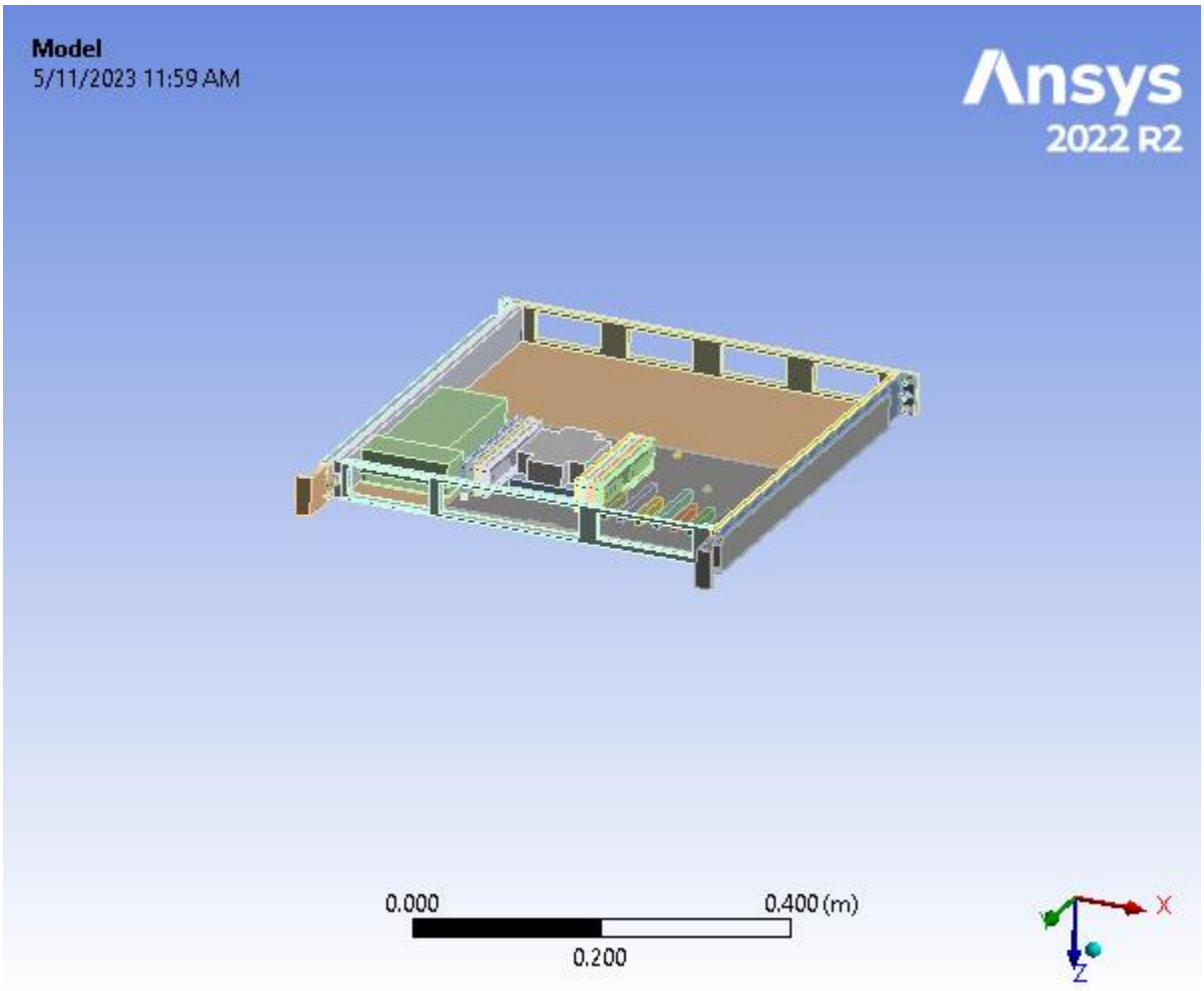
Project*

First Saved	Thursday, May 11, 2023
Last Saved	Thursday, May 11, 2023
Product Version	2022 R2
Save Project Before Solution	No
Save Project After Solution	No



Contents

Units

TABLE 1

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)

bject lame	*Geometry Import (A3, B3)*
State	Solved
Definition	
ource	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\assembly_simplified_10_screw
Type	SpaceClaim
Basic Geometry Options	
eters	Independent
neter Key	
Advanced Geometry Options	
pare s On date	No
lysis Type	3-D

Geometry

TABLE 4
Model (A4, B4) > Geometry

bject Name	*Geometry*
State	Fully Defined
Definition	
ource	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\assembly_simplified_10_screw
Type	SpaceClaim
n Unit	Meters
ment ontrol	Program Controlled
splay Style	Body Color
Bounding Box	
gth X	0.48082 m

gth Y	0.55504 m
gth Z	4.3696e-002 m
Properties	
lume	2.1151e-003 m³
Mass	8.3168 kg
Scale actor Value	1.
Statistics	
odies	167
ctive odies	167
odes	555628
nents	283240
Metric	None
Update Options	
ssign efault terial	No
Basic Geometry Options	
Solid odies	Yes
rface odies	Yes
odies	Yes
eters	Independent
meter Key	
butes	Yes
ibute Key	
amed tions	Yes
amed ction Key	
terial erties	Yes
Advanced Geometry Options	
Use tivity	Yes
inate tems	Yes
inate n Key	
eader Mode aves dated File	No

Use ances	Yes
CAD date	Yes
pare s On date	No
alysis Type	3-D
Mixed mport ution	None
mport Facet uality	Source
Clean s On mport	No
Stitch faces mport	None
pose sjoint metry	Yes
osure and metry ssing	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	Meshed										
Graphics Properties											
Visible	Yes										
Transparency	1										
Definition											
Suppressed	No										
Stiffness Behavior	Flexible										
Coordinate System	Default Coordinate System										
Reference Temperature	By Environment										
Treatment	None										
Material											
Assignment	AISI 1020 Steel, cold rolled										

