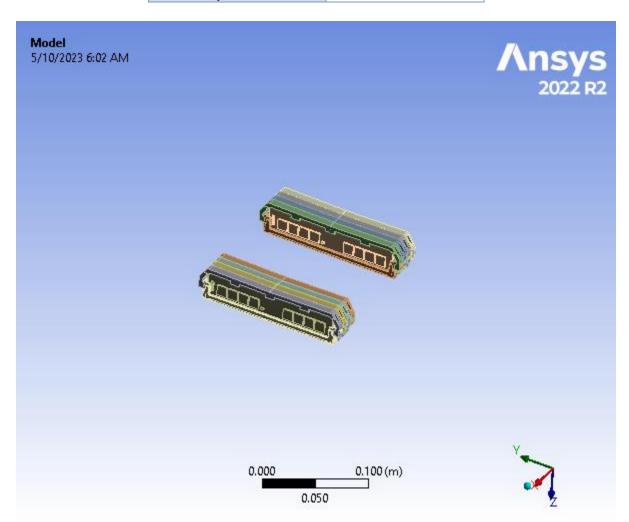


Project*

First Saved	Wednesday, May 3, 2023
Last Saved	Monday, May 8, 2023
Product Version	2022 R2
Save Project Before Solution	No
Save Project After Solution	No



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 - Parts
 - **Biggest**
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 - o Connections
 - Contacts
 - Contact Regions
 - Mesh
- Mesh Controls
- Modal (A5) 0
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 - Steel
 - Aluminum 6061-T6; 6061-T651 0
 - Structural Steel 0
 - o Nylon
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 - LCP 0
 - Glass Epoxy Composite

Units

Unit System	Metric (m, kg, N, s, V, A) Degrees rad/s Celsius
Angle	Degrees
Rotational Velocity	rad/s
Temperature	Celsius

Model (A4, B4)

TABLE 2 Model (A4, B4) > Geometry Imports

Object Name Geometry Imports
State Solved

TABLE 3 Model (A4, B4) > Geometry Imports > Geometry Import (A3, B3)

	Model (A4, B4) > Geometry Imports > Geometry Import (A3, B3)
ct e	Geometry Import (A3, B3)
е	Solved
	Definition
е	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\clip_project_2_files\dp0\SYS\DM\\$
е	SpaceClaim
	Basic Geometry Options
s	Independent
er	
У	
	Advanced Geometry Options
e n	No
е	
s e	3-D
	Geometry
	TABLE 4
	Model (A4, B4) > Geometry
ct e te	Geometry
te	Fully Defined

	Model (A4, B4) > Geometry
t e	Geometry
)	Fully Defined
	Definition
)	$\verb \lambda SEMBLIES_FINAL Clip_project_2_files ASSEMBLIES_FINAL Clip_project_2_files Clip_project_3_files Clip_project_3_file$
)	SpaceClaim
t	Meters
t I	Program Controlled
/ ?	Body Color

ie	•
	Bounding Box
X	0.48082 m
\vee	0 55504 m

L	
Z	
	Properties
e ss	2.1156e-003 m³
le	
or	
e	Statistics Statistics
s	
e	
es	
es	453910
s ts ic	231263
ic	
	Update Options
n	
ılt	
al	Basic Geometry Options
id	
es e	V
es	T es
es	Yes
rs	Independent
er	
ey es te	Yes
;S D	l es
y d	V
ıs ed	Yes
n	
y ol	
al es	
	Advanced Geometry Options
е	
ty	T eS
te	Yes
is te	
te	
y or	
er le	
le s d	No
d	
le e	
e	Yes
S	

D te	Yes
te re in te is e d rt in	No
is e	3-D
d rt n	None
rt et ty	Source
ty in n rt	No
es rt	None
e nt	Yes
re id ry ig	Yes

Smallest

TABLE 5
Model (A4, B4) > Geometry > Smallest > Parts

Object Name	SCREW- 1\SCREW- 1	SCREW- 2\SCREW- 2	SCREW- 3\SCREW- 3	SCREW- 4\SCREW- 4	LEFT- NUT- 1\LEFT- NUT-1	LEFT- NUT- 2\LEFT- NUT-2	LEFT- NUT- 3\LEFT- NUT-3	LEFT- NUT- 4\LEFT- NUT-4	LEFT- NUT- 5\LEFT- NUT-5	LEFT- NUT- 6\LEFT- NUT-6	LEFT- NUT- 7\LEFT- NUT-7		
State				Hidden									
Graphics Properties													
Visible	ole No												
Transparency		1											
				Defin	ition								
Suppressed					N	0							
Stiffness Behavior					Flex	ible							
Coordinate System				Defa	ault Coord	inate Sys	tem						
Reference Temperature		By Environment											
Treatment		None											
	Mat						aterial						
Assignment		Steel Structural Steel											
Nonlinear Effects		Yes											

Thermal Strain Effects					Yes							
Elioto				Boundi	ling Box							
Length X		1.5875€	e-002 m		3.2512e-003 m							
Length Y		6.6548€	e-003 m		7.874e-003 m							
Length Z		6.6548€	e-003 m				7.	874e-003	m			
				Prop	erties							
Volume		1.6218e	-007 m ³				1.0	658e-007	m³			
Mass		1.2763e	-003 kg		8.3666e- 004 kg			8.3663e	-004 kg			
Centroid X	0.148	394 m	-0.27	984 m			(0.16035 m				
Centroid Y	0.245	0.24544 m 0.24545 n		545 m	-0.18287 m	- 0.12731 m	- 7.1745e- 002 m	- 1.6183e- 002 m	3.938e- 002 m	9.4942e- 002 m	0.1505 m	
Centroid Z	-1.2777e- 002 m 1.2623e-002 m -1.2777e- 002 m				- 7.7017e- 005 m	-7.7016e-005 m						
Moment of Inertia		2.622e-0	09 kg∙m²			7.0864e-009 kg·m²						
Moment of Inertia		3.013e-0	08 kg⋅m²			4.1271e-009 kg⋅m²						
Moment of Inertia		3.013e-0	08 kg⋅m²			4.1271e-009 kg·m²						
				Stati	stics							
Nodes	697	681	6	53	1055	1030	1058	1047	1015	1063	1024	
Elements	339	328	3	15	524	521	537	530	503	542	514	
Mesh Metric					No	ne						
				CAD At	tributes							
PartTolerance:					0.0000	00001						
Color:175.143.175												
Color:159.175.143												
Color:143.143.175												
Color:175.159.143												
Color:175.175.143												
Color:143.159.175												
Color:175.143.143												
Color:143.175.159												

TABLE 6
Model (A4, B4) > Geometry > Smallest > Parts

	LEFT-	LEFT-	RIGHT-	RIGHT-	RIGHT-	RIGHT-	RIGHT-	RIGHT-	RIGHT-	RIGHT-	RIGHT-	
Object Name	NUT-	NUT-	NUT-	NUT-	NUT-	NUT-	NUT-	NUT-	NUT-	NUT-	NUT-	
Object Name	8\LEFT-	9\LEFT-	1\RIGHT-	2\RIGHT-	3\RIGHT-	4\RIGHT-	5\RIGHT-	6\RIGHT-	7\RIGHT-	8\RIGHT-	9\RIGHT-	
	NUT-8	NUT-9	NUT-1	NUT-2	NUT-3	NUT-4	NUT-5	NUT-6	NUT-7	NUT-8	NUT-9	
State		Hidden										
				Gra	aphics Pro	perties						
Visible						No						
Transparency		1										
Definition												
Suppressed		No										

	ı											
Stiffness Behavior		Flexible										
Coordinate System					Defaul	t Coordinat	e System					
Reference Temperature					В	By Environn	nent					
Treatment						None						
		Material Material										
Assignment		Structural Steel										
Nonlinear Effects		Yes										
Thermal Strain Effects		Yes										
					Bounding	Box						
Length X					3	3.2512e-00	3 m					
Length Y						7.874e-003	3 m					
Length Z						7.874e-003	3 m					
					Properti							
Volume					1	.0658e-007	⁷ m ³					
Mass	8.3663e	-004 kg	8.3666e- 004 kg				8.3663e	-004 kg				
Centroid X	0.160)35 m				-	0.29122 m					
Centroid Y	0.20607 m	0.26163 m	-0.18287 m	-0.12731 m	- 7.1745e- 002 m	- 1.6183e- 002 m	3.938e- 002 m	9.4942e- 002 m	0.1505 m	0.20607 m	0.26163 m	
Centroid Z	-7.7016	e-005 m					4579e-005	m				
Moment of Inertia					7.0)864e-009 l	kg·m²					
Moment of Inertia					4.1	271e-009 l	kg·m²					
Moment of Inertia					4.1	271e-009 l	kg·m²					
ipo					Statistic	cs						
Nodes	1033	1030	1042	1063	1024	1038	1023	1014	1008	1012	1085	
Elements	521	513	515	541	511	519	509	505	503	506	554	
Mesh Metric						None						
					CAD Attrib	utes						
PartTolerance:						0.0000000)1					
Color:175.159.143												
Color:143.175.175												
Color:143.175.143												
Color:159.143.175												
Color:175.175.143												
Color:143.159.175												
Color:175.143.143												
Color:143.175.159												
Color:175.143.175												
Color:159.175.143												
Color:143.143.175												

SCREW3\SCREW3	SCREW4\SCREW4	SCREW5\SCREW5		SCREW7\SCREW7	SCREW8\SCREW	8 SCREW		
			Hidden					
		Graphic	s Properties					
			No					
			1 Sfinition					
		De	efinition No					
			Flexible					
				V - 4				
		L	Default Coordinate S	system				
			By Environmen	t				
			None					
		N	laterial					
		IV	Steel					
			Yes					
			Yes					
		D						
1 1270	e-002 m	Boul	nding Box			9.5		
1.13736		e-002 m				7.92		
1.13796	e-002 m					7.92		
		Pro	operties					
5.8375e-007 m ³		5.8374e-007 m ³				1.51		
4.5941e-003 kg		4.594e-003 kg		1.19				
0.167	713 m	-0.29	98 m		0.12=2:	0		
4 5050- 000		358 m	4 570- 000	-0.18287 m	-0.12731 m	-7.174		
-1.5952e-002 m	1.5798e-002 m	-1.596e-002 m	1.579e-002 m	-7.7012e-005 m	-7.701	3e-005 m		
	2.2853e-0	007 kg⋅m²				4.091		
	3 49986-0	008 kg⋅m²		1.220				
	J. 1 3306-0			1.220				
	2.2853e-0	007 kg⋅m²		1.220				
		St	atistics					
1345	1344	1320	1312	443	470			
668	670	658	644	201	223			
			None					
		CAD	Attributes					
			0.0000001					

TABLE 8 Model (A4, B4) > Geometry > Smallest > Parts								
V15	SCREW16\SCREW16	SCREW17\SCREW17	SC					

		Model (A4, B4) > Geo	ABLE 8 ometry > Smallest > Par						
REW14\SCREW14	SCREW15\SCREW15	SCREW16\SCREW16	SCREW17\SCREW17	SCREW18\SCREW18	SCREW19\SCREW19				
Hidden									
Graphics Properties									
			No 1						
		De	finition						
		50.	No						
			Flexible						
		D	Pefault Coordinate Syster	m					
	By Environment								
None									
Material Mat									
Steel									
Yes									
	Yes								
		Boun	nding Box						
			9.525e-003 m						
			7.9248e-003 m						
			7.9248e-003 m						
		Pro	operties						
			1.5136e-007 m ³						
	-0.28628 m	0.15538 m	1.1912e-003 kg		-0.286				
0.20607 m	-0.18287 m	0.15536 III 0.26163 m	-0.12731 m	-7.1745e-002 m	-1.6183e-002 m				
-7.7013e-005 m	-8.4575e-005 m	-7.7012e-005 m	0.12701111	7.11700 002 III	-8.45756				
7110100 000 111	3.13.32 333		4.0912e-009 kg⋅m²						
			1.2206e-008 kg⋅m²						
			1.2206e-008 kg·m²						
		Sta	atistics						
	437	432	43	37	452				
	201	196	20		211				
1			None						
		CAD	Attributes						
			0.0000001						
4									

TABLE 9 Model (A4, B4) > Geometry > Smallest > Parts PEM- PEM- PEM- FASTENER- FASTENER	7\PEM-								
Model (A4, B4) > Geometry > Smallest > Parts	FASTENER- 7\PEM- FASTENER-								
Model (A4, B4) > Geometry > Smallest > Parts	FASTENER- 7\PEM- FASTENER-								
Model (A4, B4) > Geometry > Smallest > Parts	FASTENER- 7\PEM- FASTENER-								
Model (A4, B4) > Geometry > Smallest > Parts	FASTENER- 7\PEM- FASTENER-								
Model (A4, B4) > Geometry > Smallest > Parts	FASTENER- 7\PEM- FASTENER-								
Model (A4, B4) > Geometry > Smallest > Parts	FASTENER- 7\PEM- FASTENER-								
FASTENER	FASTENER- 7\PEM- FASTENER-								
Variable Variable	7\PEM- FASTENER-								
1 2 3 4 5 6									
Hidden Graphics Properties No	,								
No 1									
Definition									
Definition No No Flexible Default Coordinate System By Environment None None Material Steel Aluminum 6061-T6; 6061-T651 Yes									
No Flexible Default Coordinate System By Environment None Material Steel Aluminum 6061-T6; 6061-T651 Yes Yes Yes Steel Yes Steel Steel Steel Steel Steel Steel Steel Steel Yes Steel S									
Default Coordinate System By Environment None Material Steel Aluminum 6061-T6; 6061-T651 Yes	No								
By Environment None Material Steel Aluminum 6061-T6; 6061-T651 Yes									
None Material Steel Aluminum 6061-T6; 6061-T651 Yes	Default Coordinate System								
Material Steel Aluminum 6061-T6; 6061-T651 Yes									
Steel Aluminum 6061-T6; 6061-T651 Yes									
Yes									
Bounding Box									
9.525e-003 m 7.3324e-003 m 7.3323e-003 m	7.3324e-003 m								
7.9248e-003 m 6.35e-003 m									
7.9248e-003 m 4.7498e-003 m	4.7498e-003 m								
Properties									
1.5136e-007 m³ 8.8258e-008 m³									
1.1912e-003 kg 2.383e-004 kg									
m m	-0.15686 m								
0.20607 m 0.26163 m 4.6568e-002 m 0.22818 m 8.4788e-004 7.3238e-002 m 8.4788e-0									
-8.4575e-005 m 1.9415e-002 m	004 m								
	·004 m								

4.0912e-	12e-009 kg·m² 1.0709e-009 kg·m²											
1.2206e-	008 kg·m²					1.070	9e-009 kg⋅m	2				
1.2206e-	008 kg·m²		1.1596e-009 kg⋅m²									
				Sta	tistics							
458	45	60	523	518	563	574	576	5 5	49	513		
215		208 241 231 257 265 268								233		
		<u> </u>	'		Nor	ne						
				CAD A	ttributes							
					0.0000	0001						
					BLE 10							
	CODEM	CODEM	SCREW-		metry > Sma			000514/	<u> </u>	OTANDO		
Object Name	SCREW-	SCREW-	42\SCREW-	SCREW-	SCREW-	SCREW-	SCREW-	SCREW- 9\SCREW-	NUT-	STANDOI 1\STANDO		
Object Name	22 ISONEW-	32 ISCNEW-	42 10 CNL W	5 5	6	7	8	9	1WUT-1	1		
State		02	,_	- U	Hidd	•	<u> </u>	· ·		•		
				Graphics	Properties							
Visible					No							
Transparency					1							
				Def	inition							
Suppressed					No)						
fness Behavior					Flexi							
Coordinate				De	efault Coordi	nata System	1					
System				D6	elault Coolul	nate System	I					
Reference					By Enviro	onment						
Temperature					•							
Treatment					Nor	16						
				Ма	terial					Λ Ι !		
Assignment					Steel					Aluminur 6061-T6 6061-T65		
onlinear Effects					Ye	<u> </u>				0001-103		
Thermal Strain												
Effects					Ye	S						
2110013				Bound	ding Box							
Length X			7.9	756e-003 m				7.0866e- 003 m	6.8162e- 003 m	6.3498e-0 m		
	003 m 003 m m											

Volume											
Centroid X Controid X Con	Length Y			7.9							
Volume	Length Z			9.2	456e-003 m				9.4742e-	3.0226e-	3.175e-003
Volume					Pro	perties			000	000	
Centroid X 6.1601e	Volume			1.4							
Centroid Y O04 m O04 m O02 m O02 m O04 m O02 m O02 m O04 m O02 m O02 m O02 m O04 m O02 m	Mass										
Centroid Y	Centroid X		-0.15686 m		-0.15686	m					
Centroid Centroid	Centroid Y									0.20532	m
Part	Centroid Z	1.5731e- 1.5831e- 1.5731e- 1.5831e- 1.5731e-002 m									
Section Sect		9.5364e-009 kg·m²								009	
Statistics Sta			9.5364e-009 kg·m² 7.2928e- 009 kg·m² 9.5289e- 009 kg·m²								
Nodes 927 934 969 921 931 936 969 428 2241 331		6 10060-000 kg-m2							009		
Elements 453 462 479 451 457 460 479 194 1174 42 Mesh Metric CAD Attributes PartTolerance: 0.00000001 0r:143.175.175 0r:175.143.175 0r:175.143.175 0r:175.143.193 0r:175.143.193 0r:175.143.195 0r:175.143.195 0r:175.143.195 0r:175.143.195 0r:175.143.195 0r:175.143.195 0r:175.143.195 0r:175.143.195					Sta	tistics					
Mesh Metric None CAD Attributes PartTolerance: 0.00000001 or:143.175.175 0.00000001 or:155.143.159 0.000000000 or:159.143.175.143 0.000000000 or:175.175.143 0.000000000 or:175.175.143 0.000000000 or:175.143.159 0.000000000 or:175.143.175 0.000000000	Nodes	927	934	969	921	931	936	969	428	2241	331
CAD Attributes PartTolerance: 0.00000001 pr:143.175.175 0.00000001 pr:175.143.159 0.00000001 pr:143.175.143 0.000000001 pr:159.143.175 0.000000001 pr:175.175.143 0.000000001 pr:175.143.143 0.000000001 pr:175.143.143 0.000000001 pr:175.143.175 0.000000001 pr:175.143.175 0.000000001	Elements	453	462	479	451	457	460	479	194	1174	42
PartTolerance: 0.0000001 pr:143.175.175 pr:175.143.159 pr:143.175.143 pr:159.143.175 pr:175.175.143 pr:175.175.143 pr:175.143.159 pr:175.143.175 pr:175.143.175 pr:175.143.175	Mesh Metric					Nor	ne				
br:143.175.175 br:143.175.143 br:159.143.175 br:175.143 br:175.143 br:175.143 br:175.143 br:175.143.143 br:175.143.175 br:175.143.175					CAD A	Attributes					
br:175.143.159 br:143.175.143 br:159.143.175 br:175.175.143 br:175.143.159 br:175.143.175 br:175.143.175.159 br:175.143.175	PartTolerance:					0.0000	0001				
pr:143.175.143 pr:159.143.175 pr:175.175.143 pr:143.159.175 pr:175.143.143 pr:143.175.159 pr:175.143.175	or:143.175.175										
br:159.143.175 br:175.175.143 br:143.159.175 br:175.143.143 br:143.175.159 br:175.143.175	or:175.143.159										
br:175.175.143 br:143.159.175 pr:175.143.143 br:143.175.159 pr:175.143.175	or:143.175.143										
br:143.159.175 br:175.143.143 br:143.175.159 br:175.143.175	or:159.143.175										
pr:175.143.143 pr:143.175.159 pr:175.143.175	or:175.175.143										
pr:175.143.143 pr:143.175.159 pr:175.143.175	or:143.159.175										
br:143.175.159 br:175.143.175	or:175.143.143										
	or:143.175.159										
	or:175.143.175										
	or:159.175.143										

Small

TABLE 11 Model (A4, B4) > Geometry > Small > Parts

_1\DDR4_SL	DDR4_SLOT_1_1_2_1\DDR4_SL	DDR4_SLOT_1_1_2_1\DDR4_SL	DDR4_SLOT_1_1_2_1\DDR4_SL	DDR4_SLOT_
_1	OT_1_1_2_1	OT_1_1_2_1	OT_1_1_2_1	OT <u>.</u>

