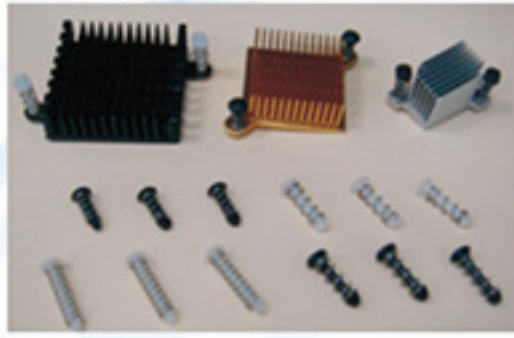


ITW Fastex[®] DESIGN SOLUTIONS

Chipset Clip-82FT Series



VGA Card Clip-83FT Series



Fan Guard Clip



Intel LGA 115X CPU Clip



Christmas Tree Clip



銅扣



LGA 115x ILM

ITW ERA is very pleased to introduce to the Electronic Industry Intel Independent Loading Mechanism (ILM) for Intel Socket H for both LGA 1155 & LGA 1156 (LGA115X). ILM provides the force needed to seat the 115x-LGA land package onto the socket contacts. The ILM is physically separate from the socket body. The assembly of the ILM to the board is expected to occur after wave solder. The exact assembly location is dependent on manufacturing preference and test flow.

Key Features

- Intel Approved
- Intel validated design for both LGA1155 and LGA 1156 Sockets
- Successfully Passed Intel Interchangeability test with sockets from various suppliers
- Successfully Passed all Intel ILM ergo requirements
- RoHS compliant

Ordering Information

Intel Part Number	ITW Part Number	Description
E3632-002	FT1302-A-F	LGA 115x ILM Top Assembly with Cover
G1349-001	FT1302-A	LGA 115x ILM Top Assembly without Cover
G12451-001	FT1302-F	LGA 115x ILM Cover
E36343-002	FT1302-B-CD	LGA 115x ILM BP with Screws

AMD Kabini



AMD Kabini



Intel LGA 115X Back Plate/客製化背板





ESSENTRA

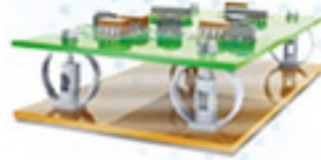
OVER 2,000 NEW PRODUCTS!



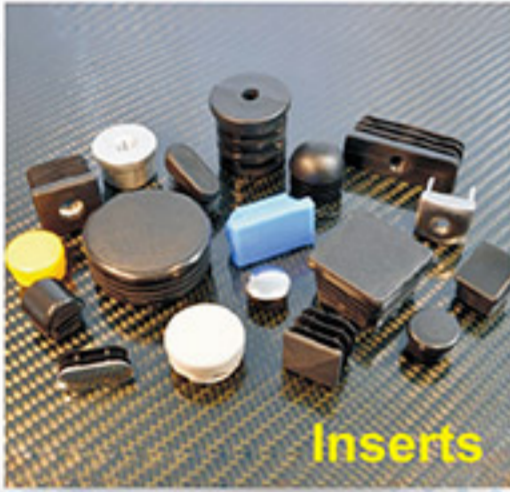
LED Hardware



Caps and Plugs



Circuit Board Hardware



Inserts



Hydraulic and Pneumatic Protection



Cable Management



Feet

Locks · Latches · Catches and Hinges



High Temperature Masking

Segment Landscape

Thermal Performance: TI at T0

- PTM7688
- PTM7988



Notebooks, Servers, Tablets/Mobile, VGA Cards, GPU, MPU, CPU

Reliability First

- PTM6000
- PTM6500D



Auto, Servers, Telecom/ Infrastructures, Power

Performance & Reliability

- PTM5688
- TCM 11
- TCM 12



Gaming, Servers, Telecom, Wireless, Power, CE, SSD

Good Enough

- PCM45F
- LTM6300



Desktop CPUs, HBLED, Consumer Electronics

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Product Portfolio

Application Classification	Product Series	TI* (C-cm ² /W), No Shim	TC (W/m ² ·C)	Reliability (hrs), 150°C baking	Pad Thickness (mm)	Remark
High-End	PTM7988 & PTM7988-SP	0.042	8.0	1500hrs	0.20 – 1.00	High Thermal performance
	PTM7688 & PTM7688-SP	0.056	6.5	2000hrs	0.20 – 1.00	High Thermal performance
	PTM6000 & PTM6000-SP	0.070	4.4	3000hrs	0.20 – 1.00	Advanced Reliability
	PTM6500D & PTM6500D-SP	0.110	3.8	1000hrs	0.20 – 1.00	High Voltage Dielectric
Mid-End	TCM11-SP	0.128	3.8	600hrs	0.50 – 3.00	Compressible TIM paste
	PTM5688 & PTM5688-SP	0.070	4.4	1000hrs	0.20 – 1.00	
	TCM12-SP	0.145	2.5	600hrs	0.50 – 3.00	Compressible TIM paste
	PCM45F & PCM45F-SP	0.120	2.4	600hrs	0.20 – 1.00	
Low COO	LTM6300-SP	0.130	2.0	600hrs		