Nonlinear Effects	Yes									
Thermal Strain Effects	Yes									
Bounding Box										
Length X	1.5875e-002 m			3.2512e-003 m						
Length Y	6.6548e-003 m			7.874e-003 m						
Length Z	6.6548e-003 m			7.874e-003 m						
Properties										
Volume	1.6217e-007 m³			1.0658e-007 m³						
Mass	1.2763e-003 kg			8.3878e-004 kg	8.3877e-004 kg					
Centroid X	0.14894 m	-0.27984 m		0.16035 m						
Centroid Y	0.24544 m	0.24545 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					-7.7017e-005 m
Moment of Inertia Ip1	2.622e-009 kg·m²			7.1033e-009 kg·m²						
Moment of Inertia Ip2	3.0131e-008 kg·m²			4.1369e-009 kg·m²						
Moment of Inertia Ip3	3.0131e-008 kg·m²			4.1369e-009 kg·m²						
Statistics										
Nodes	704	690	681	1112	1056	1110	1043	987	1044	1073
Elements	344	336	329	572	535	573	527	491	523	552
Mesh Metric	None									
CAD Attributes										
PartTolerance:	0.00000001									
Color:98.98.98										
Color:175.168.143										

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

Object Name	*Left-Nut-8\Left-Nut-8*	*Left-Nut-9\Left-Nut-9*	*Right-Nut-1\Right-Nut-1*	*Right-Nut-2\Right-Nut-2*	*Right-Nut-3\Right-Nut-3*	*Right-Nut-4\Right-Nut-4*	*Right-Nut-5\Right-Nut-5*	*Right-Nut-6\Right-Nut-6*	*Right-Nut-7\Right-Nut-7*	*Right-Nut-8\Right-Nut-8*	*Right-Nut-9\Right-Nut-9*
State	Meshed										
Graphics Properties											
Visible	Yes										
Transparency	1										
Definition											
Suppressed	No										
Stiffness Behavior	Flexible										
Coordinate System	Default Coordinate System										
Reference Temperature	By Environment										

Treatment	None										
Material											
Assignment	AISI 1020 Steel, cold rolled										
Nonlinear Effects	Yes										
Thermal Strain Effects	Yes										
Bounding Box											
Length X	3.2512e-003 m										
Length Y	7.874e-003 m										
Length Z	7.874e-003 m										
Properties											
Volume	1.0658e-007 m³										
Mass	8.3877e-004 kg		8.3878e-004 kg	8.3877e-004 kg							
Centroid X	0.16035 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	-7.7016e-005 m	-7.7017e-005 m	-8.4578e-005 m	-8.4579e-005 m							
Moment of Inertia Ip1	7.1033e-009 kg·m²										
Moment of Inertia Ip2	4.1369e-009 kg·m²										
Moment of Inertia Ip3	4.1369e-009 kg·m²										
Statistics											
Nodes	1038	1045	1091	1039	1065	1062	1019	1096	1062	1023	1051
Elements	528	524	556	526	540	544	517	561	542	514	531
Mesh Metric	None										
CAD Attributes											
PartTolerance:	0.00000001										
Color:175.168.143											

TABLE 7
Model (A4, B4) > Geometry > Smallest > Parts

Screw2\Screw2	*Screw3\Screw3*	*Screw4\Screw4*	*Screw5\Screw5*	*Screw6\Screw6*	*Screw7\Screw7*	*Screw8\Screw8*	*Screw9\Screw9*	*Sc*
Meshed								
Graphics Properties								
Yes								
1								
Definition								
No								
Flexible								
Default Coordinate System								
By Environment								
None								

Material									
AISI 1020 Steel, cold rolled									
Yes									
Yes									
Bounding Box									
1.1379e-002 m					9.525e-003 m				
e-002 m	2.2047e-002 m				7.9248e-003 m				
1.1379e-002 m					7.9248e-003 m				
Properties									
4.934e-007 m³	5.8374e-007 m³	5.8373e-007 m³	5.8374e-007 m³	5.8373e-007 m³	1.5136e-007 m³				
3.8831e-003 kg	4.594e-003 kg	4.5939e-003 kg	4.594e-003 kg		1.1912e-003 kg				
-0.298 m	0.16713 m		-0.298 m		0.15538 m				
697 m	-0.23358 m				-0.18287 m	-0.12731 m	-7.1745e-002 m		
-8.4578e-005 m	-1.5952e-002 m	1.5798e-002 m	-1.596e-002 m	1.579e-002 m	-7.7016e-005 m		-7.7015e-005 m		
007 kg·m²	2.2852e-007 kg·m²				4.0912e-009 kg·m²	4.0911e-009 kg·m²	4		
008 kg·m²	3.4996e-008 kg·m²				1.2206e-008 kg·m				
007 kg·m²	2.2852e-007 kg·m²				1.2206e-008 kg·m				
Statistics									
143	1336	1314	1326	1311	518	493	518		
71	656	644	650	642	252	234	252		
None									
CAD Attributes									
0.00000001									

TABLE 8
Model (A4, B4) > Geometry > Smallest > Parts

3\Screw13	*Screw14\Screw14*	*Screw15\Screw15*	*Screw16\Screw16*	*Screw17\Screw17*	*Screw18\Screw18*	*Screw19\Screw19*	*Screw20\S*
Meshed							
Graphics Properties							
Yes							
1							
Definition							
No							
Flexible							
Default Coordinate System							
By Environment							
None							
Material							
AISI 1020 Steel, cold rolled							

Yes
Yes
Bounding Box
9.525e-003 m
7.9248e-003 m
7.9248e-003 m
Properties
1.5136e-007 m³
1.1912e-003 kg

5538 m		-0.28628 m	0.15538 m				-0.28628 m
505 m	0.20607 m	-0.18287 m	0.26163 m	-0.12731 m	-7.1745e-002 m	-1.6183e-002 m	3.938e-0
6e-005 m		-8.4578e-005 m	-7.7016e-005 m			-8.4578e-005 m	
4.0912e-009 kg·m²				4.0911e-009 kg·m²			
1.2206e-008 kg·m²							
1.2206e-008 kg·m²							
Statistics							