Meshed

		Graphics Properties			
		Yes			
		1			
		Definition			
		No			
		Flexible			
		Default Coordinate System	em		
		By Environment			
		None			
		Material			
		LCP			
		Yes			
		Yes			
		Bounding Box			
	6.3034e-				
	0.152				
	1.965e-				
	4.0000-	Properties			
	4.8828e-				
2 m	8.5938e- -3.3027e-002 m	-0.13786 m	-0.14573 m		-0.
2 111			-0.14073 III	0.12474 m	-0.
	1.0705e-	-002 m			
	1.7584e-00	07 kg⋅m²			
	1.8398e-00	05 kg⋅m²			
	1.8513e-00	 05 kg⋅m²			
		Statistics			
	3072				
	1659				
		None			
		CAD Attributes			
		0.0000001			

TABLE 12 Model (A4, B4) > Geometry > Small > Parts

i									
1-00175- 1_2_1\MEM-)175- _1_1_2_1	MEM-00175- - 02_A_1_1_2_1WEM- 00175- 02_A_1_1_2_1	MEM-00175- - 02_A_1_1_2_1WEM- 00175- 02_A_1_1_2_1	IMP- 00393_D_1_1_2_1VMP- 00393_D_1_1_2_1	IMP- - 00393_D_1_1_2_1VMP- 00393_D_1_1_2_1	IMP- - 00393_D_1_1_2_1VMP- 00393_D_1_1_2_1				
<u>. '_ </u>	<u> </u>	02_, _ , _ ,	Meshed						
		(Graphics Properties						
			Yes						
			Definition 1						
			Definition						
			No Flexible						
			Default Coordinate	System					
			By Environme	ent					
			None						
			Material						
1			LCP Yes						
Yes									
<u></u>			Yes						
			Bounding Box						
-003 m					7.7724e-				
3335 m					0.1514				
e-002 m			Durana ution		2.3818e-				
e-006 m³			Properties		3.9622e-				
7e-006 m² 7e-002 kg					6.9735e-				
4559 m	-0.15347 m	-0.16134 m	-0.16125 m	-0.15338 m	-0.1455 m				
	439 m	<u> </u>			487 m				
4e-004 m					-1.4494e				
-005 kg·m²					3.1388e-0				
-005 kg·m²					1.7309e-0				
-007 kg·m²					1.7538e-0				
- ,_			Statistics		20				
017					384				
2871			None		178				
			CAD Attributes						
			0.00000001						
			TABLE 13 B4) > Geometry > Small >	> Parts					
	Object Nar	IMP-00393_D	D_1_1_2_1VMP- D_1_1_2_1	IMP-00393_D_1_1_2_1 00393_D_1_1_2_1					

State	Meshed								
State	Graphics Properties								
Visible	Yes								
Transparency	1								
Transparency	Definition								
Suppressed	No								
Stiffness Behavior	Flexible								
Coordinate System	Default Coordinate System								
Reference									
Temperature	By Environment								
Treatment	None								
Material Material									
Assignment	LCP								
Nonlinear Effects	Yes								
Thermal Strain	Yes								
Effects									
	Bounding Box								
Length X	7.7724e-003 m								
Length Y 0.15144 m									
Length Z 2.3818e-002 m									
	Properties								
Volume	3.9622e-006 m³								
Mass	6.9735e-003 kg								
Centroid X	-1.7044e-002 m -9.1687e-003 m								
Centroid Y	0.11852 m								
Centroid Z	-1.4494e-002 m								
Moment of Inertia Ip1	3.1388e-007 kg⋅m²								
Moment of Inertia Ip2	1.7309e-005 kg⋅m²								
Moment of Inertia Ip3	1.7538e-005 kg⋅m²								
	Statistics								
Nodes	3842								
Elements	1786								
Mesh Metric	None								
	CAD Attributes								
PartTolerance:	0.0000001								
Color:175.143.159									

Medium

TABLE 14 Model (A4, B4) > Geometry > Medium > Parts

				(, , -				
	LEFT-	DICUT	LEFT-	RIGHT-		LEFT-	RIGHT-	
	PLATE-	RIGHT- PLATE-	MOUNTING-	MOUNTING-	BACK-	MOUNTING-	MOUNTING-	LEFT-
IT-	INNER\LEFT-	INNER\RIGHT-	EAR\LEFT-	EAR\RIGHT-	PLATE\BACK-	EAR_REAR\LEFT-	EAR_REAR\RIGHT-	GUIDEBAR\LEF
	PLATE-	PLATE-INNER	MOUNTING-	MOUNTING-	PLATE	MOUNTING-	MOUNTING-	GUIDEBAR
	INNER	FLATE-IIVIVER	EAR	EAR		EAR_REAR	EAR_REAR	

Hidden

Graphics Properties

No

					1	1			
					Definition	do			
_					Flex				
					Default Coord	dinate System			
					By Envi	ironment			
_					No	ne			
					Material				
ur	m 6061-T6; 606	31-T651	Structu	ral Steel	Aluminum 6061-T6; 6061-T651		teel		
_					Υe	əs			
					Ye	es			
				P	Bounding Box				
	9.144€	e-003 m	3 m 1.651e-002 m			1.7882	e-002 m	6.3	
า	0.48	826 m	0.497	721 m	9.525e-003 m	0.49	916 m	0.	
า		4.3688e-0	ე02 m		4.3307e-002 m	4.3688	se-002 m	1.16	
Properties									
3	1.4888e-004 m³	1.4882e-004 m³	5.2426e-005 m³		8.2892e-005 m ³	6.4756	e-005 m³	2.766	
	0.40199 kg	0.4018 kg	0.411	155 kg	0.22381 kg	0.509	963 kg	3.208	
1	0.15149 m	-0.28239 m	0.15954 m	-0.29042 m	-6.5449e-002 m	0.16474 m	-0.29561 m	0.15427 m	
	1.2658e-002 m	1.2625e-002 m	2.1425	e-002 m	-0.23384 m	7.3427	e-002 m	3.93	
n	-7.4915e-005 m	-7.0093e-005 m	-7.7017e- 005 m	-8.4579e- 005 m	4.7337e-005 m	-7.6985e-005 m	-8.461e-005 m	-7.7016e-005 m	
	7.7884e-003 kg·m²	7.7855e-003 kg·m²	8.4577e-(003 kg⋅m²	4.8203e-005 kg·m²	1.0799e-	-002 kg⋅m²	5.8192	
	7.7224e-003 kg·m²	7.7196e-003 kg·m²	9.1794e-(005 kg⋅m²	5.2268e-003 kg·m²	8.5857e-	-005 kg·m²	3.8703e-007 kg·m²	
	7.1982e-005 kg·m²	7.1958e-005 kg·m²	8.3699e-	003 kg⋅m²	5.2717e-003 kg·m²	1.072e-(002 kg⋅m²	5.8175	
					Statistics				
	13316	14044	5269	5262	6129	4194	4046	3955	
	7398	7859	2265	2258	2851	1891	1820	1811	
				C	No CAD Attributes	ne			
					0.0000	00001			
_									
_									

TABLE 15
Model (A4, B4) > Geometry > Medium > Parts

Model (A4, B4) > Geometry > Medium > Parts									
Object Name	PCI- 2\PCI-2	PCI- 3\PCI-3	PCI- 4\PCI-4	PCI- 5\PCI-5	PCI- 6\PCI-6	PCI- 7\PCI-7	SINK\SINK	BASE\BASE	
State					Hidden				
			Graphi	cs Prope	rties				
Visible					No				
Transparency									
			D	efinition					
Suppressed	No								
Stiffness Behavior									
Coordinate		Default Coordinate System							
System				Doladii Ot	Jordinate (Эубісііі			
Reference		By Environment							
Temperature		•							
Treatment									
Material Aluminum LOD									
Assignment		Structural Steel						LCP	
Nonlinear Effects									
Thermal Strain Effects									
Bounding Box									
Length X	7.5e-	7.5e-003 m 7.4e-003 m						002 m	
Length Y	5.5999	5 50000-002 m 8.9e-002 5.5999e- 8.9e-002 5.5999				5.5999e- 002 m	0.10214 m		
Length Z			1	e-002 m		332	2.4698e- 002 m	9.185e-003 m	
			Pi	roperties			002 111	111	
Volume	4.65356	e-006 m³	7.2973e- 006 m ³	4.5915e- 006 m ³	7.2973e- 006 m ³	4.5915e- 006 m ³	1.678e- 004 m³	7.4113e-005 m ³	
Mass	3.653e	-002 kg	5.7284e- 002 kg	3.6043e- 002 kg	5.7284e-	3.6043e-	0.1678 kg	0.13044 kg	
			ŭ	Ū	002 kg	002 kg			
Centroid X	0.10065 m	8.0327e- 002 m	6.0006e- 002 m	3.9681e- 002 m	1.9366e- 002 m	9.5399e- 004 m	-8.5753	Be-002 m	
Centroid Y	0.167	789 m	0.15139 m	0.16789 m	0.15139 m	0.16789 m	0.10	549 m	
Centroid Z			9.7451	e-003 m			-6.2487e- 003 m	1.0693e-002 m	
Moment of Inertia	9.92e-0	06 kg⋅m²	3.8398e- 005 kg·m²	9.7878e- 006 kg·m²	3.8398e- 005 kg·m²	006 kg·m²	1.2346e- 004 kg·m²	1.1431e-004 kg·m²	
Moment of Inertia		6e-007 ·m²	8.4745e- 007 kg·m²	5.3322e- 007 kg·m²	8.4745e- 007 kg·m²	5.3322e- 007 kg·m²	8.3056e- 005 kg·m²	6.8756e-005 kg·m²	

Moment of Inertia	9.7175e-006 kg·m²	3.8073e- 005 kg·m²	9.5835e- 006 kg·m²	3.8073e- 005 kg·m²	9.5835e- 006 kg·m²	1.8945e- 004 kg·m²	1.8124e-004 kg·m²
Statistics							
Nodes	127	184	127	184	127	1472	714
Elements	12	18	12	18	12	249	88
Mesh Metric				None			
		CAD	Attribute	S			
PartTolerance:	PartTolerance: 0.00000001						
Color:143.159.175							
Color:175.143.143							
Color:143.175.159							
Color:175.143.175							
Color:159.175.143							
Color:143.143.175							
Color:175.159.143							
Color:143.175.175							

Big

TABLE 16 Model (A4, B4) > Geometry > Big > Parts

	PSK\PSK den							
Graphics Properties								
Graphics Properties								
Visible								
Transparency	1							
Definition								
Suppressed	lo							
Stiffness Behavior Flex	kible							
Coordinate System Default Coordinate Coordin	dinate System							
Reference Temperature By Envi	ronment							
Treatment None								
Material								
Assignment Glass Epoxy Composite LCP								
Nonlinear Effects Yes								
Thermal Strain Effects	es							
Bounding Box								
Length X 0.30734 m	0.10096 m							
Length Y 0.254 m	0.2222 m							
Length Z 1.6072e-003 m	3.847e-002 m							
Properties								
Volume 1.2467e-004 m ³	5.2225e-004 m ³							
Mass 0.91006 kg	0.91916 kg							
Centroid X -1.2014e-002 m	-0.23166 m							
Centroid Y 0.11111 m	0.10571 m							
Centroid Z 1.6085e-002 m	1.2126e-004 m							
Moment of Inertia Ip1 4.8751e-003 kg·m²	3.3407e-003 kg·m²							
Moment of Inertia Ip2 7.1718e-003 kg⋅m²	6.3751e-004 kg·m²							

Moment of Inertia lp3	1.2046e-002 kg·m²	3.793e-003 kg·m²						
Statistics								
Nodes	Nodes 2864 3							
Elements	1337	1595						
Mesh Metric	None							
	CAD Attributes							
PartTolerance:	PartTolerance: 0.00000001							
Color:175.143.159								
Color:143.143.175								

Biggest

TABLE 17
Model (A4, B4) > Geometry > Biggest > Parts

	metry > biggest > Parts							
Object Name	PLATE\PLATE							
State	Hidden							
Graphics Properties								
Visible	No							
Transparency	1							
Definition								
Suppressed	No							
Stiffness Behavior	Flexible							
Coordinate System	Default Coordinate System							
Reference Temperature	By Environment							
Treatment	None							
Ma	terial							
Assignment	Steel							
Nonlinear Effects	Yes							
Thermal Strain Effects	Yes							
Bounding Box								
Length X	0.43713 m							
Length Y	0.48971 m							
Length Z	1.5189e-003 m							
Pro	perties							
Volume	3.2278e-004 m³							
Mass	2.5403 kg							
Centroid X	-6.5508e-002 m							
Centroid Y	6.888e-003 m							
Centroid Z	2.0875e-002 m							
Moment of Inertia lp1	5.0134e-002 kg·m²							
Moment of Inertia lp2	4.0459e-002 kg·m²							
Moment of Inertia lp3	9.0592e-002 kg·m²							
Sta	tistics							
Nodes	3118							
Elements	411							
Mesh Metric	None							
CAD A	Attributes							
PartTolerance:	0.0000001							

Color:143.175.143

FIGURE 1
Model (A4, B4) > Geometry > Geometry

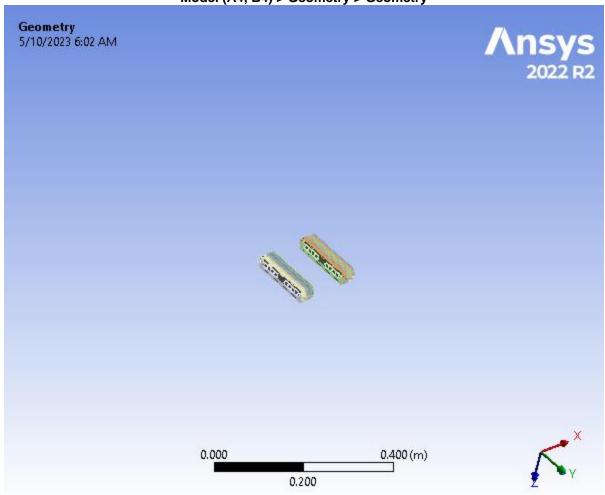


TABLE 18 Model (A4, B4) > Materials

Object Name	Materials					
State	Fully Defined					
Statistics						
Materials	7					
Material Assignments	0					

Coordinate Systems

TABLE 19 Model (A4, B4) > Coordinate Systems > Coordinate System

· · ·	Global Coordinate System					
State	Fully Defined					
Definition						

Туре	Cartesian		
Coordinate System ID	0.		
C	Prigin		
Origin X	0. m		
Origin Y	0. m		
Origin Z	0. m		
Directio	nal Vectors		
X Axis Data	[1. 0. 0.]		
Y Axis Data	[0. 1. 0.]		
Z Axis Data	[0. 0. 1.]		

Connections

TABLE 20 Model (A4, B4) > Connections

Connections
Fully Defined
Yes
Yes

TABLE 21
Model (A4, B4) > Connections > Contacts

Model (A4, B4) > Collice	tione / Comacte							
Object Name	Contacts							
State	Fully Defined							
Definition								
Connection Type	Contact							
Scope								
Scoping Method	Geometry Selection							
Geometry	All Bodies							
Auto Detec	tion							
Tolerance Type	Slider							
Tolerance Slider	0.							
Tolerance Value	1.8391e-003 m							
Use Range	No							
Face/Face	Yes							
Face-Face Angle Tolerance	75. °							
Face Overlap Tolerance	Off							
Cylindrical Faces	Include							
Face/Edge	No							
Edge/Edge	No							
Priority	Include All							
Group By	Bodies							
Search Across	Bodies							
Statistic	S							
Connections	260							
Active Connections	260							

TABLE 22
Model (A4, B4) > Connections > Contacts > Contact Regions

					is > Contacts	> Contact Regio			
gion	Contact Region 2	Contact Region 3	Contact Region 4	Contact Region 5	Contact Region 6	Contact Region 7	Contact Region 8	Contact Region 9	Contact 1
					Fully Define	d			
				S	Scope				
<u></u>					Geometry Selec	ction			
2 Fac		1 Face	2 Fac		1 Face	2 Fa		1 Face	
2 Fac	es	1 Face	2 Fac	ces	1 Face	2 Fa	ices	1 Face	
SCR	EW-1\SCREW	-1	SCR	REW-2\SCREW-	-2	SCF	REW-3\SCREW-		so
- ONT-	LEFT- PLATE- INNER\LEFT- PLATE- INNER	LEFT- MOUNTING- EAR\LEFT- MOUNTING- EAR	PLATE\FRONT-	LEFT- PLATE- INNER\LEFT- PLATE- INNER	MOUNTING- EAR	PLATE\FRONT-	RIGHT- PLATE- INNER\RIGHT- PLATE-INNER	RIGHT- MOUNTING- EAR\RIGHT- MOUNTING- EAR	PLATE\I
					No				
				De	finition				
					Bonded				
					Automatic				
				P	Program Contro	olled			
1				F	Program Contro	olled			
					1.8391e-003	m			
					No				
				Di	isplay				
					No				
					vanced				
				P	Program Contro	olled			
				P	Program Contro	olled			
				F	Program Contro	olled			
				F	Program Contro	olled			
				F	Program Contro	olled			
				F	Program Contro	olled			
				F	Program Contro	olled			
				F	Program Contro	olled			
					c Modification				
					None				

None

		M	lodel (A4, B4)		LE 23 s > Contacts > Cont	act Regions		
ict 13	Contact Region 14	Contact Region 15	Contact Region 16	Contact Region 17	Contact Region 18	Contact Region 19	Contact Region 20	Contac
					Fully Defined			
				Sc	ope			
				Ge	eometry Selection			
ice		4 Faces	2 Faces	1 Face	7 Faces			Face
ice		4 Faces	5 Faces	1 Face	7 Faces		11	Face
RON	T-PLATE\FRONT	-PLATE			LEI	FT-PLATE-INNER\LE	FT-PLATE-INNER	
- E- EFT- E- R	RIGHT- PLATE- INNER\RIGHT- PLATE-INNER	PLATE\PLATE	LEFT- MOUNTING- EAR\LEFT- MOUNTING- EAR	BACK- PLATE\BACK- PLATE	LEFT- GUIDEBAR\LEFT- GUIDEBAR	SCREW7\SCREW7	SCREW8\SCREW8	SCREV
					No			
				Defi	nition			
					Bonded			
					Automatic			
				Pro	ogram Controlled			
				Pro	ogram Controlled			
					1.8391e-003 m			
					No			
				Dis	play			
					No			
					anced			
				Pro	ogram Controlled			
				Pro	ogram Controlled			
				Pro	ogram Controlled			
				Pro	ogram Controlled			_
				Pro	ogram Controlled			
				Pro	ogram Controlled			
				Pro	ogram Controlled			
				Pro	ogram Controlled			

		Geometric M	lodification			
			None			
			None			
	Model (A4, B4) >			Contact Regior	ns	
ntact Region 25	Contact Region 26	Contact Region 27	Contact Region 28	Contact Region 29	Contact Region 30	Contact Regio
						T
		2 Faces	5 Faces	1 Face		
:R\LEFT-PLATE-IN	NNER				RIGHT-PLAT	E-INNER\RIGHT
EW13\SCREW13	SCREW14\SCREW14	PLATE\PLATE	RIGHT- MOUNTING- EAR\RIGHT- MOUNTING- EAR	BACK- PLATE\BACK- PLATE	RIGHT- GUIDEBAR\RIGHT- GUIDEBAR	SCREW15\SCR
			No			
		Defini				
			Bonded			
			Automatic			
		Prog	gram Controlle	:d		
		Prog	gram Controlle	ed .		
		1.	.8391e-003 m			
			No			
		Disp				
			No			
		Prog	gram Controlle	:d		
		Pro	gram Controlle	ed		
		Prog	gram Controlle	ed		
		Pro	gram Controlle	ed		
		Pro	gram Controlle	ed		
		Pro	gram Controlle	ed		
	R\LEFT-PLATE-II	ntact Region 25 Contact Region 26 ER\LEFT-PLATE-INNER	TABL	TABLE 24 Model (A4, B4) > Connections > Contacts > Contact Region 25 Contact Region 26 Contact Region 27 Region 28 Fully Defined Scope Geometry Selection 2 Faces 2 Faces 5 Faces ERILEFT-PLATE-INNER RIGHT-MOUNTING-EAR No Definition Bonded Automatic Program Controlle Program Controlle	None	None

