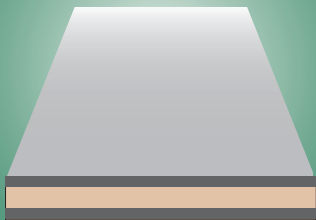


0505 0805
1005 1206

Therma-Plane

2010 2512
2525 3725



Offers

Very high thermal dissipation

Protection of critical board components against heat

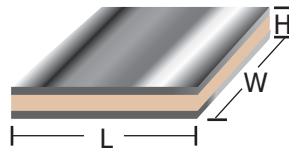
Optimal control over board temperature

Therma-Plane AlN Thermal Management Device

The **ims** Aluminum Nitride (AlN) Therma-Plane is a simple, cost effective device which aids in thermal management. Therma-Planes are available in standard sizes and thicknesses. Custom sizes are also available on request. The Therma-Plane is an electrically isolated device designed to transport heat from one location to another. Simply attach one side to the heat source, and the other side to a thermal plane or heat sink. A popular application configuration is shown below. The Therma-Plane has the following features:

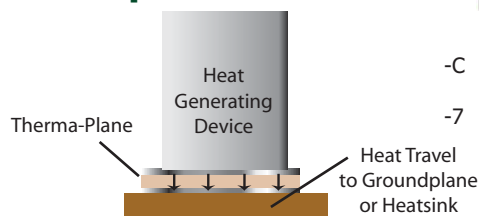
- AlN substrate material
- Multiple sizes and thicknesses
- RoHS PtAg or Solder coated PtAg sides top and bottom easy attachment

Configuration



Dimensions

Application Example



Contact materials:

- 3 ✓ PtAg (platinum silver) for epoxy or solder attachment
- C Solder coated PtAg for solder attachment
- 7 Gold over PtAu for bonding

Size	Length	Width	Height Option 'D'	Height Option 'G'	Height Option 'T'
0505	0.050"	0.050"	0.020"max	0.035"max	N/A
0805	0.080"	0.050"	0.020"max	0.035"max	N/A
1005	0.100"	0.050"	0.020"max	0.035"max	N/A
1206	0.126"	0.063"	0.020"max	0.035"max	N/A
2010	0.197"	0.098"	0.020"max	0.035"max	0.050"max
2512	0.250"	0.120"	0.020"max	0.035"max	0.050"max
2525	0.250"	0.250"	N/A	0.035"max	0.050"max
3725	0.375"	0.250"	N/A	0.035"max	0.050"max

Choose the height option that best suits your thermal conductivity needs and build your Part Number below.

Additional options available. Please contact factory.

For dimensional detail information, outline drawing is available from factory.

Ordering Information

Example: 1206 Size Therma-Plane on 0.025" substrate with PtAg on both sides

Example: P G 3 - 1206 DS		
Substrate Thickness D - 0.015" ¹ G - 0.025" T - 0.040" ²	OS - Metallization on one side DS - Metallization on both sides	
Termination Material -3 - PtAg -7 - Gold over PtAu -C - PtAg with Solder	Case Size	
	0505	1206 2525
	0805	2010 3725
	1005	2512

1. 0.015" Substrate available in sizes 2512 and smaller
2. 0.040" Substrate available in sizes 2010 and larger



Tel (401) 683-9700
Fax (401) 683-5571
e-mail: ims@ims-resistors.com
<http://www.ims-resistors.com>

Capacitance (pF) ¹ ◇

Case	Length	Width	0.015" Height	0.025" Height	0.040" Height
0505	0.050"	0.050"	0.33	0.20	N/A
0805	0.080"	0.050"	0.53	0.32	N/A
1005	0.100"	0.050"	0.67	0.40	N/A
1206	0.126"	0.063"	1.06	0.64	N/A
2010	0.197"	0.098"	2.57	1.54	0.97
2512	0.250"	0.120"	4.00	2.40	1.50
2525	0.250"	0.250"	N/A	5.00	3.13
3725	0.375"	0.250"	N/A	7.50	4.69

1 Based on a simple parallel plate model

Thermal Resistance (°C/W) ² ◇

Case	Length	Width	0.015" Height	0.025" Height	0.040" Height
0505	0.050"	0.050"	1.39	2.32	N/A
0805	0.080"	0.050"	0.87	1.45	N/A
1005	0.100"	0.050"	0.70	1.16	N/A
1206	0.126"	0.063"	0.45	0.75	N/A
2010	0.197"	0.098"	0.17	0.29	0.46
2512	0.250"	0.120"	0.12	0.19	0.31
2525	0.250"	0.250"	N/A	0.09	0.15
3725	0.375"	0.250"	N/A	0.06	0.10

2. Based on nominal thermal conductivity of AlN

Normalized Thermal Conductivity (W/°C) ³ ◇

Case	Length	Width	0.015" Height	0.025" Height	0.040" Height
0505	0.050"	0.050"	0.72	0.43	N/A
0805	0.080"	0.050"	1.15	0.69	N/A
1005	0.100"	0.050"	1.43	0.86	N/A
1206	0.126"	0.063"	2.22	1.33	N/A
2010	0.197"	0.098"	5.88	3.45	2.17
2512	0.250"	0.120"	8.33	5.26	3.23
2525	0.250"	0.250"	N/A	11.10	6.67
3725	0.375"	0.250"	N/A	16.67	10.00

3. Based on thermal resistance in above chart

◇ These values are approximate

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our
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