	510	511	503	514	499	510	503
	247		241	250	237	246	241
None							
CAD Attributes							
0.00000001							

TABLE 9
Model (A4, B4) > Geometry > Smallest > Parts

SCREW_RETAINER_SCR MM_SCREW_RETAINER_ SCREW1_A	*DIMM_SCREW_RETAINER_SCR EW1\DIMM_SCREW_RETAINER_ SCREW1_B*	*DIMM_SCREW_RETAINER_SCR EW1\DIMM_SCREW_RETAINER_ SCREW1_A*	*DIMM_SCREW_RETAINER_SCR EW1\DIMM_SCREW_RETAINER_ SCREW1_B*
Meshed			
Graphics Properties			
Yes			
1			
Definition			
No			
Flexible			
Default Coordinate System			
By Environment			

None
Material
AISI 1020 Steel, cold rolled
Yes
Yes
Bounding Box

4.1148e-003 m	3.3782e-003 m	4.1148e-003 m	3.3782e-003 m
4.1148e-003 m	3.3782e-003 m	4.1148e-003 m	3.3782e-003 m
6.35e-003 m	4.7498e-003 m	6.35e-003 m	4.7498e-003 m
Properties			
2.8004e-008 m³	3.2091e-008 m³	2.8004e-008 m³	3.2091e-008 m³
2.204e-004 kg	2.5255e-004 kg	2.204e-004 kg	2.5255e-004 kg
-1.7897e-002 m		-2.5771e-002 m	

0.18808 m

-1.7297e-002 m	-1.4179e-002 m	-1.7297e-002 m	-1.4179e-002 m
9.4292e-010 kg·m²	6.9001e-010 kg·m²	9.4292e-010 kg·m²	6.9001e-010 kg·m²
9.4292e-010 kg·m²	6.9e-010 kg·m²	9.4292e-010 kg·m²	6.9e-010 kg·m²
2.1181e-010 kg·m²	4.2626e-010 kg·m²	2.1181e-010 kg·m²	4.2626e-010 kg·m²
Statistics			
472	362	472	362
216	168	216	168

None
CAD Attributes
0.00000001

TABLE 10
Model (A4, B4) > Geometry > Smallest > Parts

M_SCREW_RETAINER_EW1\DIMM_SCREW_RETAINER_SCREW1_A	*DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_B*	*DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_A*	*DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_B*	*DIMM_SCREW_SCREW2\DIMM_TAINER_SC*
Meshed				
Graphics Properties				
Yes				
1				
Definition				
No				
Flexible				
Default Coordinate System				
By Environment				
None				
Material				
AISI 1020 Steel, cold rolled				
Yes				
Yes				
Bounding Box				
4.1148e-003 m	3.3782e-003 m	4.1148e-003 m	3.3782e-003 m	4.1148e-
4.1148e-003 m	3.3782e-003 m	4.1148e-003 m	3.3782e-003 m	4.1148e-

6.35e-003 m	4.7498e-003 m	6.35e-003 m	4.7498e-003 m	6.35e-0
Properties				
2.8004e-008 m³	3.2091e-008 m³	2.8004e-008 m³	3.2091e-008 m³	2.8004e-0
2.204e-004 kg	2.5255e-004 kg	2.204e-004 kg	2.5255e-004 kg	2.204e-0
-0.15361 m		-0.16148 m		
0.19443 m				4.9078e-0
-1.7297e-002 m	-1.4179e-002 m	-1.7297e-002 m	-1.4179e-002 m	-1.7297e-
9.4292e-010 kg·m²	6.9001e-010 kg·m²	9.4292e-010 kg·m²	6.9001e-010 kg·m²	9.4292e-01
9.4292e-010 kg·m²	6.9e-010 kg·m²	9.4292e-010 kg·m²	6.9e-010 kg·m²	9.4292e-01
2.1181e-010 kg·m²	4.2626e-010 kg·m²	2.1181e-010 kg·m²	4.2626e-010 kg·m²	2.1181e-01
Statistics				
472	362	472	362	445
216	168	216	168	199
None				
CAD Attributes				
0.00000001				

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

M_SCREW_RETAINER_ EW2\DIMM_SCREW_RE TAINER_SCREW2_B	*DIMM_SCREW_RETAINER_ SCREW2\DIMM_SCREW_RE TAINER_SCREW2_A*	*DIMM_SCREW_RETAINER_ SCREW2\DIMM_SCREW_RE TAINER_SCREW2_B*	*DIMM_SCREW_RETAINER_ SCREW2\DIMM_SCREW_RE TAINER_SCREW2_A*	*DIMM_SCREW_ SCREW2\DIMM_ TAINER_SC*
Meshed				
Graphics Properties				
Yes				
1				

Definition
No
Flexible
Default Coordinate System
By Environment
None
Material
AISI 1020 Steel, cold rolled
Yes
Yes

Bounding Box				
3.3782e-003 m	4.1148e-003 m	3.3782e-003 m	4.1148e-003 m	3.3782e-
3.3782e-003 m	4.1148e-003 m	3.3782e-003 m	4.1148e-003 m	3.3782e-
4.7498e-003 m	6.35e-003 m	4.7498e-003 m	6.35e-003 m	4.7498e-
Properties				
3.2091e-008 m³	2.8004e-008 m³	3.2091e-008 m³	2.8004e-008 m³	3.2091e-
2.5255e-004 kg	2.204e-004 kg	2.5255e-004 kg	2.204e-004 kg	2.5255e-
m	-0.13786 m		-0.14573 m	
4.8618e-002 m	5.543e-002 m	5.497e-002 m	5.543e-002 m	5.497e-
-1.4179e-002 m	-1.7297e-002 m	-1.4179e-002 m	-1.7297e-002 m	-1.4179e-
6.9001e-010 kg·m²	9.4292e-010 kg·m²	6.9001e-010 kg·m²	9.4292e-010 kg·m²	6.9001e-01
6.9001e-010 kg·m²	9.4292e-010 kg·m²	6.9001e-010 kg·m²	9.4292e-010 kg·m²	6.9001e-01