			Program Cor	ntrolled			
			Program Cor	trolled			
			Geometric Modificati	on			
			None				
			None				
		Model (A4, B4) > 0	TABLE 25 Connections > Contac	ts > Contact Regions			
ion 34	Contact Region 35	Contact Region 36	Contact Region 37	Contact Region 38	Contact Region 39	Contact Region 40	Contact Region 41
			Fully Defin	ned			
			Scope				
			Geometry Se	lection			
		1 Face			2 Faces	1 Face	
		1 Face			2 Faces	4 Faces	
		RIGHT-PLATE-INNE	R\RIGHT-PLATE-INNEI	₹			LEFT
REW19	SCREW20\SCREW20	SCREW21\SCREW21	SCREW22\SCREW22	SCREW23\SCREW23	PLATE\PLATE	PSK\PSK	LEFT- NUT- 1\LEFT- NUT-1
			No				
			Definition Bonded	1			
			Automat				
			Program Cor				
			Program Cor	ntrolled			
			1.8391e-00)3 m			
			No				
			Display				
			No				
			Advanced				
			Program Cor	ntrolled			
			Program Cor	ntrolled			
			Program Cor	ntrolled			
			Program Cor	ntrolled			

						Program	Controlled		
						Program	Controlled		
						Program	Controlled		
						Program ¹	Controlled		
						Geometric Modific	cation		
						Nc	one		
						Nc	one		
				M	odel (A4, B4) >	TABLE 26 Connections > Con	ntacts > Contact Re	eaions	
ct n	Contact Region 46		Contact Region 48		Contact	Contact Region 51	Contact Region 52	Contact Region 53	Contact Region 54
							Defined		
						Scope			
						Geometry	y Selection		
		2 Faces			5 Faces	6 Faces	1 Face	3 Faces	2 Fac
		6 Faces			1 Face	6 Faces	1 Face	2 Faces	1 Fa
					LEF	FT-MOUNTING-EAR\	\LEFT-MOUNTING-	-EAR	
- - Г-	LEFT- NUT- 6\LEFT- NUT-6	LEFT- NUT- 7\LEFT- NUT-7	LEFT- NUT- 8\LEFT- NUT-8	LEFT- NUT- 9\LEFT- NUT-9	BACK- PLATE\BACK- PLATE	LEFT- MOUNTING- EAR_REAR\LEFT- MOUNTING- EAR_REAR	LEFT- GUIDEBAR\LEFT- GUIDEBAR	SCREW1\SCREW1	SCREW3\SCREW3
						N Definition	No		
							nded		
							omatic		
							Controlled		
							Controlled		
							e-003 m		
							No		
						Display			
							No		
						Advanced Program (Controlled		
						Flogialii	Controlled		

			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
		Geom	etric Modification			
			None			
			None			
	Mc	odel (A4, B4) > Connec	TABLE 27 tions > Contacts > Co	ntact Regions		
itact Region 58	Contact Region 59	Contact Region 60	Contact Region 61	Contact Region 62	Contact Region 63	С
			Fully Defined			
			Scope			
		4.500	Geometry Selection			
		1 Face	1 Face			
	LEFT-M	OUNTING-EAR\LEFT-M				
EW9\SCREW9	SCREW10\SCREW10	SCREW11\SCREW11	SCREW12\SCREW12	SCREW13\SCREW13	SCREW14\SCREW14	SCI
			No			
			Definition Bonded			
			Automatic			
			Program Controlled			
			Program Controlled			
			1.8391e-003 m			
			No			
			Display			
			No			

			Advanced						
			Program Controlled	t					
			Program Controlled	t					
			Program Controlled	t					
			Program Controlled	t					
			Program Controlled	b					
			Program Controlled	b					
			Program Controlled	b					
			Program Controlled	b					
		Geor	metric Modification						
			None						
			None						
	TABLE 28 Model (A4, B4) > Connections > Contact Regions								
Contact Region 69	Contact Region 70	Contact Region 71	Contact Region 72	Contact Region 73	Contact Region 74	Contact 7			
			Fully Defined						
			Scope						
			Geometry Selection	n					
2 Faces	1 Face	2 Faces	1 Face	2 Faces	1 Face	2 Fa			
			1 Face	<u> </u>		1			
I EET MILIT O	,, === , , , , = , , , , , , , , , , ,								
LEFT-NUT-3	3\LEFT-NUT-3	LEFT-NUT-	-4\LEFT-NUT-4	LEFT-NUT-	-5\LEFT-NUT-5	L			
LEFT-	SCREW9\SCREW9	LEFT-		LEFT-		LEI			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-		LEI GUIDEB/			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-	SCREW10\SCREW10 No Definition	LEFT- GUIDEBAR\LEFT-		LEI GUIDEB <i>i</i>			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-	SCREW10\SCREW10	LEFT- GUIDEBAR\LEFT-		LEI GUIDEB <i>i</i>			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-	SCREW10\SCREW10 No Definition Bonded Automatic	LEFT- GUIDEBAR\LEFT- GUIDEBAR		LEI GUIDEB <i>i</i>			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-	SCREW10\SCREW10 No Definition Bonded	LEFT- GUIDEBAR\LEFT- GUIDEBAR		LEI GUIDEB <i>i</i>			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-	SCREW10\SCREW10 No Definition Bonded Automatic	LEFT- GUIDEBAR\LEFT- GUIDEBAR		LEI GUIDEB <i>i</i>			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-	SCREW10\SCREW10 No Definition Bonded Automatic Program Controlled Program Controlled 1.8391e-003 m	LEFT- GUIDEBAR\LEFT- GUIDEBAR		LEI GUIDEB <i>i</i>			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-	No Definition Bonded Automatic Program Controlled Program Controlled 1.8391e-003 m No	LEFT- GUIDEBAR\LEFT- GUIDEBAR		LEI GUIDEB <i>i</i>			
LEFT- GUIDEBAR\LEFT-		LEFT- GUIDEBAR\LEFT-	SCREW10\SCREW10 No Definition Bonded Automatic Program Controlled Program Controlled 1.8391e-003 m	LEFT- GUIDEBAR\LEFT- GUIDEBAR		LEI GUIDEB <i>i</i>			

			1	No				
			Advanced					
			Program	Controlled				
			Program	Controlled				
			Program	Controlled				
			Program	Controlled				
			Program	Controlled				
			Program	Controlled				
			Program	Controlled				
			Program	Controlled				
			Geometric Modifi	ication				
			N	lone				
			N	lone				
		Model (A4, B4) >	TABLE 29 Connections > Cor	ntacts > Contact Regio	ins			
Region 78	Contact Region 79	Contact Region 80	Contact Region 81	Contact Region 82	Contact Region 83	Contact Region 84	Contact Region 85	Conta Regio 86
			Fully	Defined				
			Scope					
			Geometr	y Selection				
ace	2 Faces	1 Face	2 Faces	1 Face			2 Fa	aces
		1 Face					6 Fa	aces
Γ-7∖LEFT- T-7	LEFT-NUT-	-8\LEFT-NUT-8	LEFT-NUT-	-9\LEFT-NUT-9	RIG	HT-MOUN	TING-EAR	
SCREW13	LEFT- GUIDEBAR\LEFT- GUIDEBAR	SCREW14\SCREW14	LEFT- GUIDEBAR\LEFT- GUIDEBAR	SCREW16\SCREW16	RIGHT- NUT- 1\RIGHT- NUT-1	RIGHT- NUT- 2\RIGHT- NUT-2	RIGHT- NUT- 3\RIGHT- NUT-3	RIGH NUT 4\RIGH NUT-
			1	No				
			Definition					
			Bor	nded				
				omatic				
			Program	Controlled				
			Program	Controlled				
								ļ

				1.8391e-003 m			
				No			
				Display			
				No			
				dvanced			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
			Geometr	ic Modification			
				None			
				None			
		Model (T <i>I</i> (A4, B4) > Connectio	ABLE 30	ntact Regions		
ntact egion 91	Contact Region 92	Contact Region 93	Contact Region 94	Contact Region 95	Contact Region 96	Contact Region 97	Contac
				Fully Defined			
				Scope			
			,	Geometry Selection			
	5 Faces	6 Faces	1 Face	3 Faces	2 Fa	aces	
	1 Face	6 Faces	1 Face	2 Faces		1	Face
			RIGHT-MOUNT	ING-EAR\RIGHT-MO	UNTING-EAR		
GHT- UT- IGHT- JT-9	BACK- PLATE\BACK- PLATE	RIGHT- MOUNTING- EAR_REAR\RIGHT- MOUNTING- EAR_REAR	RIGHT- GUIDEBAR\RIGHT- GUIDEBAR	SCREW2\SCREW2	SCREW5\SCREW5	SCREW6\SCREW6	SCREW
			D	No efinition			
			De	Bonded			

			Automatic			
			Program Controlled			
		F	Program Controlled			
			1.8391e-003 m			
			No			
		D	Display			
			No			
			dvanced			
<u> </u>			Program Controlled			
			Program Controlled			
		F	Program Controlled			
		F	Program Controlled			
			Program Controlled			
		1	Program Controlled			
		1	Program Controlled			
		1	Program Controlled			
		Geometri	ic Modification			
			None			
			None			
	Mode	TA el (A4, B4) > Connection	ABLE 31	act Regions		
ntact Region 102	Contact Region 103	Contact Region 104	Contact Region 105	Contact Region 106	Contact Region 107	С
			Fully Defined			_
		ş	Scope			
		(Geometry Selection			
	1 Face				2 Faces	
			1 Face		T	
RIGHT-MOUN	NTING-EAR\RIGHT-MO	UNTING-EAR			RIGHT-NUT-1	1\R
REW20\SCREW20	SCREW21\SCREW21	SCREW22\SCREW22	SCREW23\SCREW23	SCREW24\SCREW24	RIGHT- GUIDEBAR\RIGHT- GUIDEBAR	SC
	-		No			

			Definition			
			Bonded			
			Automatic			
			Program Controlled			
			Program Controlled			
			1.8391e-003 m			
			No			
			Display			
			No			
		l l	Advanced			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
		Geome	etric Modification			
			None			
			None			
	Mode		TABLE 32 tions > Contacts > Con	ntact Regions		
ontact Region 113	Contact Region 114	Contact Region 115	Contact Region 116	Contact Region 117	Contact Region 118	Cont
1			Fully Defined	1		
			Scope			
			Geometry Selection			
2 Faces	1 Face	2 Faces	1 Face	2 Faces	1 Face	
			1 Face			
RIGHT-NUT-4	4\RIGHT-NUT-4	RIGHT-NUT-	5\RIGHT-NUT-5	RIGHT-NUT-6	6\RIGHT-NUT-6	
				I.		

UIDEE	RIGHT- BAR\RIGHT- JIDEBAR	SCREW19\SCREW19	RIGHT- GUIDEBAR\RIGHT- GUIDEBAR	- SCREW20\SCREW20	RIGHT- GUIDEBAR\RIGHT- GUIDEBAR	SCREW21\SCREW21	I GUID
				No			
				Definition Bonded			
				Automatic			
				Program Controlled			\longrightarrow
				Program Controlled			
				1.8391e-003 m			
				No			
				Display			
				No			•
				Advanced			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
				Program Controlled			
			Geom	etric Modification			
				None			
				None			
		Mode		TABLE 33 ctions > Contacts > Con	ntact Pagions		
123	Contact Reg	Contact Po				on Contact Region 129	n C
				Fully Defined			
				Scope			
				Geometry Selection			
	1 Fac	De l			3 Faces		
			3 Faces			2 Faces	
i							7

NUT-9	9\RIGHT-NUT-9		BACK-PLATE\BACK-PLATE								
НТ-	SCREW24\SCREW24	4 SCREW1\SCREW1	SCREW2\SCREW2	SCREW3\SC	CREW3	SCREW4\SCREW4	SCREW5\SCREW	/5 SCI			
				No							
			Definit								
				Bonded							
				Automatic							
			Prog	ram Controlled	<u>d</u>						
			Prog	ram Controlled	d						
			1.8	8391e-003 m							
				No							
			Displa								
				No							
			Advand		1						
				ram Controlled							
			Progr	ram Controlled	d 						
			Prog	ram Controlled	:d						
			Prog	ram Controllec	d						
			Prog	ram Controlled	∤d						
			Prog	ram Controllec	∤d						
			Prog	ram Controlled	;d						
				ram Controllec	.d						
			Geometric Mo	odification							
				None							
_				None							
			TABLE B4) > Connections >		Contact	Regions					
itact l 135	Region Contact Re 5 136		gion 137 Contact F	Region 138	Contac	et Region 139 Con	tact Region 140	Conta			
700	7 100		F	ully Defined							

			_						
			Scope						
			Geometry Selecti	ion					
8 F	aces		2 Faces			8			
				2 Faces					
		LE	FT-GUIDEBAR\LEFT-G	JUIDEBAR					
W8\SCREW8	SCREW9\SCREW9	SCREW10\SCREW10	SCREW11\SCREW11	SCREW12\SCREW12	SCREW13\SCREW13	SCREW			
			No						
			Definition						
	Bonded								
	Automatic								
			Program Controll	led					
	Program Controlled								
			1.8391e-003 m	١					
			No						
			Display						
			No						
			Advanced Program Controll	lod					
			Program Controll						
			Program Controll	ed 					
			Program Controll	led					
			Program Controll	led					
			Program Controll	led					
			Program Controll	led					
			Program Controll	led					
	Geometric Modification								
			None						
			None						

TABLE 35

	М	odel (A4, B4) > Conne	ctions > Contacts > Co	ntact Regions		
ct Region 145	Contact Region 146	Contact Region 147	Contact Region 148	Contact Region 149	Contact Region 150	Col
			Fully Defined			
			Scope			
			Geometry Selection			
Faces		2 Faces		8 Fa	aces	
		2 Fa	ices			
		RIGHT-GUIDEBAR\	RIGHT-GUIDEBAR			
/18\SCREW18	SCREW19\SCREW19	SCREW20\SCREW20	SCREW21\SCREW21	SCREW22\SCREW22	SCREW23\SCREW23	SCR
			No			
			Definition			
			Bonded			
			Automatic			
			Program Controlled			
			Program Controlled			
			1.8391e-003 m			
			No			
			Display			
			No			
			Advanced			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
			Program Controlled			
		Geom	netric Modification			

None

None

TABLE 36 Model (A4, B4) > Connections > Contacts > Contact Regions Contact Contact Contact Contact Contact Region Contact Contact Region Region Region Contact Region 159 Region 160 161 Region 162 Region 163 Re 156 157 158 **Fully Defined** Scope Geometry Selection 1 Face 1 Face 4 Faces 1 Face PCI-PCI-PCI-7\PCI-7 SINK\SINK BASE\BASE BOARD\BOA 5\PCI-5 | 6\PCI-6 PEM-PEM-FASTENER- FASTENER- FAS DDR4_SLOT_1_1_2_1\DDR4_SLOT_1_1_2_1 BASE\BASE BOARD\BOARD BOARD\BOARD 1\PEM-2\PEM-FASTENER- FASTENER- FAS 2 No **Definition Bonded** Automatic **Program Controlled Program Controlled** 1.8391e-003 m No **Display** No Advanced **Program Controlled Program Controlled Program Controlled Program Controlled Program Controlled Program Controlled Program Controlled**

	Program Controlled										
	Geometric Modification										
	None										
	None										
	TABLE 37 Model (A4, B4) > Connections > Contact Regions										
ect ne	Contact Region 166	Contact Region 167	Contact Region 168	Contact Region 169	Contact Region 170	Contact Region 171	Contact Region 172	Contact Region 173	Contact Region 174	Contact Region 175	
te						lly Defined					
2~					Scope						
ng od					Geom	etry Selection	1				
ıct						1 Face					
et						1 Face					
ict es					BOA	RD\BOARD					
et	PEM- FASTENER- 5\PEM-	PEM- FASTENER- 6\PEM-	PEM- FASTENER- 7\PEM-	PEM- FASTENER- 8\PEM-	SCREW- 12\SCREW-	SCREW- 22\SCREW-	SCREW- 32\SCREW-	SCREW- 42\SCREW-	SCREW- 5\SCREW-	SCREW- 6\SCREW- 7	
es			FASTENER-		12	22	32	42	5	6	
ed	5	6	7	8		No					
,					Definiti						
ре						Bonded					
be de					Д	utomatic					
or					Progra	am Controlled					
im					Progra	am Controlled					
ict im						391e-003 m					
ce ed						No					
su					Displa						
ent als						No					
al S					Advanc	ed					
on						am Controlled					
all ng					Progra	am Controlled					
ng on od					Progra	am Controlled					
on ce					Progra	am Controlled					
J-C											

ce	Program Controlled							
nal ss	Program Controlled							
ite ss	Program Controlled							
all on	Program Controlled							
	Geometric Modification							
ict try on	None							
et try on	None							

TABLE 38

Model (A4, B4) > Connections > Contacts > Contact Regions Contact Contact Contact | Object Contact Region Name Region 179 178 180 181 182 185 186 187 177 183 184 Fully Defined State Scope Scoping **Geometry Selection** Method Contact 1 Face 2 1 Face 1 Face 29 Faces **Target** Faces Contact BOARD\BOARD **Bodies** NUT-STANDOFF-SCREW-Target 8\SCREW-1\NUT-1\STANDOFF-DDR4_SLOT_1_1_2_1\DDR4_SLOT_1_1_2_1 Bodies 8 1 **Protected** No **Definition** Bonded Type Scope Automatic Mode **Behavior Program Controlled** Trim **Program Controlled** Contact Trim 1.8391e-003 m Tolerance Suppressed No **Display** Element No Normals Advanced Formulation **Program Controlled** Small **Program Controlled** Sliding

Detection Method	Program Controlled
Penetration Tolerance	Program Controlled
Elastic Slip Tolerance	Program Controlled
Normal Stiffness	Program Controlled
Update Stiffness	Program Controlled
Pinball Region	Program Controlled
	Geometric Modification
Contact Geometry Correction	None
Target Geometry Correction	None

TABLE 39

Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	Contact Region 188		Contact Region 190	Contact Region 191	Contact Region 192	Contact Region 193		Contact Region 195	Contact Region 196	Contact Region 197	Contact Region 198
State	State Fully Defined										
	Scope										
Scoping Method		Geometry Selection									
Contact		1 Face								2 Faces	
Target				8 Fa	aces					9 Faces	
Contact Bodies		BOARD\BOARD						PLATE\PLATE			
Target Bodies	M	MEM-00175-02_A_1_1_2_1\MEM-00175-02_A_1_1_2_1					1∖PEM-	PEM- FASTENER- 2\PEM- FASTENER- 2	3∖PEM-		
Protected							No				
						Definition	n				
Туре						E	Bonded				
Scope Mode						Aı	utomatic				
Behavior						Progra	m Contro	olled			
Trim Contact						Progra	m Contro	olled			
Trim Tolerance	1.8391e-003 m										
Suppressed											
						Display	/				

Element Normals	No						
Advanced							
Formulation Program Controlled							
Small Sliding	Program Controlled						
Detection Method	Program Controlled						
Penetration Tolerance	Program Controlled						
Elastic Slip Tolerance	Program Controlled						
Normal Stiffness	Program Controlled						
Update Stiffness	Program Controlled						
Pinball Region	Program Controlled						
	Geometric Modification						
Contact Geometry Correction	None						
Target Geometry Correction	None						