Super Thermal-conductive Sheets

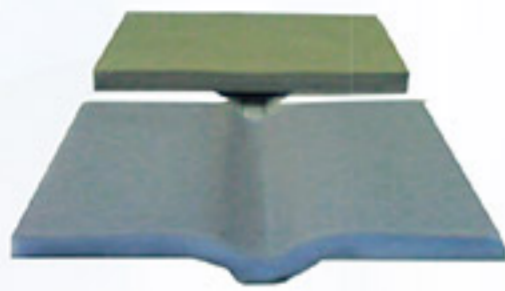
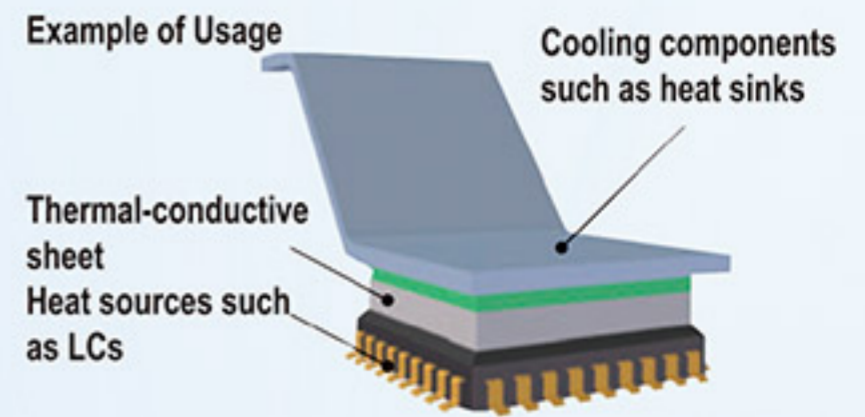


Illustration: Convex/concave contouring
 Foreground: FEATHER-S3S (Soft product)
 Background: PT-LS (General-purpose product)



Image of carbon fiber orientation



Characteristics

		FEATHER-S3S	FEATHER-E20	FEATHER-N25S	PT-CUS	AVAILY-S	FEATHER-D6
Appearance	-						
Features	-	Single-sided Adhesive, 2-layer Type	Double-sided adhesive, Single-layer Type	Single-sided Adhesive, 2-layer Type	Single-sided Adhesive, 2-layer Type	Single-sided Adhesive, 2-layer Type	Double-sided adhesive, Single-layer Type
Hardness	JIS Type E	5	20	9	12	10	40
Specific Gravity	-	1.8	1.8	2.0	2.9	2.9	3.1
Volume Resistance	$\Omega \cdot \text{cm}$	$\geq 1 \times 10^{10}$	$\geq 1 \times 10^{10}$	$\geq 1 \times 10^{10}$	$\geq 1 \times 10^{10}$	$\geq 1 \times 10^{10}$	$\geq 1 \times 10^{10}$
Breakdown Voltage	AC kV/mm	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10
Withstand Voltage	AC kV/mm	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10
Thermal Conductivity*1	W/m·K	2	2	2.5	3	3	6
Thermal Conductivity*2	W/m·K	1.4	1.4	1.6	2.2	2.2	3.6
Operating Temperature Range	°C	-40-150	-40-150	-40-150	-40-150	-40-150	-40-150
Flame Retardance	UL 94	V-0	V-0	V-0	V-1	V-1	V-0
Thickness	mm	0.5-	0.2-	0.5-	0.5-	0.5-	0.5-

*1: Thermal resistance conversion method, *2: ASTM D5470
 Numerical values shown in the above table are actual measured values, not product standard values.