4.2626e-010 kg·m²	2.1181e-010 kg·m²	4.2626e-010 kg·m²	2.1181e-010 kg·m²	4.2626e-01
Statistics				
329	445	329	445	329
149	199	149	199	149
None				
CAD Attributes				
0.00000001				

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

V_RETAINER_SCREW2\DIMM_SCREW_RETAINER_SCREW2_B	*PEM-Fastener-1\PEM-Fastener-1*	*PEM-Fastener-2\PEM-Fastener-2*	*PEM-Fastener-3\PEM-Fastener-3*	*PEM-Fastener-4\PEM-Fastener-4*	*PEM-Fastener-5\PEM-Fastener-5*	*PEM-Fastener-6\PEM-Fastener-6*	*PEM-Faste 7\PE Faste 7*
Meshed							
Graphics Properties							
Yes							
1							
Definition							
No							
Flexible							
Default Coordinate System							
By Environment							
None							
Material							
AISI 1020 Steel, cold rolled	Aluminum 6061-T6; 6061-T651						
Yes							
Yes							
Bounding Box							
3.3782e-003 m	7.3324e-003 m	7.3323e-003 m					7.332 003

3.3782e-003 m	6.35e-003 m						
4.7498e-003 m							
Properties							
3.2091e-008 m³	8.8258e-008 m³						
2.5255e-004 kg	2.383e-004 kg						
-0.16148 m	-0.15686 m	6.1601e-004 m	0.12508 m			6.1601e-004 m	-0.15 m
5.497e-002 m	4.6568e-002 m	0.22818 m		8.4788e-004 m	7.3238e-002 m	8.4788e-004 m	
-1.4179e-002 m	1.9415e-002 m						
6.9001e-010 kg·m²	1.0709e-009 kg·m²						
6.9001e-010 kg·m²	1.0709e-009 kg·m²						
4.2626e-010 kg·m²	1.1596e-009 kg·m²						
Statistics							
329	491	466	529	503	479	451	48
149	227	208	250	229	212	199	
None							
CAD Attributes							
0.00000001							

TABLE 13
Model (A4, B4) > Geometry > Smallest > Parts

Object Name	*Screw-3\Screw-3*	*Screw-4\Screw-4*	*Screw-5\Screw-5*	*Screw-6\Screw-6*	*Screw-7\Screw-7*	*Screw-8\Screw-8*	*Screw-9\Screw-9*	*Nut-1\Nut-1*	*Standoff-1\Standoff-1*
State	Meshed								
Graphics Properties									
Visible	Yes								
Transparency	1								
Definition									
Suppressed	No								
Stiffness Behavior	Flexible								
Coordinate System	Default Coordinate System								
Reference Temperature	By Environment								
Treatment	None								
Material									
Assignment	AISI 1020 Steel, cold rolled								Aluminum 6061-T6; 6061-T651
Nonlinear Effects	Yes								

Thermal Strain Effects	Yes								
Bounding Box									
Length X	7.9756e-003 m						7.0866e-003 m	6.8162e-003 m	6.3498e-003 m
Length Y	7.9756e-003 m						7.0866e-003 m	7.2982e-003 m	7.3321e-003 m
Length Z	9.2456e-003 m						9.4742e-003 m	3.0226e-003 m	3.175e-003 m
Properties									
Volume	1.4187e-007 m³						9.9522e-008 m³	6.596e-008 m³	7.9856e-008 m³
Mass	1.1165e-003 kg						7.8324e-004 kg	5.191e-004 kg	2.1561e-004 kg
Centroid X	-0.15686 m	6.6656e-002 m	-0.15686 m	0.12508 m		6.1601e-004 m	-0.15686 m		
Centroid Y	4.6568e-002 m	7.3238e-002 m	8.4788e-004 m	7.3238e-002 m	0.22818 m		0.20532 m		
Centroid Z	1.5831e-002 m	1.5731e-002 m	1.5831e-002 m	1.5731e-002 m			1.7521e-002 m	1.8458e-002 m	1.3605e-002 m
Moment of Inertia Ip1	9.5367e-009 kg·m²						7.2928e-009 kg·m²	2.2327e-009 kg·m²	9.5297e-010 kg·m²
Moment of Inertia Ip2	9.5367e-009 kg·m²						7.2928e-009 kg·m²	2.2328e-009 kg·m²	9.5296e-010 kg·m²
Moment of Inertia Ip3	5.1906e-009 kg·m²						1.8303e-009 kg·m²	3.8088e-009 kg·m²	1.5463e-009 kg·m²
Statistics									
Nodes	964	950	915	943	971	987	432	2206	397
Elements	481	469	451	469	490	498	203	1160	187
Mesh Metric	None								
CAD Attributes									
PartTolerance:	0.00000001								
Color:143.164.175									
Color:175.168.143									
Color:168.175.143									

Small

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

M_SCREW_RETAINER_TOUTSIDE\DIMM_SCREWTAINER_TOP_OUTSIDE	*DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE*	*DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE*	*DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE*	*DIMM_SCREOP_OUTSIDE_RETAINER_*
Meshed				
Graphics Properties				
Yes				

1
Definition
No
Flexible
Default Coordinate System
By Environment
None
Material
ABS
Yes
Yes
Bounding Box
6.3e-003 m
0.1465 m
4.445e-003 m
Properties
1.9783e-006 m³
2.5718e-003 kg

-3.3645e-002 m	-0.13786 m	-0.14573 m	-0.15361 m	-0.1
	0.12493 m			

-1.8522e-002 m
4.4621e-006 kg·m²

1.5976e-008 kg·m²
4.4712e-006 kg·m²
Statistics
4483
2185
None
CAD Attributes
0.00000001

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

M_SCREW_RETAINER_T_INSIDE\DIMM_SCREW_ETAINER_TOP_INSIDE	*DIMM_SCREW_RETAINER_TOP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE*	*DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1*	*DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1*	*DIMM_SCREW VERTICAL1\DI RETAINER_*
Meshed				
Graphics Properties				
Yes				
1				
Definition				
No				
Flexible				
Default Coordinate System				