TABLE 40 Model (A4, B4) > Connections > Contacts > Contact Regions

Contact

et e	Contact Region 199	Contact Region 200	Contact Region 201	Contact Region 202	Contact Region 203	Contact Region 204	Contact Region 205	Contact Region 206	Contact Region 207	Contact Region 208		
е	Fully Defined											
	Scope											
g d		Geometry Selection										
ct			2 Faces					1 Fa	ce			
et			9 Faces					1 Fa	ce			
ct s	PLATE\PLATE											
et S	4\PEM-	PEM- FASTENER- 5\PEM- FASTENER-	6\PEM-	7∖PEM-	8\PEM-	SCREW- 12\SCREW- 12	SCREW- 22\SCREW- 22	SCREW- 32\SCREW- 32	SCREW- 42\SCREW- 42	SCREW- 5\SCREW- 5		
	4	5	6	7	8							
d						No						
					Definiti	on						
е						Bonded						
e e					A	Automatic						
or					Progr	am Controlled	t					

n et	Program Controlled										
n						1.8391€	-003 m				
e d						N	0				
						Display					
nt	No										
S						Advanced					
n						Program (Controlled				
Ш						Program (
g						Fiogram	Jonitrolled				
n d	Program Controlled										
n e	Program Controlled										
p e						Program (Controlled				
al S	Program Controlled										
е						Program (Controlled				
s III						Program (
n					0						
ct					Geon	netric Modific	ation				
у						No	ne				
n et											
y n	None										
			Mode	el (A4, B4) > Conne	TABLE 41 ctions > Con	tacts > Conta	ct Regions			
bject Jame	Contact Region	Contact Region	Contact Region	Contact Region		Contact Region 215	Contact	Contact Region 217	Contact Region 218	Contact Region 219	Coi Regio

Name	Region 210	Region 211	Region 212	Region 213	Region 214	Region 215	Region 216	Region 217	Region 218	Region 219	Regio	
State						Fully D	efined				·	
	Scope											
oping ethod	GEOMETY SELECTION											
ntact	1 Face 2 Faces		1 Face 2 Faces 1 Face 2 Fa						aces			
arget	1 F	ace	2 Faces	8 Faces	1 Face	2 Faces						
ontact odies	PI ATF\PI ATF					PEM- FASTENER- 1\PEM- FASTENER- 1	2\PEM-	PEM- FASTENER- 3\PEM- FASTENER- 3	4\PEM-	PEM- FASTENER- 5\PEM- FASTENER- 5	6\P	
arget odies	SCREW- 7\SCREW- 7	SCREW- 8\SCREW- 8	SCREW- 9\SCREW- 9	NUT- 1\NUT- 1	PSK\PSK	SCREW- 32\SCREW- 32	SCREW- 8\SCREW-8	SCREW- 7\SCREW-7	SCREW- 12\SCREW- 12	SCREW- 6\SCREW-6	SCF 22\SC 2	

ected	ed No								
		Definition							
Type		Bonde	ed .						
cope Mode		Automa	atic						
avior	Program Controlled								
Trim Intact	Program Controlled								
Trim ance	1.8391e-003 m								
essed		No							
	Display								
ment rmals		No							
		Advanced							
ation		Program Co	ntrolled						
Small liding									
ethod									
ration rance	Program Controlled								
c Slip rance	Program Controlled								
ormal fness		Program Co	ntrolled						
odate fness		Program Co	ntrolled						
inball egion		Program Co	ntrolled						
egion		Geometric Modificat	tion						
ontact metry ection		None							
arget metry ection		None	;						
	Model (A4, B4)	TABLE 42) > Connections > Contact	cts > Contact Regions						
act Region 225	Contact Region 226	Contact Region 227	Contact Region 228	Contact R					
		Fully Def	ined						

		Geometry S	election	
17 Faces	163 Faces		17 Faces	163 F
8 Faces	39 Faces	12 Faces	8 Faces	39 Fa

Scope

DDR4_SLOT_1_1_2_1\DDR4_SLOT_1_1_2_1

2_	MEM-00175- 1\DDR4_SLOT_1_1_2_1									
	No									
	Definition Desirated									
	Bonded									
	Automatic Program Controlled									
	Program Controlled									
	Program Controlled									
	1.8391e-003 m									
	No Display									
	Display									
	No Advenced									
	Advanced Program Controlled									
	Program Controlled									
	Program Controlled									
	Program Controlled									
	Program Controlled									
	Program Controlled									
	Program Controlled									
	Program Controlled									
	Geometric Modification									
	None									
	None									
	TABLE 43 Model (A4, B4) > Connections > Contact Regions									
	Contact Region 236 Contact Region 237 Contact Region 238 Contact Region 239									
	Fully Defined									

	Scope									
	Geometry Selection									
	17 Faces	163 Faces	17 Faces							
	8 Faces	39 Faces	12 Faces	8 Faces						
		DDR4_SLOT_1_1_2_	1\DDR4_SLOT_1_1_2_1							
P- DDR4_SLOT_1_1_2_1\DDR4_SLOT_1_1_2_1										
	No									
	Definition									
	Bonded									
	Automatic									
		Program	Controlled							
	Program Controlled									
	1.8391e-003 m									
	No									
		Display								
			No							
		Advanced								
		Program	Controlled							
		Program	Controlled							
		Program	Controlled							
		Program	Controlled							
		Program	Controlled							
		Program	Controlled							
		Program	Controlled							
		Program	Controlled							
		Geometric Modif	ication							
		N	lone							
	None									

TABLE 44
Model (A4, B4) > Connections > Contacts > Contact Regions

ject ime	Contact Region 243	Contact Region 244	Contact Region 245	Contact Region 246	Contact Region 247	Contact Region 248			Contact Region 251	
tate			Fully D	efined						
			Scope							
oing hod			Geometry	Selection	1					
tact	163 Faces	17 Faces	163 Faces	17 Faces				3 Faces		
rget	39 Faces	12 Faces	39 Faces	12 Faces				9 Faces		
tact dies	DDR4	_SLOT_1_1_2_1\DDR4_5	SLOT_1_1_2_1		MEM-00175-02_A_1_1_2_1\MEM-00175-02_A_1_			02_A_1_		
rget dies	MEM-00175- 02_A_1_1_2_1\MEM- 00175- 02_A_1_1_2_1	IMP- 00393_D_1_1_2_1\IMP- 00393_D_1_1_2_1	MEM-00175- 02_A_1_1_2_1\MEM- 00175- 02_A_1_1_2_1		IMP-00	0393_D_	1_1_2_1\	IMP-003	93_D_1_	1_2_1
ted			N	0						
			Definition							
ype ope			Bon							
ode	Automatic									
vior			Program (Controlled	l					
rim tact			Program (Controlled	l					
rim nce	1.8391e-003 m									
sed	No									
	Display									
nent nals	No									
	Advanced									
tion nall	Program Controlled									
ling	Program Controlled									
tion hod			Program (Controlled	l					
tion nce			Program (Controlled	İ					
Slip nce		Program Controlled								
mal ess	Program Controlled									
late ess	Program Controlled									
ball	Program Controlled									
jion			Geometric Modific							
tact etry	None									
tion										

TABLE 45
Model (A4, B4) > Connections > Contacts > Contact Regions

	Model (A4, B4) > Connections > Contacts > Contact Regions						
Object Name	Contact Region 254	Contact Region 255	Contact Region 256	Contact Region 257	Contact Region 258	Contact Region 259	Contact Region 260
State			Fully Defir	ned			
	Scope						
Scoping Method		Ge	ometry Se	lection			
Contact			3 Faces	3			
Target	9 Faces			3 Fa	aces		
Contact Bodies	MEM-00175- 02_A_1_1_2_1\MEM- 00175-02_A_1_1_2_1 IMP-00393_D_1_1_2_1\IMP-00393_D_1_1_2_1						
Target Bodies	IMP-00)393_D_1_	_1_2_1\IMF	P-00393_E)_1_1_2_1		
Protected			No				
		Defin	ition				
Туре			Bonded	ł			
Scope Mode			Automat	ic			
Behavior		Program Controlled					
Trim Contact		Pro	ogram Con	trolled			
Trim Tolerance	1.8391e-003 m						
Suppressed	No						
		Disp	lay				
Element Normals			No				
		Adva	nced				
Formulation	Formulation Program Controlled						
Small Sliding	Program Controlled						
Detection Method		Pro	ogram Con	trolled			
Penetration Tolerance		Pro	ogram Con	trolled			
Elastic Slip Tolerance		Pro	ogram Con	trolled			
Normal Stiffness		Pro	ogram Con	trolled			
Update Stiffness		Pro	ogram Con	trolled			
Pinball Region		Pro	ogram Con	trolled			
_	Geometric Modification						
Contact Geometry Correction	Geometry						

Target	
Geometry	
Correction	

None

Mesh

TABLE 46 Model (A4, B4) > Mesh

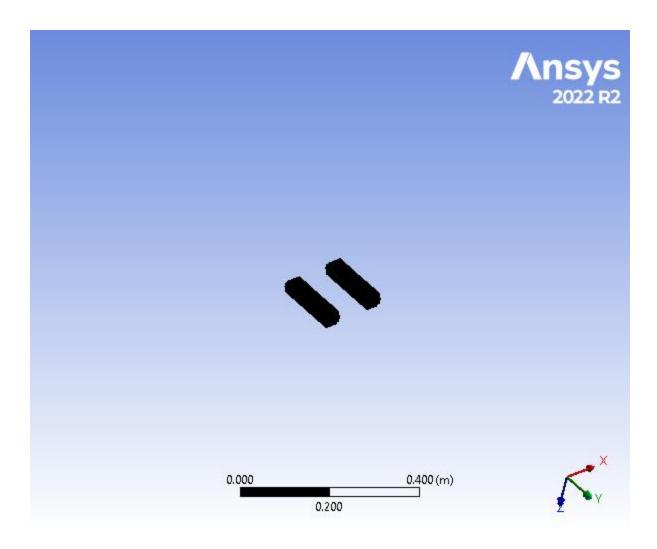
Model (A4, B4) > Mesh					
Object Name	Mesh				
State	Solved				
Display					
Display Style	Use Geometry Setting				
Defaults					
Physics Preference	Mechanical				
Element Order	Program Controlled				
Element Size	Default				
Sizing					
Use Adaptive Sizing	Yes				
Resolution	Default (2)				
Mesh Defeaturing	Yes				
Defeature Size	Default				
Transition	Fast				
Span Angle Center	Coarse				
Initial Size Seed	Assembly				
Bounding Box Diagonal	0.73564 m				
Average Surface Area	9.1312e-005 m ²				
Minimum Edge Length	1.6327e-005 m				
Quality					
Check Mesh Quality	Yes, Errors				
Error Limits	Aggressive Mechanical				
Target Element Quality	Default (5.e-002)				
Smoothing	Medium				
Mesh Metric	None				
Inflation					
Use Automatic Inflation	None				
Inflation Option	Smooth Transition				
Transition Ratio	0.272				
Maximum Layers	5				
Growth Rate	1.2				
Inflation Algorithm	Pre				
View Advanced Options	No				
Advanced					
Number of CPUs for Parallel Part Meshing	Program Controlled				
Straight Sided Elements	No				
Rigid Body Behavior	Dimensionally Reduced				
Triangle Surface Mesher	Program Controlled				
Topology Checking	Yes				
Pinch Tolerance	Please Define				
Generate Pinch on Refresh	No				

Statistics	
Nodes	453910
Elements	231263

TABLE 47 Model (A4, B4) > Mesh > Mesh Controls

model (A4, B4) > mesh > mesh controls						
Object Name	Smallest	Small	Medium	Big	Biggest	
State		Fully Defined				
		Scope				
Scoping Method		Geom	etry Selection	on		
Geometry	1351 Faces	13128 Faces	648 Faces	51 Faces	21 Faces	
	Definition					
Suppressed	No					
Туре	Element Size					
Element Size	2.5e-003 m	5.e-003 m	1.e-002 m	2.e-002 m	3.e-002 m	
	Advanced					
Defeature Size	Default					
Influence Volume	No					
Behavior	Soft					

FIGURE 2 Model (A4, B4) > Mesh > Mesh



Modal (A5)

TABLE 48 Model (A4, B4) > Analysis

Model (A4, B4) > Allalysis					
Object Name	Modal (A5)				
State	Solved				
Definition					
Physics Type	Structural				
Analysis Type	Modal				
Solver Target	Mechanical APDL				
Options					
Environment Temperature	22. °C				
Generate Input Only	No				

TABLE 49
Model (A4, B4) > Modal (A5) > Initial Condition

odo: (714, 5 4) > moda: (710) > milia: oonailie					
Object Name		Pre-Stress (None)			
	State	Fully Defined			
Definition					

Pre-Stress Environment None Available

TABLE 50
Model (A4, B4) > Modal (A5) > Analysis Settings

Analysis Settings

	Model (A4, B4) > Modal (A5) > Analysis Settings
Name	, v
State	Fully Defined
	Options
des to Find	15
Search Range	No
emand ansion	No
	Solver Controls
amped	No
r Type	
	Rotordynamics Controls
Effect	Off
mpbell agram	Off
	Advanced
ct Split (DMP)	
(-	Output Controls
Stress	Yes
urface Stress	No
Stress	No
Strain	Yes
t Data	No
Forces	Constrained Nodes
ne and Energy	No
Angles	No
lculate actions	Yes
Modal Results	Program Controlled
eneral neous	No
ult File ession	Program Controlled
	Analysis Data Management
r Files ectory	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\clip_project_2_files\dp0\SYS
Future nalysis	MSUP Analyses
cratch r Files rectory	

IAPDL db	
ontact mmary	Program Controlled
Delete eeded Files	Yes
r Units	Active System
er Unit System	

TABLE 51 Model (A4, B4) > Modal (A5) > Loads

Object Name	Fixed Support			
State	e Fully Defined			
S	cope			
Scoping Method	Geometry Selection			
Geometry	24 Faces			
Definition				
Туре	Fixed Support			
Suppressed	No			

Solution (A6)

TABLE 52 Model (A4, B4) > Modal (A5) > Solution

	, (0) × 00 lutio				
Object Name	Solution (A6)				
State	Solved				
Adaptive Mesh Ref	inement				
Max Refinement Loops	1.				
Refinement Depth	2.				
Information					
Status	Done				
MAPDL Elapsed Time	2 m 56 s				
MAPDL Memory Used	16.268 GB				
MAPDL Result File Size	1.1532 GB				
Post Processing					
Beam Section Results	No				

The following bar chart indicates the frequency at each calculated mode.

FIGURE 3 Model (A4, B4) > Modal (A5) > Solution (A6)

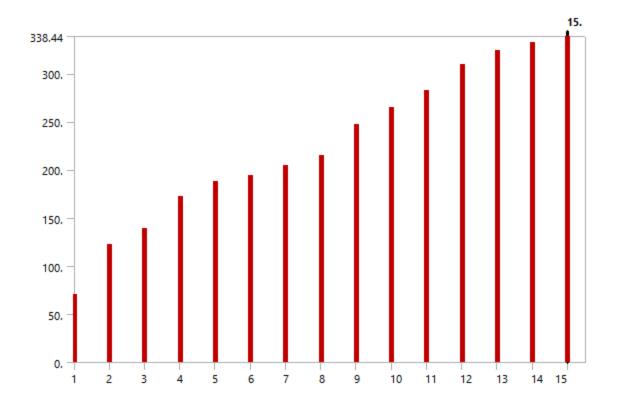


TABLE 53 Model (A4, B4) > Modal (A5) > Solution (A6)

Frequency [Hz]
70.532
122.24
138.75
172.
187.94
194.08
204.67
214.45
246.9
264.35
281.94
309.74
323.76
332.04
338.44

TABLE 54
Model (A4, B4) > Modal (A5) > Solution (A6) > Solution Information

11, 21, 1110 (210, 201	11, 21, 110 110, 110, 110, 110, 110, 110				
Object Name	Solution Information				
State	Solved				
Solution Information					
Solution Output	Solver Output				

Newton-Raphson Residuals	0		
Identify Element Violations	0		
Update Interval	2.5 s		
Display Points	All		
FE Connection Visibility			
Activate Visibility	Yes		
Display	All FE Connectors		
Draw Connections Attached To	All Nodes		
Line Color	Connection Type		
Visible on Results	No		
Line Thickness	Single		
Display Type	Lines		

TABLE 55
Model (A4, B4) > Modal (A5) > Solution (A6) > Results

()hiect Name	Total	Total			
		Total	Total	Total	Total
Def	formation	Deformation 2	Deformation 3	Deformation 4	Deformation 5
State			Solved		
	Scope				
Scoping Method		G	eometry Selection	n	
Geometry			All Bodies		
		Defin	ition		
Type	Total Deformation				
Mode	1.	2.	3.	4.	5.
Identifier					
Suppressed	No				
		Resi	ults		
Minimum	0. m				
Maximum 1.0	0126 m	1.2324 m	1.8732 m	1.3512 m	8.2815 m
Average 0.4	1174 m	0.35539 m	0.39071 m	0.35397 m	0.27566 m
Minimum Occurs On	LEFT-MOUNTING-EAR\LEFT-MOUNTING-EAR				
Maximum Occurs On	PLATE\PLATE IMP-00393_D_1_1_2_1\IMP-00393_D_1_1_2_1				
Information					
Frequency 70.	.532 Hz	122.24 Hz	138.75 Hz	172. Hz	187.94 Hz

TABLE 56
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation

Mode	Frequency [Hz]
1.	70.532
2.	122.24
3.	138.75
4.	172.
5.	187.94
6.	194.08
7.	204.67
8.	214.45
9.	246.9

10.	264.35
11.	281.94
12.	309.74
13.	323.76
14.	332.04
15.	338.44

TABLE 57
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation 2

Mode	Frequency [Hz]
1.	70.532
2.	122.24
3.	138.75
4.	172.
5.	187.94
6.	194.08
7.	204.67
8.	214.45
9.	246.9
10.	264.35
11.	281.94
12.	309.74
13.	323.76
14.	332.04
15.	338.44

TABLE 58
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation 3

Mode	Frequency [Hz]
1.	70.532
2.	122.24
3.	138.75
4.	172.
5.	187.94
6.	194.08
7.	204.67
8.	214.45
9.	246.9
10.	264.35
11.	281.94
12.	309.74
13.	323.76
14.	332.04
15.	338.44

TABLE 59
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation 4

,	(2.0)	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•
	Mode	Frequency [Hz	<u>.</u>]
	1.	70.532	

2.	122.24
3.	138.75
4.	172.
5.	187.94
6.	194.08
7.	204.67
8.	214.45
9.	246.9
10.	264.35
11.	281.94
12.	309.74
13.	323.76
14.	332.04
15.	338.44

TABLE 60
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation 5

Mode	Frequency [Hz]
1.	70.532
2.	122.24
3.	138.75
4.	172.
5.	187.94
6.	194.08
7.	204.67
8.	214.45
9.	246.9
10.	264.35
11.	281.94
12.	309.74
13.	323.76
14.	332.04
15.	338.44

Harmonic Response (B5)

TABLE 61 Model (A4, B4) > Analysis

	,		
Object Name	Harmonic Response (B5)		
State	Solved		
Definition			
Physics Type	Structural		
Analysis Type	Harmonic Response		
Solver Target	Mechanical APDL		
Options			
Generate Input Only	No		

TABLE 62 Model (A4, B4) > Harmonic Response (B5) > Initial Condition

= 1, 1100111101111011100 (= 0, 1 11111101				
Object Name	Modal (Modal)			
State	Fully Defined			
Definition				
Modal Environment	Modal			
Pre-Stress Environment	None			

TABLE 63 Model (A4, B4) > Harmonic Response (B5) > Analysis Settings Analysis Settings

ect Name	Analysis Settings
State	Fully Defined
	Step Controls
iple Steps	No
	Options
requency Spacing	Linear
Range Minimum	
Range Maximum	100. Hz
Solution Intervals	50
er Defined equencies	
Solution Method	
Include Residual Vector	No
Cluster Results	No
n Demand Expansion	No
re Results At All equencies	Yes
•	Rotordynamics Controls
olis Effect	
	Output Controls
Stress	Yes
Surface Stress	
ack Stress	No
Strain	Yes
ntact Data	Yes
al Forces	No
olume and Energy	
ler Angles	

<u> </u>	
Calculate Reactions	Yes
General ellaneous	No
Expand sults From	Program Controlled
Expansion	Modal Solution
Result File mpression	Program Controlled
пріосолі	Damping Controls
Damping Ratio From Modal	No
Damping Define By	Damping Ratio
Damping Ratio	2.e-002
Stiffness Coefficient Define By	Direct Input
Stiffness Coefficient	0.
Mass Coefficient	0.
	Analysis Data Management
olver Files Directory	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\clip_project_2_files\dp0\S 1\MECH\
Future Analysis	None
Scratch olver Files Directory	
re MAPDL db	No
Contact Summary	Program Controlled
Delete Jnneeded Files	Yes
lver Units	Active System
Solver Unit System	mks

TABLE 64 Model (A4, B4) > Harmonic Response (B5) > Accelerations

System

Object Name	Acceleration		
State	Fully Defined		
Scope			
Geometry	All Bodies		
Definition			
Base Excitation	No		