		PT-UT	PT-V	MANION35(E20)	MANION50 α
Appearance	-				
Features	-	Double-sided adhesive	Double-sided adhesive	Double-sided non-adhesive	Double-sided non-adhesive
Hardness	JIS Type E	30	30	20	50
Specific Gravity	-	1.8	2.4	2.4	2.4
Volume Resistance	$\Omega \cdot \text{cm}$	$\geq 1 \times 10^{10}$	$\geq 1 \times 10^{10}$	<500	<500
Breakdown Voltage	AC kV/mm	>1.0	>0.9	<0.1	<0.1
Withstand Voltage	AC kV/mm	>0.9	>0.8	<0.1	<0.1
Thermal Conductivity*1	W/m·K	15	20	35	50
Thermal Conductivity*2	W/m·K	6	7	8	11
Operating Temperature Range	°C	-40-150	-40-150	-40-150	-40-150
Flame Retardance	UL 94	V-0	V-0	V-0	V-0
Thickness	mm	0.5-3.0	0.25-3.0	0.5-2.0	0.2-2.0

*1: Thermal resistance conversion method, *2: ASTM D5470
 Numerical values shown in the above table are actual measured values, not product standard values.

Damper for Fan

Fan

Portable music player



車用Damper
電磁波吸收片
導熱片
硬碟緩衝片
Dot Connector

Damper for HDD



音響周邊

Micro Holder
Speaker Holder

基板部

導熱片 導熱膏
電磁波吸收片
Dot Connector
Fan Damper

防水

防水Packing

硬碟周邊

硬碟緩衝材
導熱片

硬碟周邊

按鍵

Key Switch

攝像頭周邊

Lens Cushion
CCD Packing
Dot Connector

基板部

導熱片 導熱膏
電磁波吸收片
Dot Connector
Fan Damper

音響周邊

Micro Holder
Speaker Holder

基板部

導熱片 導熱膏
電磁波吸收片
Dot Connector
Fan Damper

外觀部

Jack Cover
Foot Rubber

攝像頭周邊

Lens Cushion
CCD Packing
Dot Connector

按鍵

Key Switch

外觀部

Jack Cover
Foot Rubber

光碟機周邊

Damper Roller

音響周邊

Micro Holder
Speaker Holder

外觀部

Jack Cover
Foot Rubber

防水

防水Packing

遊戲機

光碟機周邊

Damper Roller

按鍵

Key Switch

硬碟周邊

硬碟緩衝材
導熱片

手機

液晶螢幕周邊

Touch Screen Panel
透明緩衝材

外觀/機能部品

Key Switch
Sids Key
Jack Cover

音響周邊

Micro Holder
Speaker Holder

音響周邊

Micro Holder
Speaker Holder
導熱片 導熱膏
電磁波吸收片
Dot Connector
Fan Damper

基板部

導熱片 導熱膏
電磁波吸收片
Dot Connector
Fan Damper

外觀部

Jack Cover
Foot Rubber

手持式遊戲機

音響周邊

Micro Holder
Speaker Holder

攝像頭周邊

Lens Cushion
CCD Packing
Dot Connector

按鍵

Key Switch
Touch Screen Panel

外觀部

Jack Cover
Foot Rubber

外觀部品

背面Panel
Em Blem

攝像頭周邊

Lens Cushion
CCD Packing
Dot Connector

按鍵

Key Switch

攝像頭周邊

Lens Cushion
CCD Packing
Dot Connector

防水

防水Packing

基板部

導熱片 導熱膏
電磁波吸收片
Dot Connector
Fan Damper

防水

防水Packing

硬碟周邊

硬碟緩衝材
導熱片

Damper For HDD, Blue-ray, Dis, Lens, Mic, Speaker, Fan Vibration

AIRPCS® Auto Inflation Machine



AIRPCS® 易撕型氣泡袋



AIRBAG Packing®

AIRBAG Packaging Comparison

EPE Foam 發泡聚乙烯

AIRBAG End Cap 左右夾

Price (價格)

High Packing Cost
包材成本高

Reduce Packing Cost **15%-40%**
包材成本可省下 **15% -40%**

Advantage (優勢)

1. Protection 保護性好
2. Easy to set up 包裝步驟簡易

1. Good protection 良好的保護效果
2. Easy to set up 包裝步驟簡易
3. Beautiful printing 精美印刷
4. Space-saving 節省倉儲空間
5. No pollutants 無污染
6. Easy recycle 完全可以回收
7. Lower transportation cost 降低運費成本

Shortcoming (缺點)

1. High Cost 高成本
2. Mold requirement 需要模具
3. Lose size 尺寸較大
4. Huge storages space 較大的倉儲空間
5. High recycle cost 回收費用高

1. No puncher resistance 無法抵抗穿刺能力
2. Need time to inflate (**5 Sec**) 需要**5秒**時間充氣
3. Inflate tool required 需要充氣工具

Shipment (裝載量)

Lose
體積過大，裝載量較小

1. 600 pcs/box 平均一箱可裝600 pcs
2. Box size(紙箱尺寸): 490x345x260 mm
3. 28 box/1 pallet 平均一棧板可放28箱
(Totally flat before using 充氣前是完全平的)