By Environment
None
Material
ABS
Yes
Yes
Bounding Box
Properties
-0.15361 m -0.16148 m -1.0023e-002 m -1.7897e-002 m -2.5771e
0.18666 m
Statistics

None
CAD Attributes
0.00000001

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

DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2	*DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2*	*DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2*	*DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2*	*DI R*
Meshed				
Graphics Properties				
Yes				
1				
Definition				
No				
Flexible				
Default Coordinate System				
By Environment				
None				
Material				
ABS				
Yes				
Yes				

Bounding Box				
6.3e-003 m				
7.445e-003 m				
3.205e-002 m				
Properties				
7.1078e-007 m³				
9.2401e-004 kg				
-1.7897e-002 m	-2.5771e-002 m	-3.3645e-002 m	-0.13786 m	
5.0031e-002 m				
-5.8316e-003 m				
6.3716e-008 kg·m²				
6.3917e-008 kg·m²				
6.8821e-009 kg·m²				
Statistics				
5790				
3100				
None				
CAD Attributes				
0.00000001				

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

SLOT	*DIMM_SLOT\DIMM_SLOT*	*DIMM_SLOT\DIMM_SLOT*	*DIMM_SLOT\DIMM_SLOT*	*DIMM_SLOT\DIMM_SLOT*	*DIMM1_CHIP\DIMM*
Meshed					
Graphics Properties					

Yes					
1					
Definition					
No					
Flexible					
Default Coordinate System					
By Environment					
None					
Material					
ABS					
Yes					
Yes					
Bounding Box					
6.3e-003 m					
0.1527 m					
1.965e-002 m					
Properties					
4.583e-006 m³					
5.9579e-003 kg					
-0.13786 m	-0.14573 m	-0.15361 m	-0.16148 m	-9.7851e-003	
0.12468 m					
1.092e-002 m					
1.3096e-005 kg·m²					
1.2129e-007 kg·m²					
1.3018e-005 kg·m²					
Statistics					
28816					
15420					
None					
CAD Attributes					
0.00000001					

TABLE 18
Model (A4, B4) > Geometry > Small > Parts

Object Name	*DIMM1_CHIP\DIMM1_CHIP*	*DIMM1_CHIP\DIMM1_CHIP*	*DIMM1_CHIP\DIMM1_CHIP*	*DIMM1_CHIP\DIMM1_CHIP*
State	Meshed			
Graphics Properties				
Visible	Yes			
Transparency	1			
Definition				
Suppressed	No			

Stiffness Behavior	Flexible			
Coordinate System	Default Coordinate System			
Reference Temperature	By Environment			
Treatment	None			
Material				
Assignment	Glass Epoxy Composite			
Nonlinear Effects	Yes			
Thermal Strain Effects	Yes			
Bounding Box				
Length X	4.1075e-003 m			
Length Y	0.13337 m			
Length Z	3.1321e-002 m			
Properties				
Volume	8.095e-006 m³			
Mass	5.9093e-002 kg			
Centroid X	-0.13762 m	-0.1455 m	-0.15337 m	-0.16125 m
Centroid Y	0.12427 m			
Centroid Z	-1.5685e-003 m			
Moment of Inertia Ip1	8.9306e-005 kg·m²			
Moment of Inertia Ip2	3.6221e-006 kg·m²			
Moment of Inertia Ip3	8.5765e-005 kg·m²			
Statistics				
Nodes	6072			
Elements	2916			
Mesh Metric	None			
CAD Attributes				
PartTolerance:	0.00000001			
Color:143.159.175				

Medium

TABLE 19
Model (A4, B4) > Geometry > Medium > Parts

ame	*Front-Plate\Front-Plate*	*Left-Plate-Inner\Left-Plate-Inner*	*Right-Plate-Inner\Right-Plate-Inner*	*Back-Plate\Back-Plate*	*Left-Mounting-Ear_Rear\Left-Mounting-Ear*	*Left-Mounting-Ear\Left-Mounting-Ear*	*Right-Mounting-Ear_Rear\Right-Mounting-Ear*	*Right-Mounting-Ear\Right-Mounting-Ear*	*Left-Guidebar\Left-Guidebar*	*Right-Guidebar\Ri Guideba*
tate	Meshed									
Graphics Properties										
ible	Yes									
ncy	1									
Definition										
sed	No									

vior	Flexible									
ıate tem	Default Coordinate System									
nce ture	By Environment									
ıent	None									
Material										
ıent	Aluminum 6061-T6; 6061-T651			AISI 1020 Steel, cold rolled				Nylon		
ects	Yes									
rain ects	Yes									
Bounding Box										
h X	0.4252 m	9.144e-003 m		0.48082 m	1.7882e-002 m	1.651e-002 m	1.7882e-002 m	1.651e-002 m	6.35e-003 m	
h Y	1.27e-002 m	0.4826 m		9.525e-003 m	0.4916 m	0.49721 m	0.4916 m	0.49721 m	0.4699 m	
th Z	4.3307e-002 m	4.3688e-002 m		4.3307e-002 m	4.3688e-002 m				1.1684e-002 m	
Properties										
ume	4.9769e-005 m³	1.4888e-004 m³	1.4882e-004 m³	8.2892e-005 m³	6.4756e-005 m³	5.2426e-005 m³	6.4756e-005 m³	5.2426e-005 m³	2.7663e-005 m³	
ass	0.13438 kg	0.40199 kg	0.4018 kg	0.22381 kg	0.50963 kg	0.4126 kg	0.50963 kg	0.4126 kg	3.2089e-002 kg	
d X	-4.775e-002 m	0.15149 m	-0.28239 m	-6.5449e-002 m	0.16474 m	0.15954 m	-0.29561 m	-0.29042 m	0.15427 m	-0.28517 m
d Y	0.2476 m	1.2658e-002 m	1.2625e-002 m	-0.23384 m	7.3426e-002 m	2.1425e-002 m	7.3426e-002 m	2.1425e-002 m	3.938e-002 m	
id Z	1.1534e-003 m	-7.4915e-005 m	-7.0092e-005 m	4.7337e-005 m	-7.6983e-005 m	-7.7017e-005 m	-8.4613e-005 m	-8.4579e-005 m	-7.7016e-005 m	-8.4579e-005 m
ertia Ip1	3.4683e-005 kg·m²	7.7884e-003 kg·m²	7.7855e-003 kg·m²	4.8203e-005 kg·m²	1.0799e-002 kg·m²	8.4792e-003 kg·m²	1.0799e-002 kg·m²	8.4792e-003 kg·m²	5.8192e-004 kg·m²	
ertia Ip2	2.4242e-003 kg·m²	7.7224e-003 kg·m²	7.7196e-003 kg·m²	5.2268e-003 kg·m²	8.5857e-005 kg·m²	9.2028e-005 kg·m²	8.5857e-005 kg·m²	9.2028e-005 kg·m²	3.8703e-007 kg·m²	3.8704e-007 kg·m²
ertia Ip3	2.3933e-003 kg·m²	7.1982e-005 kg·m²	7.1958e-005 kg·m²	5.2717e-003 kg·m²	1.072e-002 kg·m²	8.3912e-003 kg·m²	1.072e-002 kg·m²	8.3912e-003 kg·m²	5.8175e-004 kg·m²	
Statistics										
des	4944	13423	14018	6096	4191	5282	4128	5258	3944	3923
ents	2297	7471	7857	2828	1891	2274	1858	2257	1804	1790
etric	None									
CAD Attributes										
nce:	0.00000001									
175										
199										
143										
143										