Define By	Components	
Coordinate System	Global Coordinate System	
X Component	0. m/s²	
Y Component	0. m/s²	
Z Component	-45.4 m/s²	
Suppressed	No	

FIGURE 4
Model (A4, B4) > Harmonic Response (B5) > Acceleration > AccelerationCondition

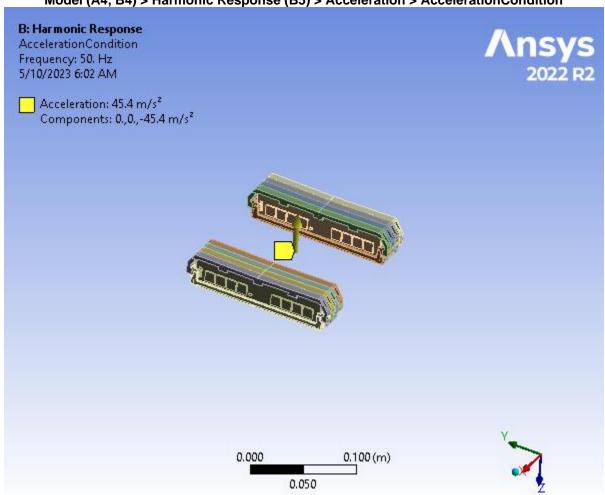
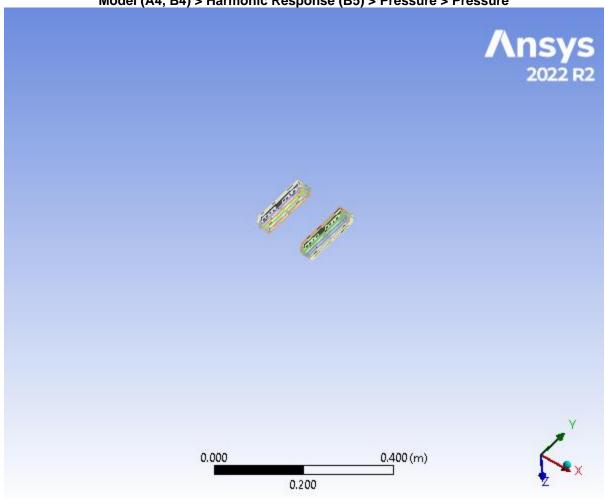


TABLE 65
Model (A4, B4) > Harmonic Response (B5) > Loads

(A+, B+) > Harmonic Response (B5) >			
Pressure			
Suppressed			
Scope			
Geometry Selection			
1 Face			
Definition			
Pressure			
Normal To			

Applied By	Direct
Loaded Area	Initial
Magnitude	400. Pa
Phase Angle	0. °
Suppressed	Yes

FIGURE 5
Model (A4, B4) > Harmonic Response (B5) > Pressure > Pressure



Solution (B6)

TABLE 66 Model (A4, B4) > Harmonic Response (B5) > Solution

, ,				
Object Name	Solution (B6)			
State	Solved			
Information				
Status	Done			
MAPDL Elapsed Time	10 m 22 s			
MAPDL Memory Used	4.4141 GB			
MAPDL Result File Size	11.53 GB			

Post Processing		
Beam Section Results	No	

FIGURE 6
Model (A4, B4) > Harmonic Response (B5) > Solution (B6)

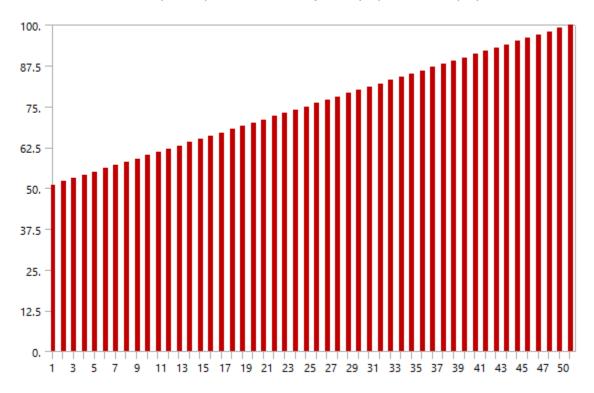


TABLE 67
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Solution Information

Clation (Bo) > Colat			
Solution Information			
Solved			
ation			
Solver Output			
0			
0			
2.5 s			
All			
FE Connection Visibility			
Yes			
All FE Connectors			
All Nodes			
Connection Type			
No			
Single			
Onigio			

TABLE 68

Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

VelocityFrequencyRespons | VelocityFrequencyRespons | AccelerationFrequencyRespon | AccelerationFrequencyRespons | VelocityFrequencyRespons | AccelerationFrequencyRespon | AccelerationFrequency

/elocityFrequencyRespons eDIMM1x	VelocityFrequencyRespons eDIMM1y	VelocityFrequencyRespons eDIMM1z	AccelerationFrequencyRespon seDIMM1x	AccelerationFreque seDIMM1
<u> </u>	<i></i>	Solved		
		Scope		
		Geometry Selection		
		1 Body		
		Use Average		
	Directional Valenty	Definition		Directional Acce
X Axis	Directional Velocity Y Axis	Z Axis	X Axis	Y Axis
A ANIS	I Axis	Z AXIS	A Axis	1 AXIS
		Global Coordinate Syste	m	
		No		
		Options		
		Use Parent		
		50. Hz		
		100. Hz		
		Bode		
		Log Y		
		Results		
0.14578 m/s	0.20023 m/s	2.5538 m/s	65.035 m/s²	89.325 m/
				71. Hz
161.36 °	161.11 °	-18.206 °	-108.64 °	-108.89 '
-0.13813 m/s	-0.18945 m/s	2.4259 m/s	-20.789 m/s ²	-28.912 m/
4.6601e-002 m/s	6.481e-002 m/s	-0.79791 m/s	-61.622 m/s²	-84.516 m/

FIGURE 7
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM1x

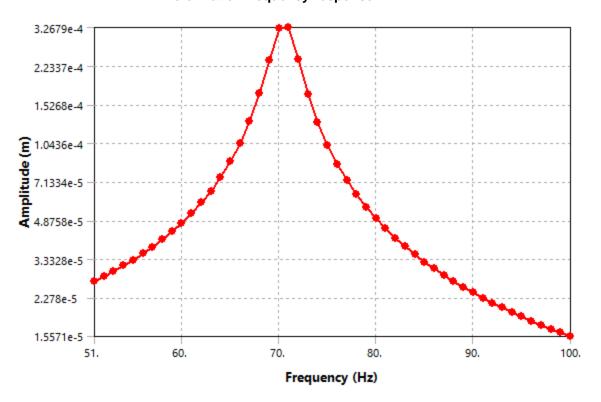


FIGURE 8
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) >
DeformationFrequencyResponseDIMM1y

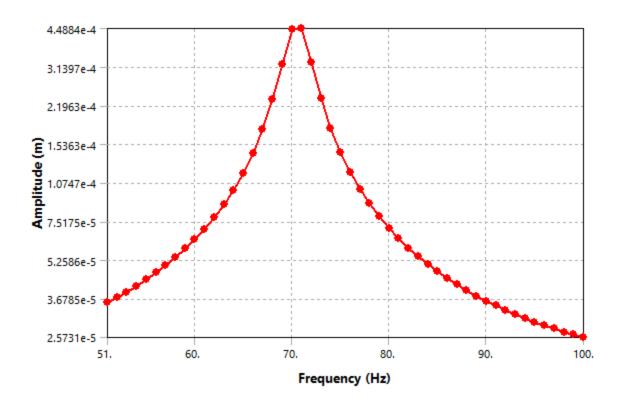


FIGURE 9
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) >
DeformationFrequencyResponseDIMM1z

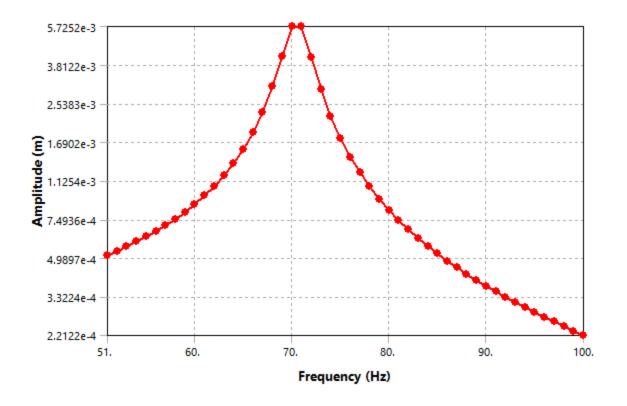


FIGURE 10
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1x

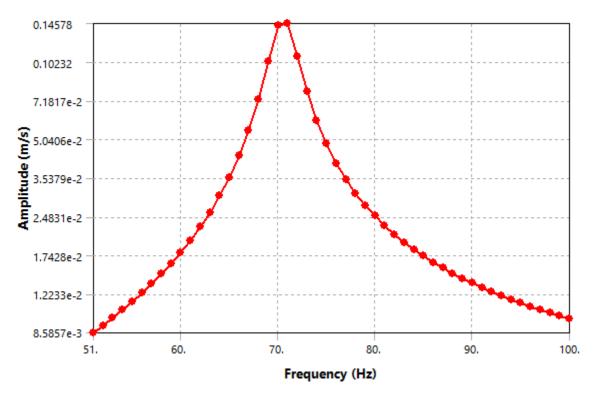


FIGURE 11
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1y

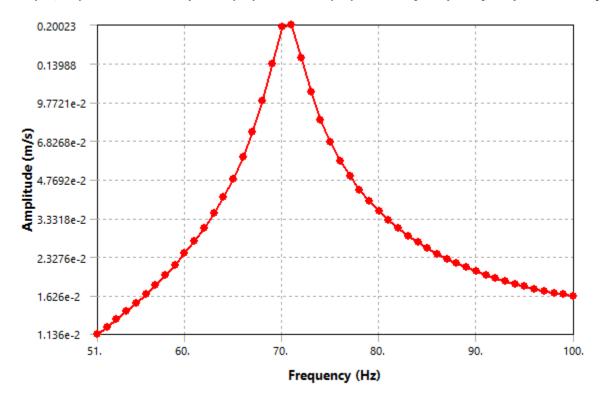


FIGURE 12
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1z

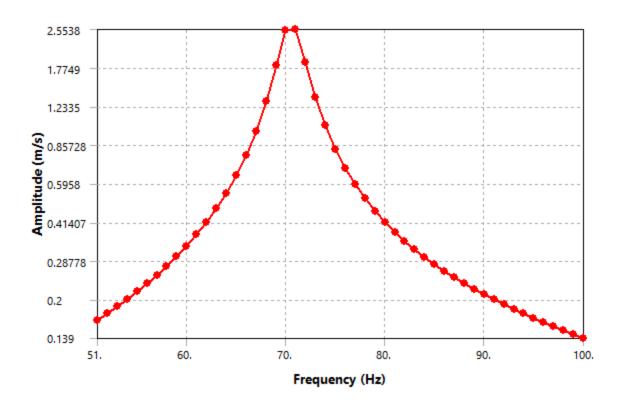


FIGURE 13
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1x

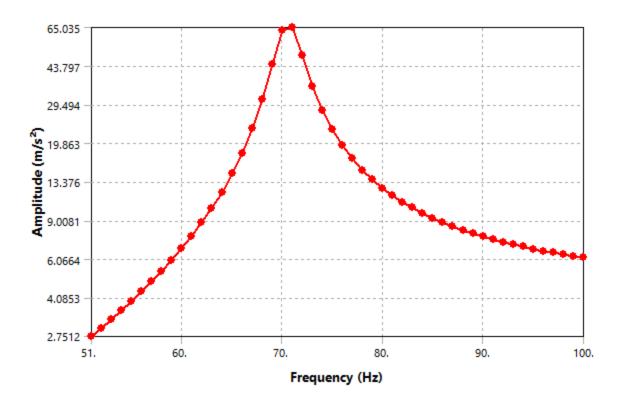


FIGURE 14
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1y

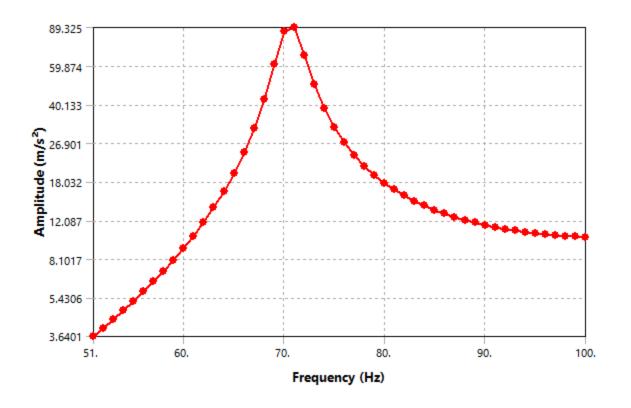


FIGURE 15
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1z

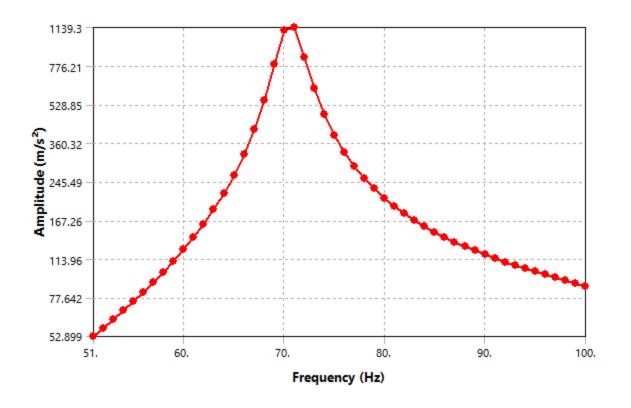


FIGURE 16
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2x

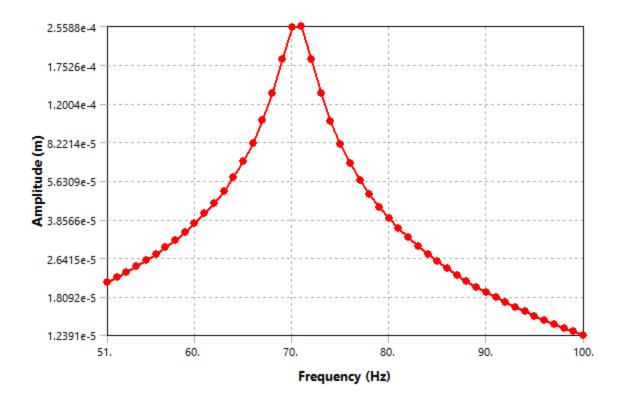


FIGURE 17
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2y

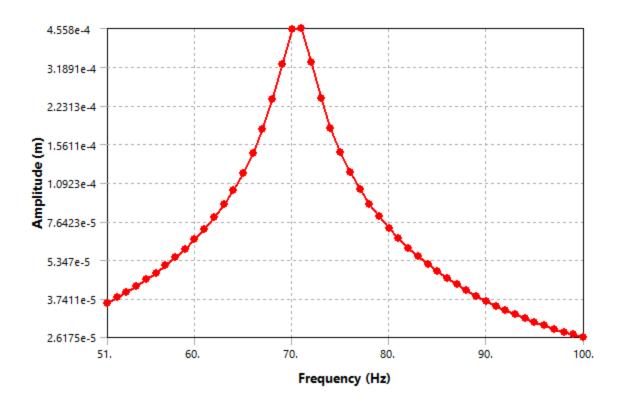


TABLE 69 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts DeformationFrequencyRespo

ormationFrequencyRespo

DeformationFrequencyRespo DeformationFrequencyRespo

DeformationFre

	Botonnation roquonoy toopo	Bololination roquolity (copo		
nseDIMM3z	nseDIMM4x	nseDIMM4y	nseDIMM4z	nseDII
		Solved		
		Scope		
		Geometry Selection		
		1 Body		
		Use Average		
		Definition		
		Directional Deformation		
Z Axis	X Axis	Y Axis	Z Axis	X A
		Global Coordinate System		
		,		

No

Use Parent

Options

50. Hz

100. Hz

Bode

Log Y

	Results					
5.9135e-003 m	1.0977e-004 m	4.6688e-004 m	5.9345e-003 m	2.6524e-		
	71. Hz					
-108.22 °	71.351 °	71.098 °	-108.22 °	-108.6		
-1.849e-003 m	3.5101e-005 m	1.5125e-004 m	-1.8557e-003 m	-8.4639e		
-5.617e-003 m	1.0401e-004 m	4.417e-004 m	-5.6369e-003 m	-2.5137e		

