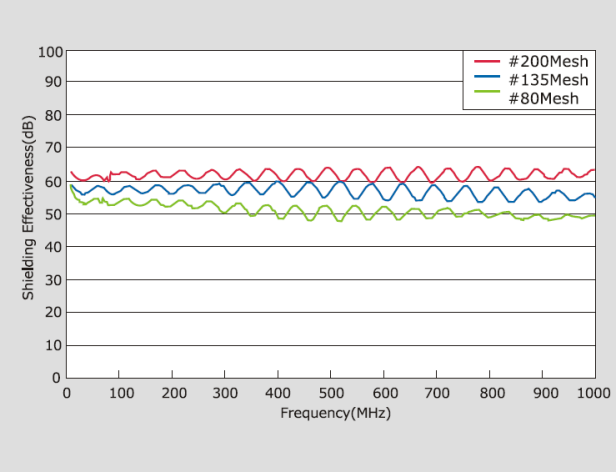
Structure



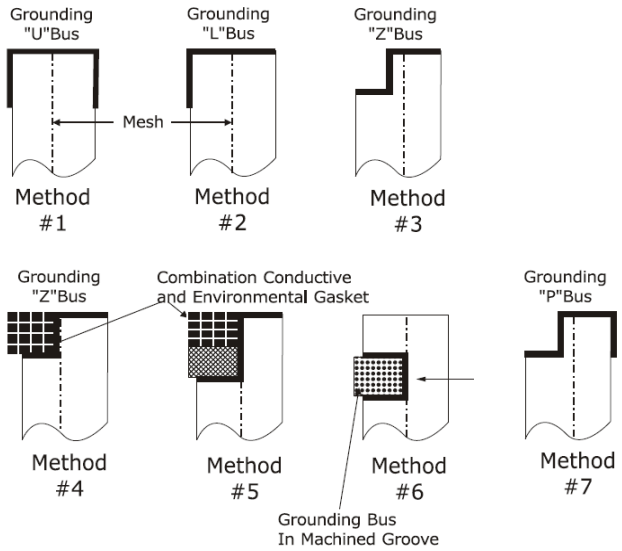
How to Fix Window on Hardware



Quality Performance (SE)



Grounding Method

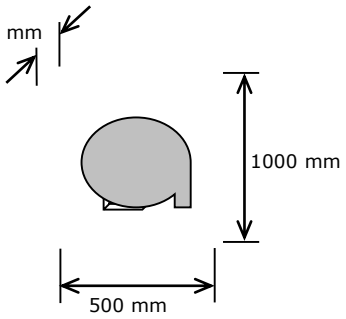


How to Order

P/N: IDW – AAA – BBB – CCC – DDD – EEE – FFF - GGG
(1) (2) (3) (4) (5) (6) (7) (8)

(1) Serial Number
(2) Width of Window (mm)
(3) Height of Window (mm)
(4) Thickness of Window (mm)
(5) Numbers of Mesh Count & Mesh angle, or ITO Coating
(6) Coating option : AR, AG, None:N
(7) Color of Window
(8) Grounding method

For Example



<Example #1>
·Color: Gray
·Mesh Count: 135
·Mesh Angle : 45°
·Coating option : None
·Grounding Method : #2
☞ **IDW-500-1000-5.0-13545-N-Gray-#2**

<Example #2>
·Color : Gray
·Mesh Count : 80
·Mesh Angle : 90°
·Coating : AR
·Grounding Method : #2
☞**IDW-500-1000-5.0-08090-AR-Gray-#2**

<Example #3>
·Color : Gray
·Mesh Count : None
·Mesh Angle : None
·ITO Coating
·Coating option : AR
·Grounding Method : #2
☞**IDW-500-1000-5.0-ITO-AR-Gray-#2**

Option

AR (Anti-Reflection) Coating

To minimize the glare, AR treatment on the substrate may be done. Right data have shown the transparency only for the AR acrylic sheet without conductive mesh.
In case of using conductive mesh, the data will be changed

ITO Coating

ITO coating proved a good EMI Shielding and optical transparency.
The electric conductivity is 2000Ω/㎝.
No moire type.
Maximum operating temperature is about 80℃.
Total light transparency is approximately 75%.
The coating thickness of ITO is 500 ~ 600Å.