TABLE 20
Model (A4, B4) > Geometry > Medium > Parts

Object Name	*PCI-Slots\PCI-2*	*PCI-Slots\PCI-3*	*PCI-Slots\PCI-4*	*PCI-Slots\PCI-5*	*PCI-Slots\PCI-6*	*PCI-Slots\PCI-7*
State	Meshed					
Graphics Properties						
Visible	Yes					
Transparency	1					
Definition						
Suppressed	No					
Stiffness Behavior	Flexible					
Coordinate System	Default Coordinate System					
Reference Temperature	By Environment					
Treatment	None					
Material						
Assignment	LCP					
Nonlinear Effects	Yes					
Thermal Strain Effects	Yes					
Bounding Box						
Length X	7.5e-003 m		7.4e-003 m			
Length Y	5.5999e-002 m		8.9e-002 m	5.5999e-002 m	8.9e-002 m	5.5999e-002 m
Length Z	1.108e-002 m					
Properties						
Volume	4.6535e-006 m³		7.2973e-006 m³	4.5915e-006 m³	7.2973e-006 m³	4.5915e-006 m³
Mass	8.1902e-003 kg		1.2843e-002 kg	8.081e-003 kg	1.2843e-002 kg	8.081e-003 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
Centroid Y	0.16789 m		0.15139 m	0.16789 m	0.15139 m	0.16789 m
Centroid Z	9.7451e-003 m					
Moment of Inertia Ip1	2.2241e-006 kg·m²		8.609e-006 kg·m²	2.1945e-006 kg·m²	8.609e-006 kg·m²	2.1945e-006 kg·m²
Moment of Inertia Ip2	1.2218e-007 kg·m²		1.9e-007 kg·m²	1.1955e-007 kg·m²	1.9e-007 kg·m²	1.1955e-007 kg·m²
Moment of Inertia Ip3	2.1787e-006 kg·m²		8.5362e-006 kg·m²	2.1487e-006 kg·m²	8.5362e-006 kg·m²	2.1487e-006 kg·m²
Statistics						
Nodes	127		184	127	184	127
Elements	12		18	12	18	12
Mesh Metric	None					
CAD Attributes						
PartTolerance:	0.00000001					
Color:143.175.143						

Big

TABLE 21
Model (A4, B4) > Geometry > Big > Parts

Object Name	*Board\Board*	*Sink\Sink*	*Base\Base*	*PSK\Solid1*
State	Meshed			
Graphics Properties				
Visible	Yes			
Transparency	1			
Definition				
Suppressed	No			
Stiffness Behavior	Flexible			
Coordinate System	Default Coordinate System			
Reference Temperature	By Environment			
Treatment	None			
Material				
Assignment	Glass Epoxy Composite	Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod		ABS
Nonlinear Effects	Yes			
Thermal Strain Effects	Yes			
Bounding Box				
Length X	0.30734 m	7.9e-002 m		0.10096 m
Length Y	0.254 m	0.10214 m		0.2222 m
Length Z	1.6e-003 m	2.4698e-002 m	9.185e-003 m	3.847e-002 m
Properties				
Volume	1.2466e-004 m³	1.678e-004 m³	7.4113e-005 m³	5.2225e-004 m³
Mass	0.91003 kg	0.27745 kg	0.12255 kg	0.67892 kg
Centroid X	-1.201e-002 m	-8.5753e-002 m		-0.23166 m
Centroid Y	0.11111 m	0.10549 m		0.10571 m
Centroid Z	1.6085e-002 m	-6.2487e-003 m	1.0693e-002 m	1.2126e-004 m
Moment of Inertia Ip1	4.8752e-003 kg·m²	2.0414e-004 kg·m²	1.074e-004 kg·m²	2.4675e-003 kg·m²
Moment of Inertia Ip2	7.1721e-003 kg·m²	1.3733e-004 kg·m²	6.4595e-005 kg·m²	4.7089e-004 kg·m²
Moment of Inertia Ip3	1.2047e-002 kg·m²	3.1326e-004 kg·m²	1.7027e-004 kg·m²	2.8016e-003 kg·m²
Statistics				
Nodes	2807	379	221	3149
Elements	1307	52	24	1550
Mesh Metric	None			
CAD Attributes				
PartTolerance:	0.00000001			
Color:143.143.175				
Color:143.175.143				