FIGURE 18
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2z

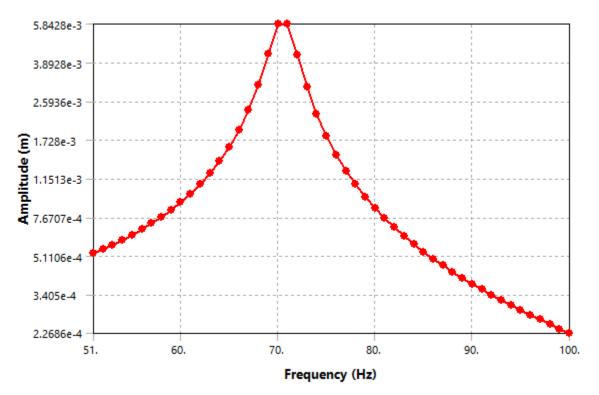


FIGURE 19
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3x

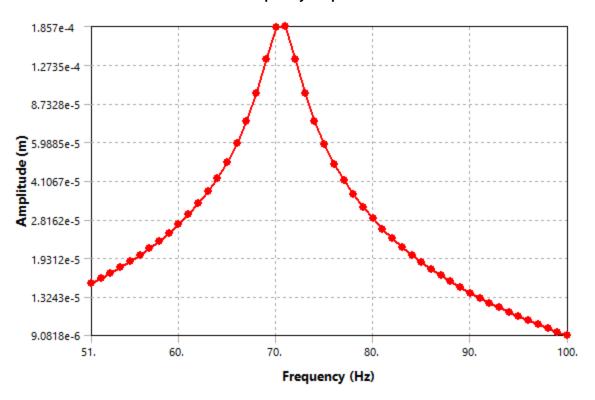


FIGURE 20 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3y

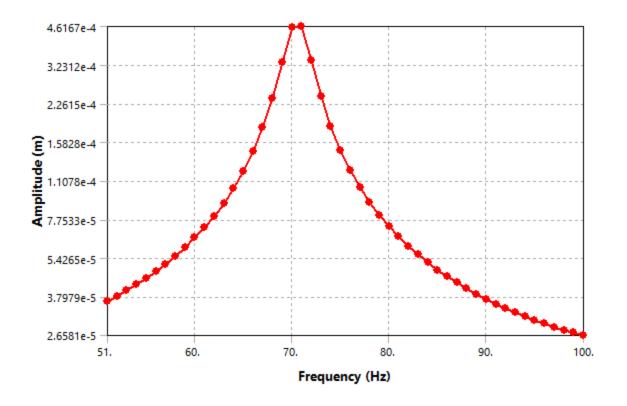


FIGURE 21 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3z

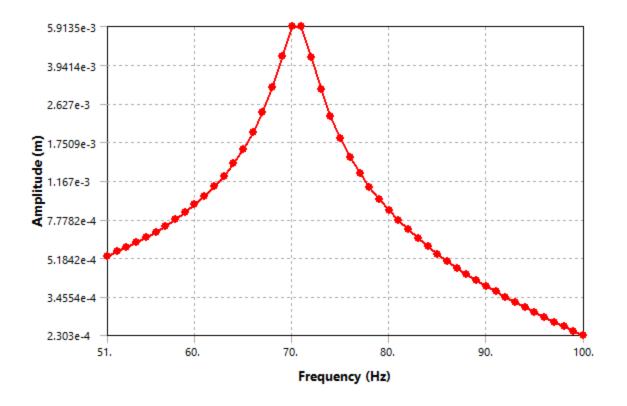


FIGURE 22 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4x

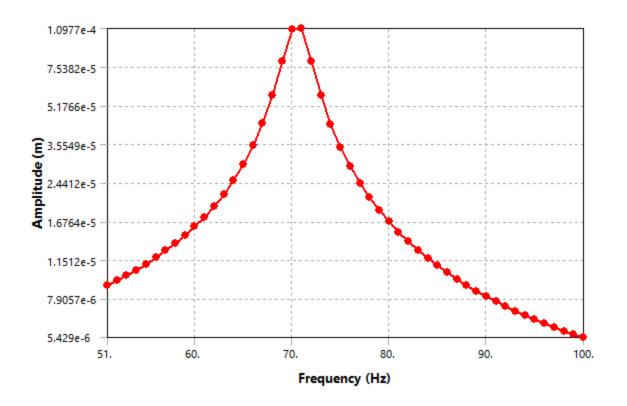


FIGURE 23 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4y

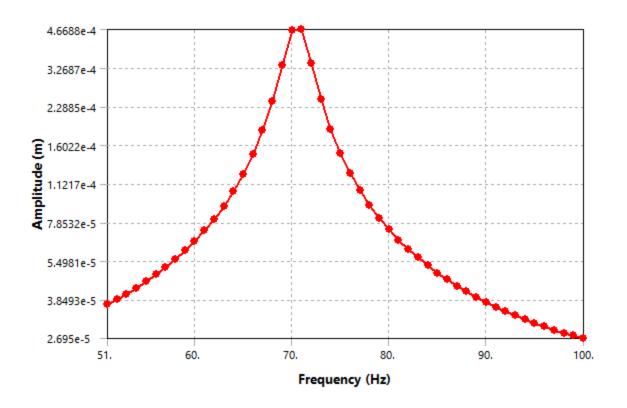


FIGURE 24
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4z

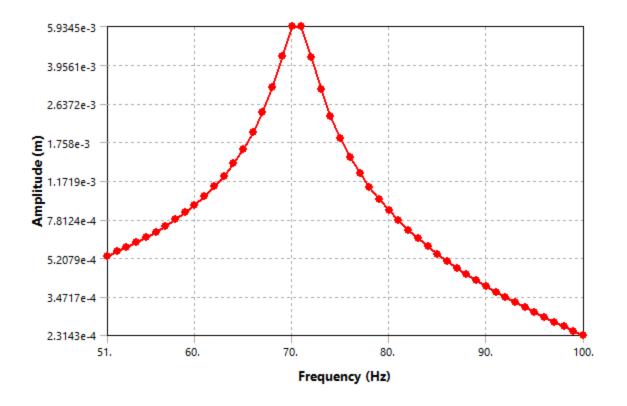


FIGURE 25
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5x

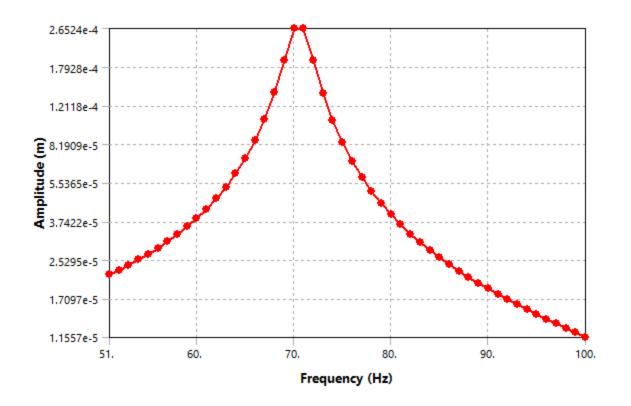


FIGURE 26 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5y

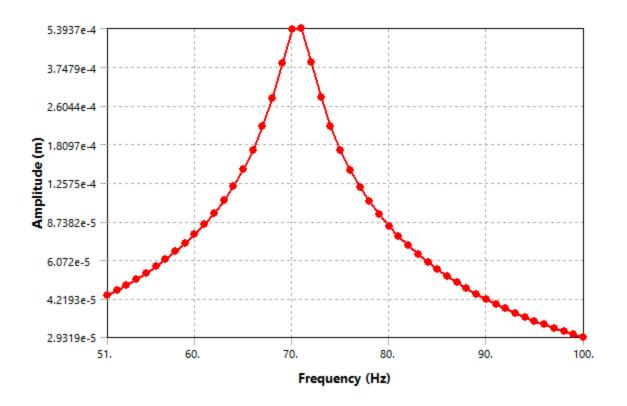


FIGURE 27 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5z

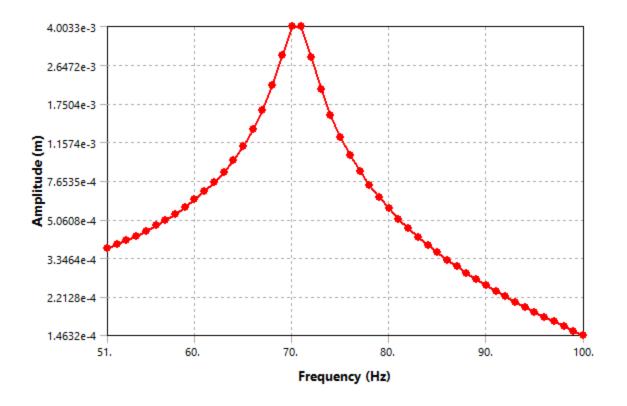


FIGURE 28 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6x

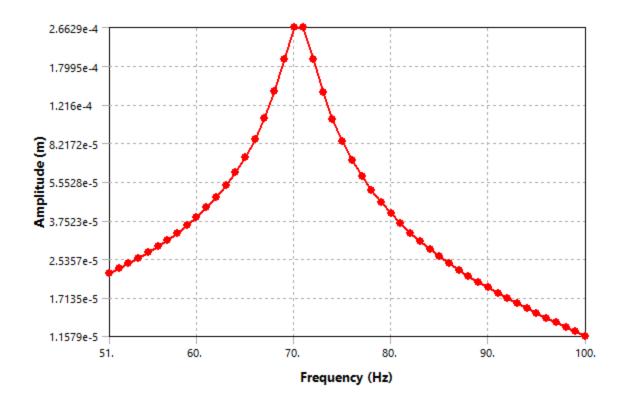


TABLE 70 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

;	DeformationFrequencyRespons	DeformationFrequencyRespons	VelocityFrequencyResponse	VelocityFrequencyResponse	Velocity⊢i
	eDIMM7y	eDIMM7z	DIMM2x	DIMM2y	
			Solved		
		Sc	cope		
		Geo	ometry Selection		
			1 Body		
			Use Average		

	Defi	inition		
Y Axis	Z Axis	X Axis	Y Axis	

Global Coordinate System

No

Options

Use Parent

50	Hъ

100. Hz

Bode

Log Y

Results						
5.4501e-004 m	3.6919e-003 m	3.6919e-003 m 0.11415 m/s 0.20334 m/s		2		
. Hz	70. Hz					
71.259°	-69.017 °	161.33 °	161.11 °			
1.7511e-004 m	1.322e-003 m	-0.10814 m/s	-0.19239 m/s	2		
5.1611e-004 m	-3.447e-003 m	3.6544e-002 m/s	6.5829e-002 m/s	-0		

FIGURE 29 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6y

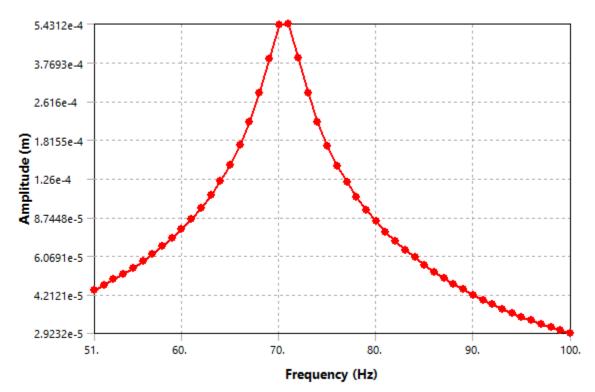


FIGURE 30 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6z

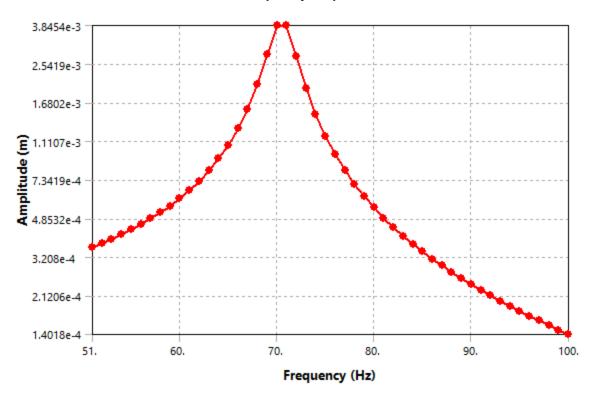


FIGURE 31 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM7x

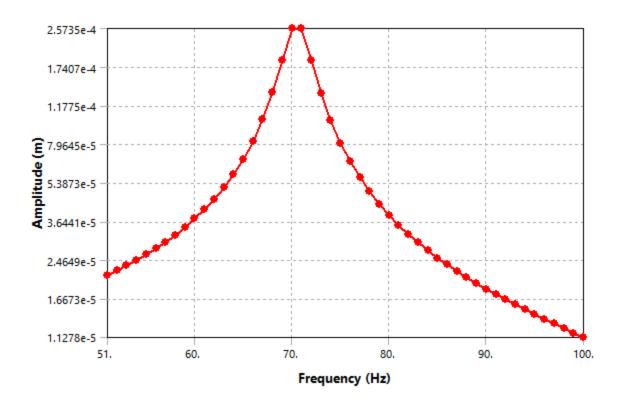


FIGURE 32 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM7y

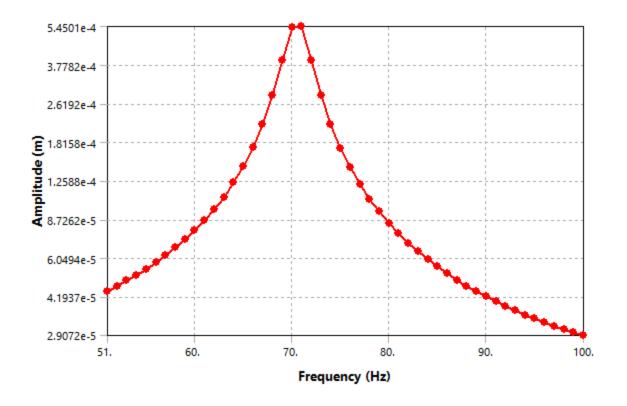


FIGURE 33
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) >
DeformationFrequencyResponseDIMM7z

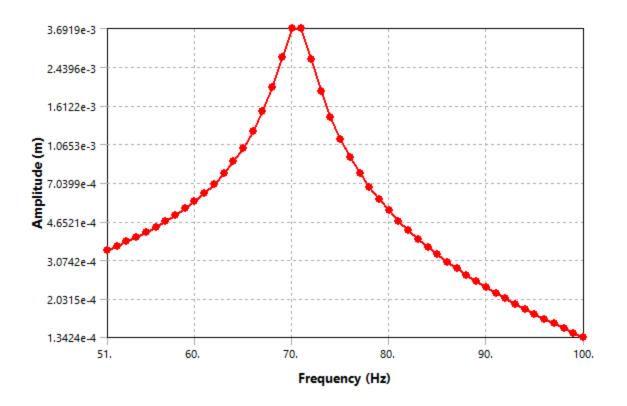


FIGURE 34
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2x

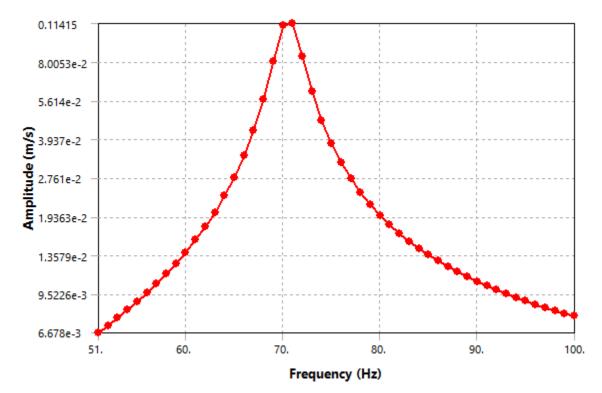


FIGURE 35
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2y

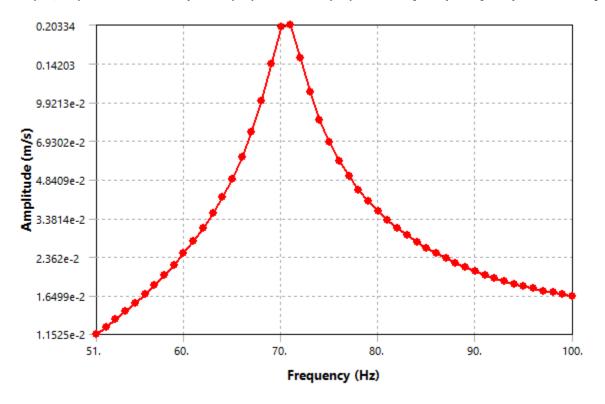


FIGURE 36
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2z

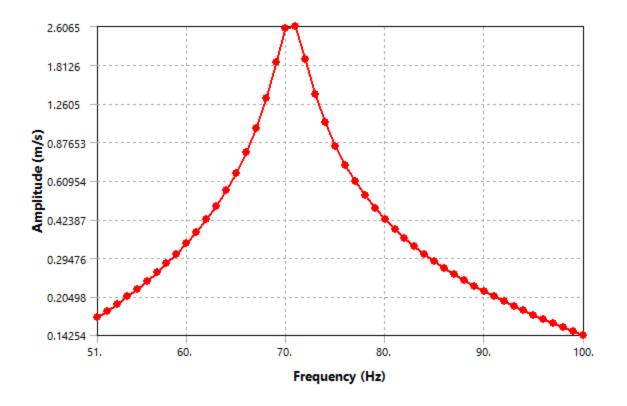


FIGURE 37
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3x

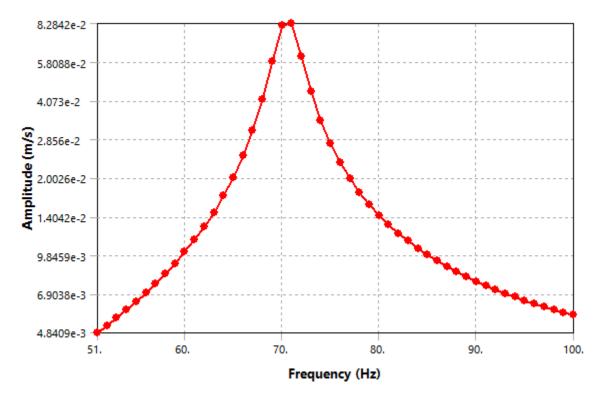


FIGURE 38
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3y

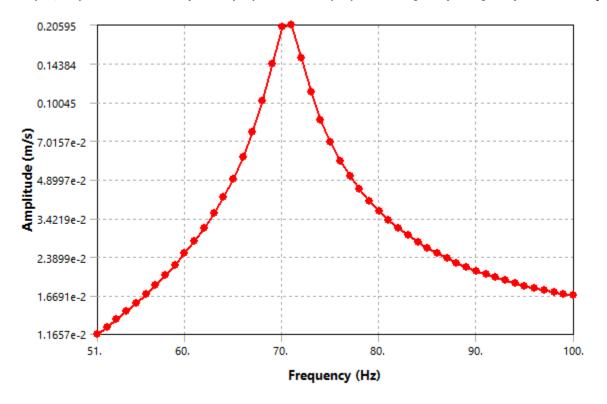
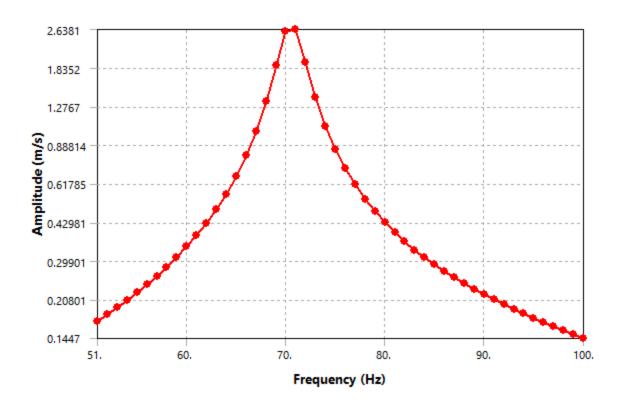


FIGURE 39
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3z



locityFrequencyResponse

VelocityFreque

DIMM5x	DIMM5y	DIMM5z	DIMM6x	DIMI
		Solved		
		Scope		
		Geometry Selection		
		1 Body		
		Use Average		
		Definition		
		Directional Velocity		
X Axis	Y Axis	Z Axis	X Axis	Y A:
		Global Coordinate System		
		No		

Options

Use Parent

50. Hz
100. Hz
Bode

Log Y

	Results					
0.11832 m/s	0.24061 m/s	1.7826 m/s	0.11879 m/s	0.2422		
		71. Hz				
-18.609 °	161.22 °	-18.063 °	-18.602 °	161.		
0.11214 m/s	-0.2278 m/s	1.6947 m/s	0.11259 m/s	-0.2294		
-3.7758e-002 m/s	7.7466e-002 m/s	-0.55272 m/s	-3.7893e-002 m/s	7.7922e-		