Biggest

TABLE 22
Model (A4, B4) > Geometry > Biggest > Parts

Object Name	*Plate\Plate*
State	Meshed
Graphics Properties	
Visible	Yes
Transparency	1
Definition	
Suppressed	No
Stiffness Behavior	Flexible
Coordinate System	Default Coordinate System
Reference Temperature	By Environment
Treatment	None
Material	
Assignment	AISI 1020 Steel, cold rolled
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
Properties	
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 Ip1	5.0134e-002 kg·m²
Moment of Inertia Ip2	4.0459e-002 kg·m²
Moment of Inertia Ip3	9.0592e-002 kg·m²
Statistics	
Nodes	3285
Elements	432
Mesh Metric	None
CAD Attributes	
PartTolerance:	0.00000001
Color:175.159.143	

TABLE 23
Model (A4, B4) > Materials

Object Name	*Materials*
State	Fully Defined
Statistics	
Materials	8
Material Assignments	0

Coordinate Systems

TABLE 24
Model (A4, B4) > Coordinate Systems > Coordinate System

Object Name	*Global Coordinate System*
State	Fully Defined
Definition	
Type	Cartesian
Coordinate System ID	0.
Origin	
Origin X	0. m
Origin Y	0. m
Origin Z	0. m
Directional Vectors	
X Axis Data	[1. 0. 0.]
Y Axis Data	[0. 1. 0.]
Z Axis Data	[0. 0. 1.]

Connections

TABLE 25
Model (A4, B4) > Connections

Object Name	*Connections*
State	Fully Defined
Auto Detection	
Generate Automatic Connection On Refresh	Yes
Transparency	
Enabled	Yes

TABLE 26
Model (A4, B4) > Connections > Contacts

Object Name	*Contacts*
State	Fully Defined
Definition	
Connection Type	Contact
Scope	
Scoping Method	Geometry Selection
Geometry	All Bodies
Auto Detection	
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

Statistics	
Connections	479
Active Connections	479

TABLE 27
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region*	*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 Region 10*	*Conta Region*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	2 Faces		1 Face	2 Faces		1 Face	2 Faces		1 Face	2 Faces	
Target	2 Faces		1 Face	2 Faces		1 Face	2 Faces		1 Face	2 Faces	
Contact Bodies	Screw-1\Screw-1			Screw-2\Screw-2			Screw-3\Screw-3			Screw-4\Screw-4	
Target Bodies	Front-Plate\Front-Plate	Left-Plate-Inner\Left-Plate-Inner	Left-Mounting-Ear\Left-Mounting-Ear	Front-Plate\Front-Plate	Left-Plate-Inner\Left-Plate-Inner	Left-Mounting-Ear\Left-Mounting-Ear	Front-Plate\Front-Plate	Right-Plate-Inner\Right-Plate-Inner	Right-Mounting-Ear\Right-Mounting-Ear	Front-Plate\Front-Plate	Right Plate Inner\Ri Plate-In
rotected	No										
Definition											
Type	Bonded										
Scope Mode	Automatic										
Behavior	Program Controlled										
Trim Contact	Program Controlled										
Trim olerance	1.8391e-003 m										
pressed	No										
Display											
Element Normals	No										
Advanced											
mulation	Program Controlled										
Small Sliding	Program Controlled										
etection Method	Program Controlled										
netration olerance	Program Controlled										
stic Slip olerance	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 28
Model (A4, B4) > Connections > Contacts > Contact Regions

Contact Region 12	*Contact Region 13*	*Contact Region 14*	*Contact Region 15*	*Contact Region 16*	*Contact Region 17*	*Contact Region 18*	*Contact Region 19*	*Contact Region 20*	*Contact Region 21*	*C*
Fully Defined										
Scope										
Geometry Selection										
1 Face			4 Faces	1 Face	2 Faces	7 Faces	1 Face			
1 Face			4 Faces	1 Face	5 Faces	7 Faces	1 Face			
Screw-Screw-4	Front-Plate\Front-Plate			Left-Plate-Inner\Left-Plate-Inner						
Right-Mounting-Ear\Right-Mounting-Ear	Left-Plate-Inner\Left-Plate-Inner	Right-Plate-Inner\Right-Plate-Inner	Plate\Plate	Back-Plate\Back-Plate	Left-Mounting-Ear\Left-Mounting-Ear	Left-Guidebar\Left-Guidebar	Screw7\Screw7	Screw8\Screw8	Screw9\Screw9	Sc
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 29
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 24	*Contact Region 25*	*Contact Region 26*	*Contact Region 27*	*Contact Region 28*	*Contact Region 29*	*Contact Region 30*	*Contact Region 31*	*Cont*
Fully Defined									
Scope									
Geometry Selection									
1 Face				2 Faces	1 Face	2 Faces	7 Faces		1
1 Face				2 Faces	1 Face	5 Faces	7 Faces		1
Left-Plate-Inner\Left-Plate-Inner					Right-Plate-Inner\Right-Plate-Inner				
	Screw12\Screw12	Screw13\Screw13	Screw14\Screw14	Plate\Plate	Back-Plate\Back-Plate	Right-Mounting-Ear\Right-Mounting-Ear	Right-Guidebar\Right-Guidebar	Screw15\Screw15	Screw
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 30
Model (A4, B4) > Connections > Contacts > Contact Regions

gion	*Contact Region 35*	*Contact Region 36*	*Contact Region 37*	*Contact Region 38*	*Contact Region 39*	*Contact Region 40*	*Contact Region 41*	*Contact Region 42*	*Contac*
Fully Defined									
Scope									
Geometry Selection									
1 Face						2 Faces	1 Face		
1 Face					4 Faces	2 Faces	5 Faces		
Right-Plate-Inner\Right-Plate-Inner							Back-Plate\B		
rew19	Screw20\Screw20	Screw21\Screw21	Screw22\Screw22	Screw23\Screw23	PSK\Solid1	Plate\Plate	Left-Mounting-Ear\Left-Mounting-Ear	Right-Mounting-Ear\Right-Mounting-Ear	Screw1
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
Program Controlled
Geometric Modification
None
None