FIGURE 40
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4x

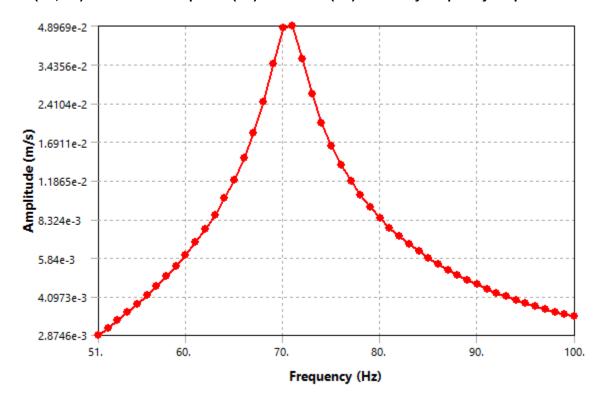


FIGURE 41
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4y

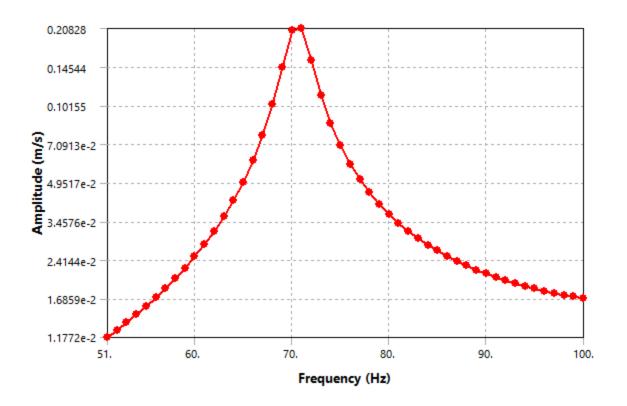


FIGURE 42
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4z

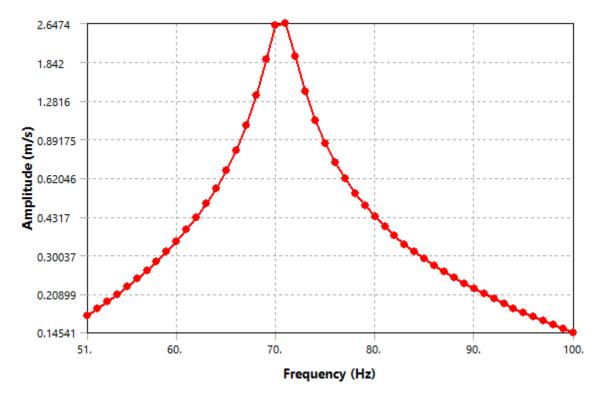


FIGURE 43
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5x

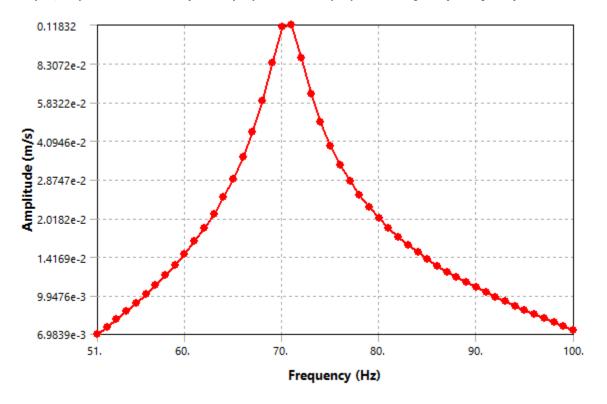


FIGURE 44
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5y

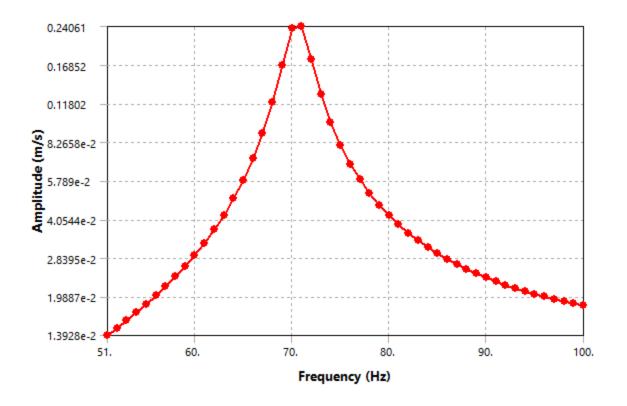


FIGURE 45
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5z

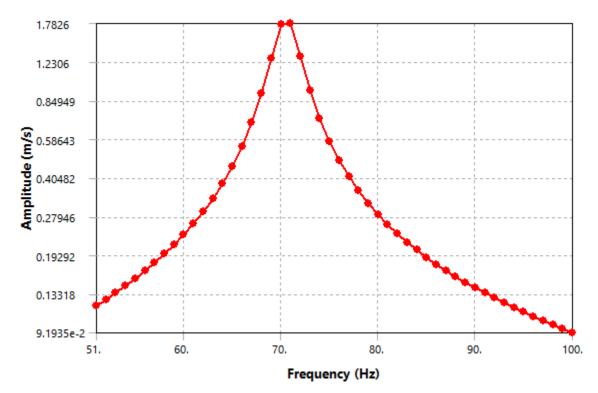


FIGURE 46
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6x

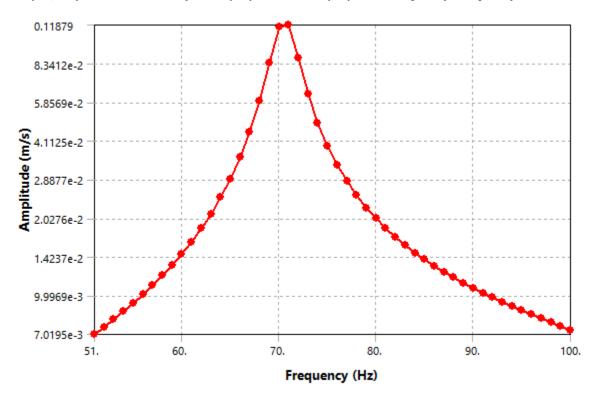


FIGURE 47
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6y

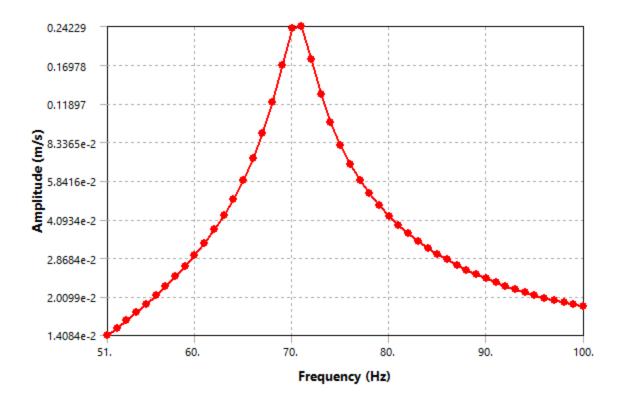


FIGURE 48
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6z

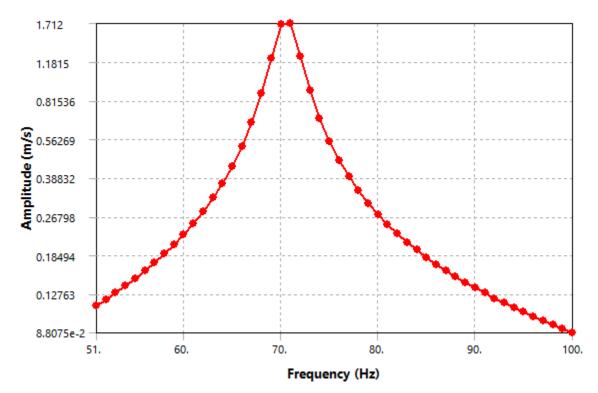


FIGURE 49
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7x

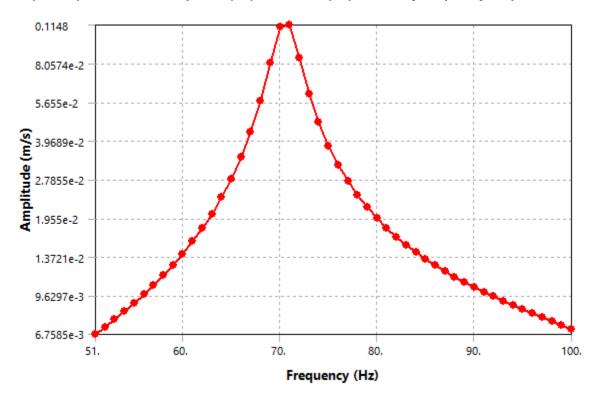


FIGURE 50
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7y

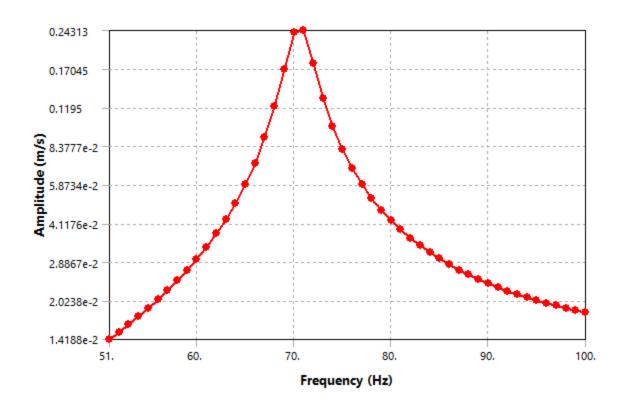


TABLE 72 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

equencyRespons	AccelerationFrequencyRespon	AccelerationFrequencyRespon	AccelerationFrequencyRespon	AccelerationFrequer			
DIMM8z	seDIMM2x	seDIMM2y	seDIMM2z	seDIMM3x			
		Solved					
		Scope					
	Geometry Selection						
	1 Body						

Use Average

	Definition					
	Directional Acc					
Z Axis	X Axis	Y Axis	Z Axis	X Axis		

Global Coordinate System

No

Options

Use Parent

5	0.	Н	7

100. Hz

Bode

Log Y

		Results		
5806 m/s	50.924 m/s²	90.71 m/s²	1162.8 m/s²	36.956 m/s
		71. Hz		
18.028 °	-108.67 °	-108.89 °	71.785°	-108.67 °
.503 m/s	-16.302 m/s ²	-29.367 m/s²	363.47 m/s ²	-11.833 m/s
48916 m/s	-48.244 m/s²	-85.824 m/s²	1104.5 m/s²	-35.011 m/s

FIGURE 51
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7z

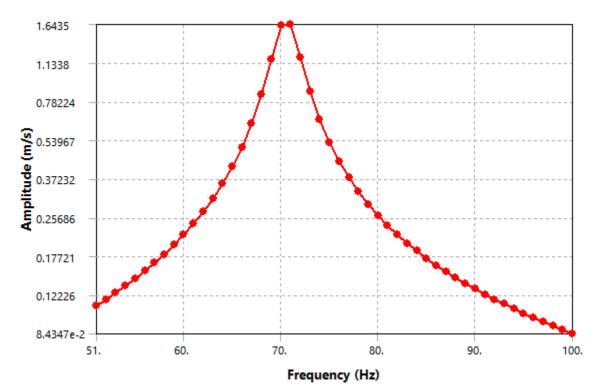


FIGURE 52
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8x

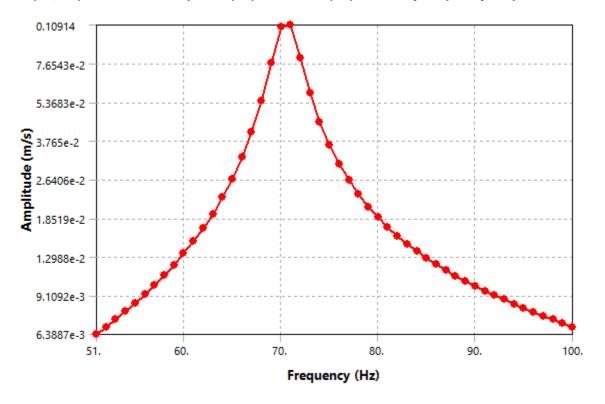


FIGURE 53
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8y

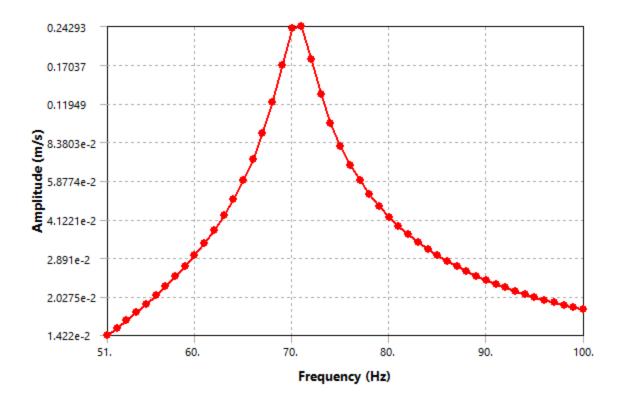


FIGURE 54
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8z

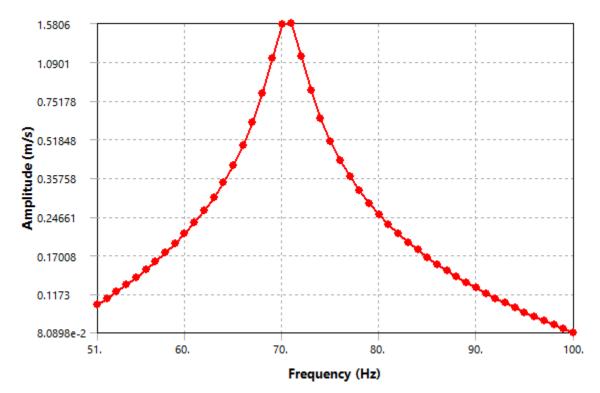


FIGURE 55
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2x

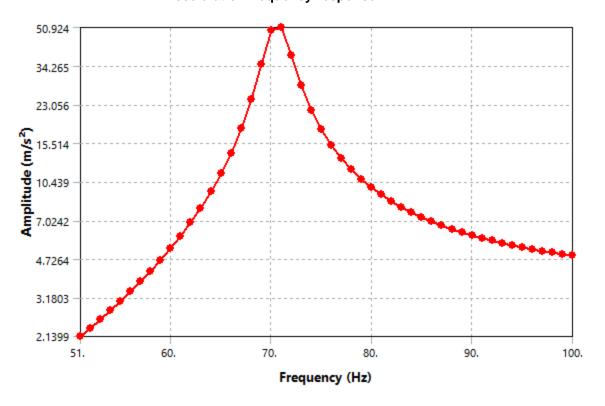


FIGURE 56
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2y

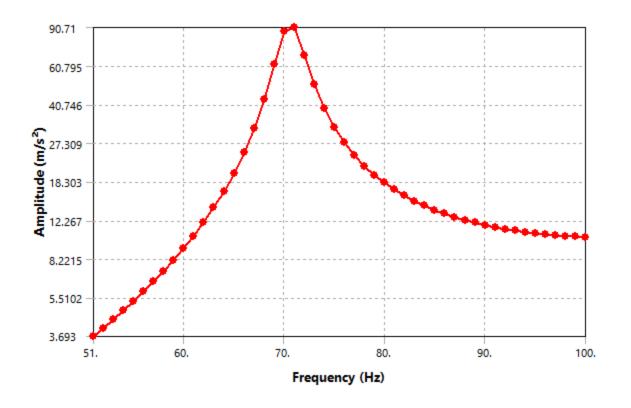


FIGURE 57
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2z

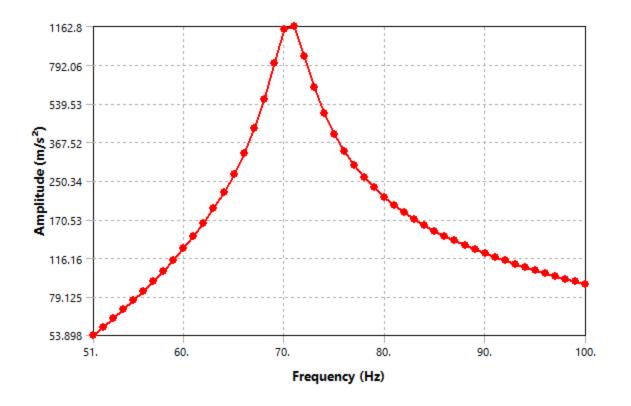


FIGURE 58
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3x

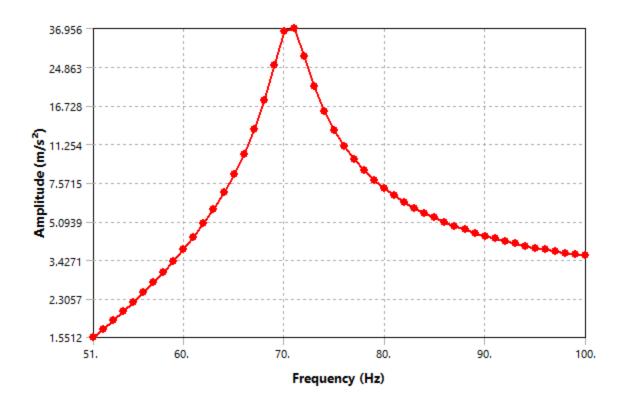


FIGURE 59
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3y

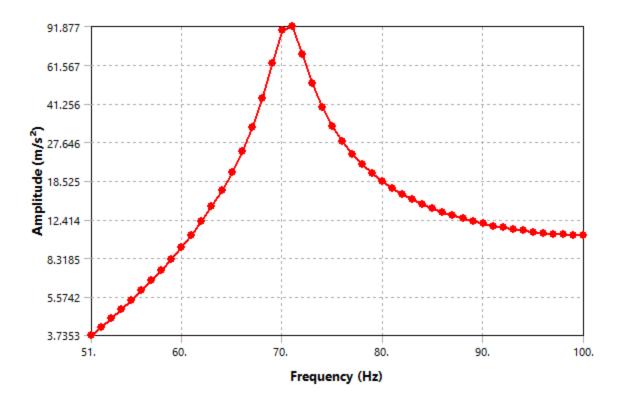


FIGURE 60 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3z

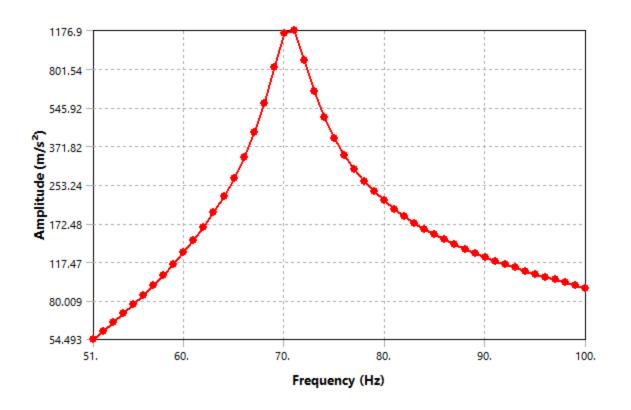


FIGURE 61
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4x

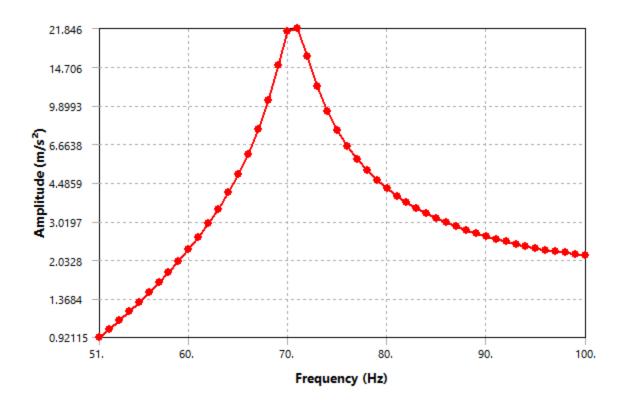


TABLE 73
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

AccelerationFrequencyRespo

elerationFrequencyRespo

AccelerationFrequencyRespo AccelerationFrequencyRespo

AccelerationFre

	7 lood or all of it requestion to ope	1 toootorationii roquonoyi toopo		
nseDIMM5y	nseDIMM5z	nseDIMM6x	nseDIMM6y	nseDII
		Solved		
		Scope		
		Geometry Selection		
		1 Body		
		Use Average		
		Definition		
		Directional Acceleration		
Y Axis	Z Axis	X Axis	Y Axis	ZA
		Global Coordinate System		
		Ciobai Cooldinate Cystem		

No

Options

Use Parent

100. Hz

Bode

Log Y

		Results		
107.34 m/s²	795.23 m/s²	52.994 m/s²	108.09 m/s²	763.75
		71. Hz		
-108.78 °	71.937 °	71.398 °	-108.76 °	71.94
-34.558 m/s ²	246.57 m/s ²	16.904 m/s ²	-34.761 m/s ²	236.67
-101.62 m/s ²	756.04 m/s ²	50.226 m/s ²	-102.34 m/s²	726.16

FIGURE 62 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4y

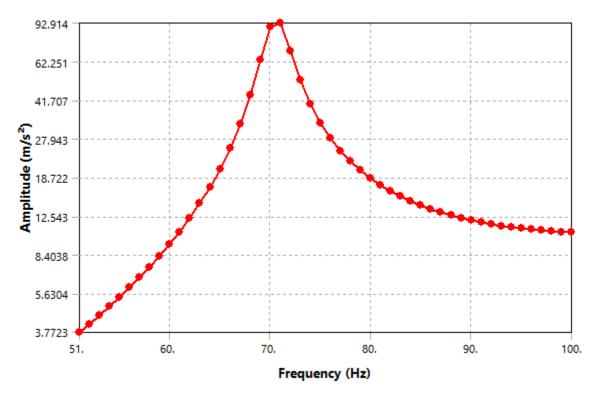


FIGURE 63
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4z

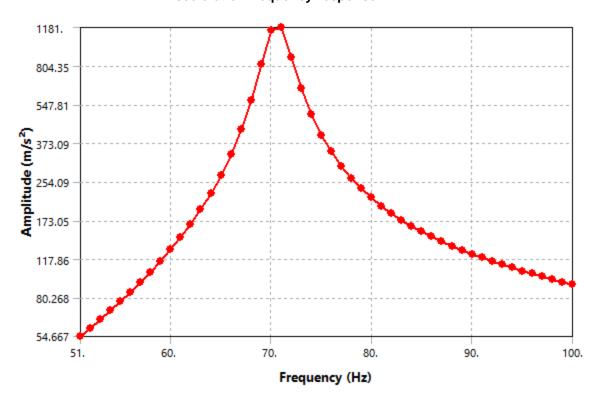


FIGURE 64
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5x

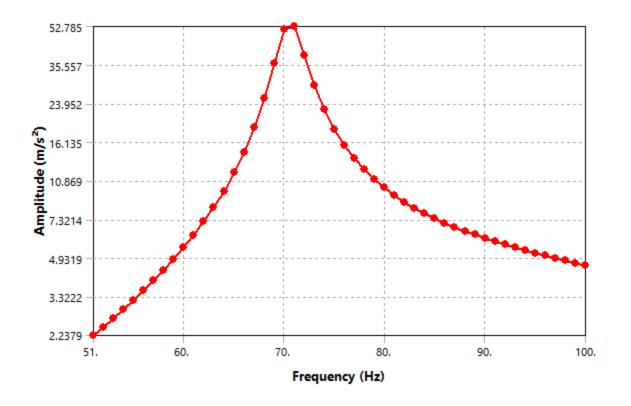


FIGURE 65
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5y

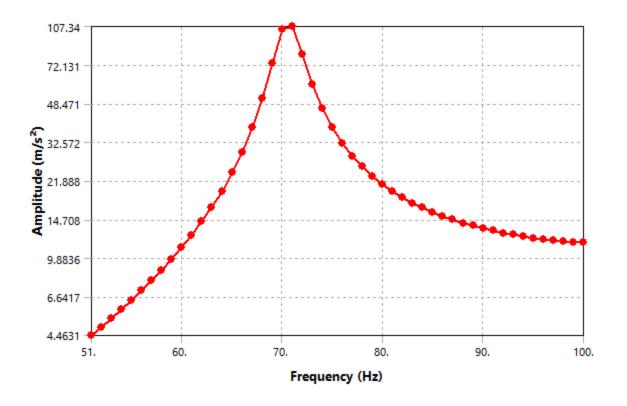


FIGURE 66
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5z

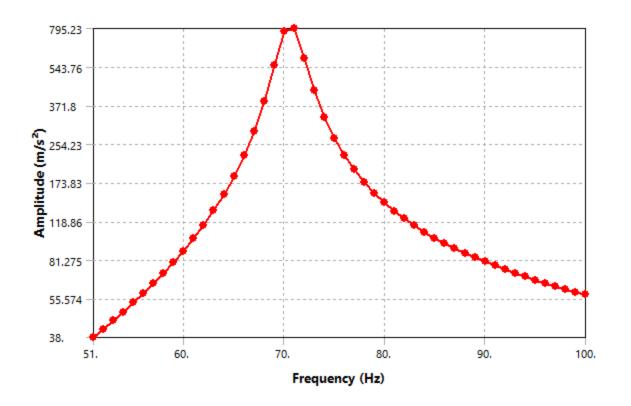


FIGURE 67
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6x

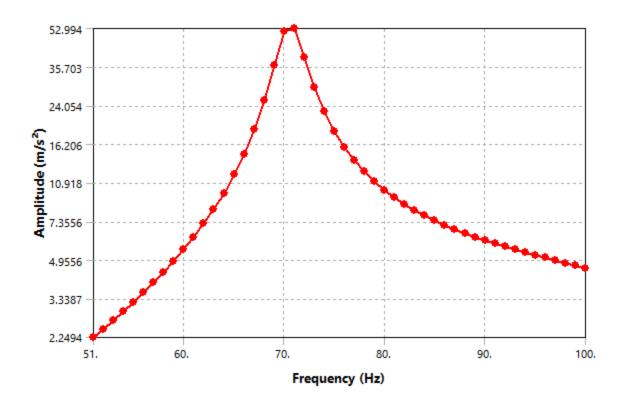


FIGURE 68
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6y

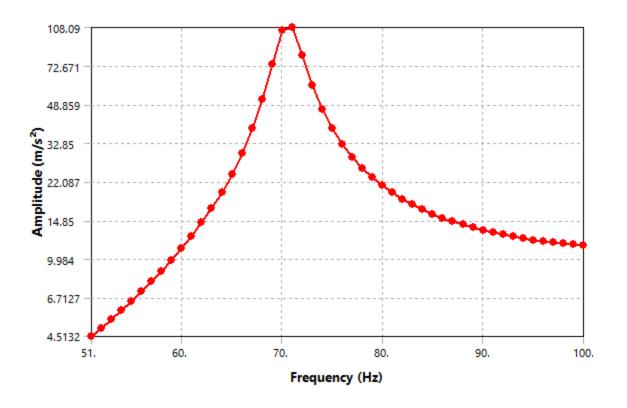


FIGURE 69
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6z

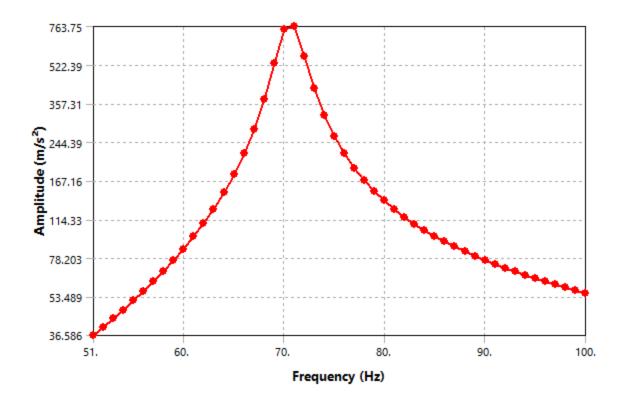


FIGURE 70
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7x

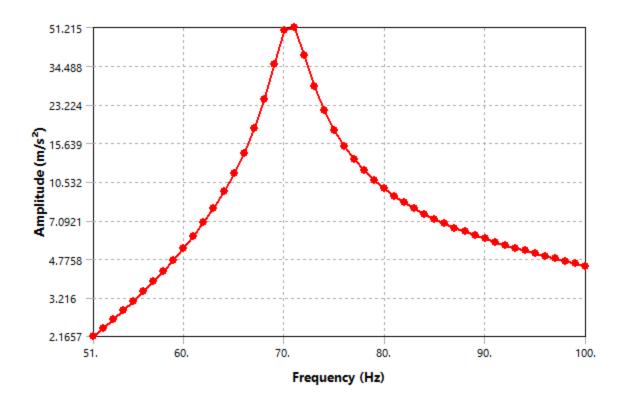


FIGURE 71
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7y

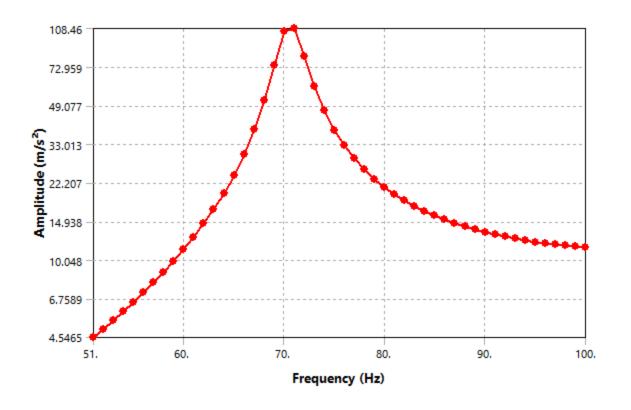


FIGURE 72 Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7z

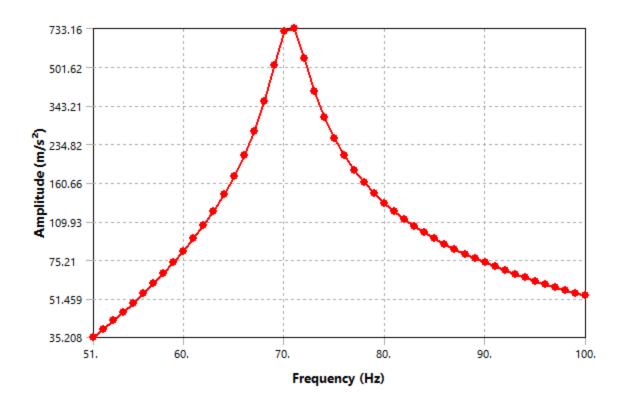


TABLE 74
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

tionFrequencyResponseDIMM8y | AccelerationFrequencyResponseDIMM8z | DeformationFrequencyResponseDIMM8x | DeformationFrequencyResponseDIMM8x |

	Solv	ved .	
	Scope		
	Geometry	Selection	
	1 Bo	ody	
	Use Av	verage	
	Definition		
Directional Acceleration			Directiona
Y Axis	Z Axis	X Axis	Y
	Global Coord	inate System	
	N	0	
	Options		
	Use P	arent	
	50.	Hz	_
	100.	Hz	

Bode

Log Y

	Results		
108.37 m/s ²	705.1 m/s²	2.4465e-004 m	5.445
	71. Hz		
-108.73 °	71.972 °	-108.64 °	71
-34.792 m/s²	218.22 m/s ²	-7.82e-005 m	1.748
-102.63 m/s ²	670.48 m/s²	-2.3181e-004 m	5.157

FIGURE 73
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8x

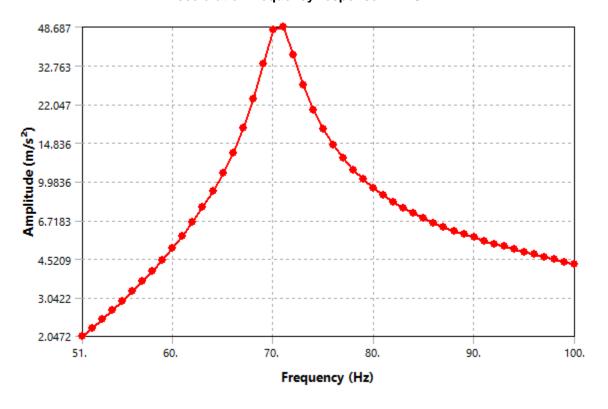


FIGURE 74
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8y

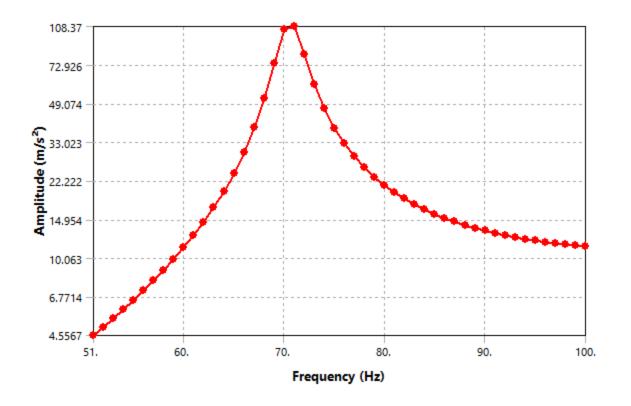


FIGURE 75
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8z

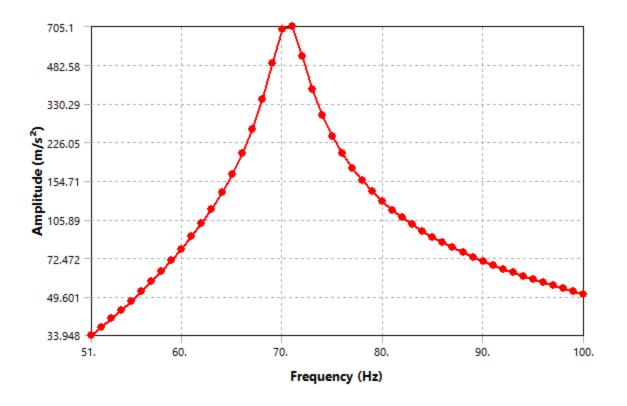


FIGURE 76
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8x

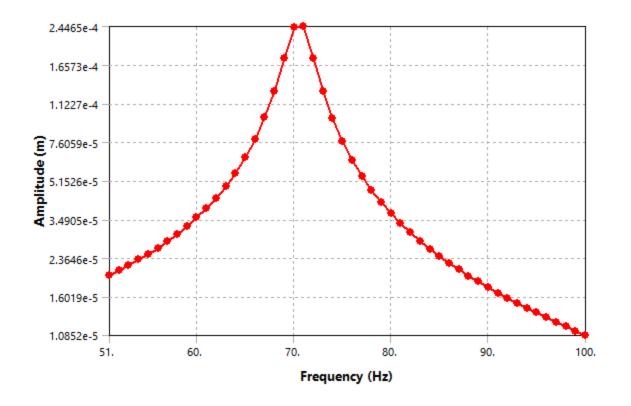


FIGURE 77
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8y

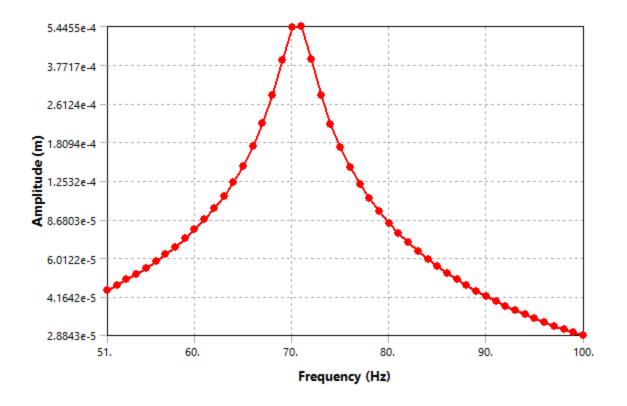
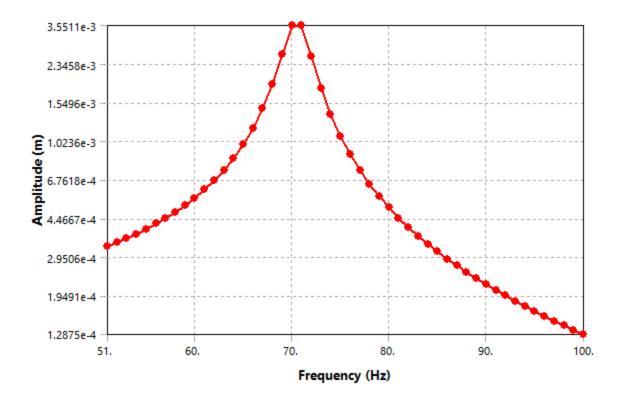


FIGURE 78
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8z



Material Data

Steel

TABLE 75 Steel > Isotropic Elasticity

Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa
2.05e+011	0.29	1.627e+011	7.9457e+010

TABLE 76 Steel > Density

Density kg m^-3 7870

TABLE 77 Steel > Isotropic Secant Coefficient of Thermal Expansion

Coefficient of Thermal Expansion C^-1
Zero-Thermal-Strain Reference Temperature C
22

TABLE 78
Steel > Tensile Yield Strength
Tensile Yield Strength Pa

TABLE 79 Steel > Tensile Ultimate Strength

Tensile Ultimate Strength Pa 4.2e+008

TABLE 80

Steel > Specific Heat Constant Pressure

Specific Heat J kg^-1 C^-1 486

TABLE 81

Steel > Isotropic Thermal Conductivity

Thermal Conductivity W m^-1 C^-1 51.9

Aluminum 6061-T6; 6061-T651

TABLE 82

Aluminum 6061-T6; 6061-T651 > Isotropic Elasticity

Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa
6.895e+010	0.33	6.7598e+010	2.5921e+010

TABLE 83

Aluminum 6061-T6; 6061-T651 > Density

Density kg m^-3 2700

TABLE 84

Aluminum 6061-T6; 6061-T651 > Isotropic Secant Coefficient of Thermal Expansion

Coefficient of Thermal Expansion C^-1
Zero-Thermal-Strain Reference Temperature C
22

TABLE 85

Aluminum 6061-T6; 6061-T651 > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 86

Aluminum 6061-T6; 6061-T651 > Tensile Ultimate Strength

Tensile Ultimate Strength Pa 3.103e+008

TABLE 87

Aluminum 6061-T6; 6061-T651 > Specific Heat Constant Pressure

Specific Heat J kg^-1 C^-1 896

TABLE 88

Aluminum 6061-T6; 6061-T651 > Isotropic Thermal Conductivity

Th	ermal Conductivity W m^-1 C^-1
	167.2

Structural Steel

TABLE 89 Structural Steel > Constants

Density	7850 kg m^-3
Coefficient of Thermal Expansion	1.2e-005 C^-1
Specific Heat	434 J kg^-1 C^-1
Thermal Conductivity	60.5 W m^-1 C^-1
Resistivity	1.7e-007 ohm m

TABLE 90 Structural Steel > Color

Red	Green	Blue
132	139	179

TABLE 91

Structural Steel > Compressive Ultimate Strength

Compressive Ultimate Strength Pa	3
0	

TABLE 92

Structural Steel > Compressive Yield Strength

Compressive Yield Strength Pa
2.5e+008

TABLE 93

Structural Steel > Tensile Yield Strength

Tensile Yield Strength Pa	ì		
2.5e+008			

TABLE 94

Structural Steel > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
4.6e+008

TABLE 95

Structural Steel > Isotropic Secant Coefficient of Thermal Expansion

Zero-Thermal-Strain Refere	nce Temperature C
22	

TABLE 96 Structural Steel > S-N Curve

	Alternating Stress Pa	Cycles	Mean Stress Pa
3.999e+009		10	0
	2.827e+009	20	0
	1.896e+009	50	0

1.413e+009	100	0
1.069e+009	200	0
4.41e+008	2000	0
2.62e+008	10000	0
2.14e+008	20000	0
1.38e+008	1.e+005	0
1.14e+008	2.e+005	0
8.62e+007	1.e+006	0

TABLE 97 Structural Steel > Strain-Life Parameters

Strength	Strength	Ductility	Ductility	Cyclic Strength	Cyclic Strain
Coefficient Pa	Exponent	Coefficient	Exponent	Coefficient Pa	Hardening Exponent
9.2e+008	-0.106	0.213	-0.47	1.e+009	0.2

TABLE 98 Structural Steel > Isotropic Elasticity

Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa	Temperature C
2.e+011	0.3	1.6667e+011	7.6923e+010	

TABLE 99 Structural Steel > Isotropic Relative Permeability

Relative Permeability 10000

Nylon

TABLE 100 Nylon > Isotropic Elasticity

Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa
3.e+009	0.42	6.25e+009	1.0563e+009

TABLE 101 Nylon > Density Density kg m^-3

Density kg m^-3

TABLE 102

Nylon > Isotropic Secant Coefficient of Thermal Expansion

Coefficient of Thermal Expansion C^-1
Zero-Thermal-Strain Reference Temperature C
22

TABLE 103

Nylon > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 104
Nylon > Tensile Ultimate Strength

Tensile Ultimate Strength Pa 7.e+007

TABLE 105 Nylon > Specific Heat Constant Pressure

Specific Heat J kg^-1 C^-1 950

TABLE 106

Nylon > Isotropic Thermal Conductivity

Thermal Conductivity W m^-1 C^-1 0.285

Aluminum Scaled

TABLE 107

Aluminum Scaled > Isotropic Elasticity

Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa
6.895e+010	0.33	6.7598e+010	2.5921e+010

TABLE 108

Aluminum Scaled > Density

Density kg m^-3 1000

TABLE 109

Aluminum Scaled > Isotropic Secant Coefficient of Thermal Expansion

Coefficient of Thermal Expansion C^-1
Zero-Thermal-Strain Reference Temperature C
22

TABLE 110

Aluminum Scaled > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 111

Aluminum Scaled > Tensile Ultimate Strength

Tensile Ultimate Strength Pa 3.103e+008

TABLE 112

Aluminum Scaled > Specific Heat Constant Pressure

Specific Heat J kg^-1 C^-1 896

TABLE 113

Aluminum Scaled > Isotropic Thermal Conductivity

Thermal Conductivity W m^-1 C^-1 167.2

TABLE 114 LCP > Isotropic Elasticity

Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa
2.e+009	0.36	2.381e+009	7.3529e+008

TABLE 115 LCP > Density

Density kg m^-3 1760

TABLE 116

LCP > Isotropic Secant Coefficient of Thermal Expansion

Coefficient of Thermal Expansion C^-1
Zero-Thermal-Strain Reference Temperature C
22

TABLE 117

LCP > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 118

LCP > Tensile Ultimate Strength

Tensile Ultimate Strength Pa 1.17e+008

TABLE 119

LCP > Specific Heat Constant Pressure

Specific Heat J kg^-1 C^-1 1850

TABLE 120

LCP > Isotropic Thermal Conductivity

Thermal Conductivity W m^-1 C^-1 0.18

Glass Epoxy Composite

TABLE 121

Glass Epoxy Composite > Isotropic Elasticity

Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa
2.14e+010	0.3	1.7833e+010	8.2308e+009

TABLE 122
Glass Epoxy Composite > Density

Density kg m^-3 7300

TABLE 123

Glass Epoxy Composite > Isotropic Secant Coefficient of Thermal Expansion

Coefficient of Thermal Expansion C^-1
Zero-Thermal-Strain Reference Temperature C
22

TABLE 124

Glass Epoxy Composite > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 125

Glass Epoxy Composite > Tensile Ultimate Strength

Tensile Ultimate Strength Pa 3.19e+008

TABLE 126

Glass Epoxy Composite > Specific Heat Constant Pressure

Specific Heat J kg^-1 C^-1 1620

TABLE 127

Glass Epoxy Composite > Isotropic Thermal Conductivity

Thermal Conductivity W m^-1 C^-1 1.19