TABLE 31
Model (A4, B4) > Connections > Contacts > Contact Regions

bject ame	*Contact Region 45*	*Contact Region 46*	*Contact Region 47*	*Contact Region 48*	*Contact Region 49*	*Contact Region 50*	*Contact Region 51*	*Contact Region 52*	*Contact Region 53*	*Contact Region 54*
State	Fully Defined									
Scope										
ping thod	Geometry Selection									
ntact	3 Faces				6 Faces		1 Face	2 Faces		
rget	2 Faces				6 Faces		1 Face	6 Faces		
ntact dies	Back-Plate\Back-Plate					Left-Mounting-Ear_Rear\Left-Mounting-Ear		Left-Mounting-Ear\Left-Mo Ear		
rget dies	Screw3\Screw3	Screw4\Screw4	Screw5\Screw5	Screw6\Screw6	Plate\Plate	Left-Mounting-Ear\Left-Mounting-Ear	Left-Guidebar\Left-Guidebar	Left-Nut-1\Left-Nut-1	Left-Nut-2\Left-Nut-2	Left-Nut-3\Left-Nut-3
cted	No									
Definition										
Type	Bonded									
cope lode	Automatic									
avior	Program Controlled									

Trim ntact	Program Controlled
Trim ance	1.8391e-003 m
ssed	No
Display	
ment mals	No
Advanced	
ation	Program Controlled
mall ding	Program Controlled
ction thod	Program Controlled
ation ance	Program Controlled
Slip ance	Program Controlled
rmal ness	Program Controlled
date ness	Program Controlled
nball gion	Program Controlled
Geometric Modification	
ntact metry ction	None
rget metry ction	None

TABLE 32
Model (A4, B4) > Connections > Contacts > Contact Regions

ect me	*Contact Region 56*	*Contact Region 57*	*Contact Region 58*	*Contact Region 59*	*Contact Region 60*	*Contact Region 61*	*Contact Region 62*	*Contact Region 63*	*Contact Region 64*	*Contact Region 65*	*Contac*
ate	Fully Defined										
Scope											
ing hod	Geometry Selection										
act	2 Faces					1 Face	3 Faces	2 Faces		1 Face	
get	6 Faces					1 Face	2 Faces	1 Face			
act ies	Left-Mounting-Ear\Left-Mounting-Ear										
get ies	Left-Nut-5\Left-Nut-5	Left-Nut-6\Left-Nut-6	Left-Nut-7\Left-Nut-7	Left-Nut-8\Left-Nut-8	Left-Nut-9\Left-Nut-9	Left-Guidebar\Left-Guidebar	Screw1\Screw1	Screw3\Screw3	Screw4\Screw4	Screw7\Screw7	Screw8
ted	No										
Definition											

ype	Bonded
ope ode	Automatic
vior	Program Controlled
rim act	Program Controlled
rim nce	1.8391e-003 m
sed	No
Display	
ent als	No
Advanced	
ion	Program Controlled
nall ing	Program Controlled
ion nod	Program Controlled
ion nce	Program Controlled
Slip nce	Program Controlled
mal ess	Program Controlled
ate ess	Program Controlled
ball ion	Program Controlled
Geometric Modification	
act etry ion	None
get etry ion	None

TABLE 33
Model (A4, B4) > Connections > Contacts > Contact Regions

tact Region 68	*Contact Region 69*	*Contact Region 70*	*Contact Region 71*	*Contact Region 72*	*Contact Region 73*	*Contact Region 74*	*Contact Reg 75*
Fully Defined							
Scope							
Geometry Selection							
1 Face						2 Faces	1 Face
1 Face							
Left-Mounting-Ear\Left-Mounting-Ear						Left-Nut-1\Left-Nut-1	
v10\Screw10	Screw11\Screw11	Screw12\Screw12	Screw13\Screw13	Screw14\Screw14	Screw16\Screw16	Left-Guidebar\Left-Guidebar	Screw7\Scre

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 34
Model (A4, B4) > Connections > Contacts > Contact Regions

ontact Region 79	*Contact Region 80*	*Contact Region 81*	*Contact Region 82*	*Contact Region 83*	*Contact Region 84*	*Contact Region 85*	*Contact Region 86*	*C*
Fully Defined								
Scope								
Geometry Selection								
1 Face	2 Faces	1 Face	2 Faces	1 Face	2 Faces	1 Face	2 Faces	
1 Face								
eft-Nut-3	Left-Nut-4\Left-Nut-4		Left-Nut-5\Left-Nut-5		Left-Nut-6\Left-Nut-6		Left-Nut-7\L	

crew9\Screw9	Left-Guidebar\Left-Guidebar	Screw10\Screw10	Left-Guidebar\Left-Guidebar	Screw11\Screw11	Left-Guidebar\Left-Guidebar	Screw12\Screw12	Left-Guidebar\Left-Guidebar	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								
Geometric Modification								
None								
None								

TABLE 35
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 89*	*Contact Region 90*	*Contact Region 91*	*Contact Region 92*	*Contact Region 93*	*Contact Region 94*	*Contact Region 95*	*Contact Region 96*	*Contact Region 97*	*Contact Region 98*	*Co Re*
State	Fully Defined										
Scope											
coping Method	Geometry Selection										
Contact	1 Face	2 Faces	1 Face	6 Faces	1 Face	2 Faces					

Target	1 Face			6 Faces	1 Face	6 Faces						
Contact Bodies	Left-Nut-8\Left-Nut-8	Left-Nut-9\Left-Nut-9		Right-Mounting-Ear_Rear\Right-Mounting-Ear		Right-Mounting-Ear\Right-Mounting-Ear						
Target Bodies	Screw14\Screw14	Left-Guidebar\Left-Guidebar	Screw16\Screw16	Right-Mounting-Ear\Right-Mounting-Ear	Right-Guidebar\Right-Guidebar	Right-Nut-1\Right-Nut-1	Right-Nut-2\Right-Nut-2	Right-Nut-3\Right-Nut-3	Right-Nut-4\Right-Nut-4	Right-Nut-5\Right-Nut-5	R 6\R N	
otected	No											
Definition												
Type	Bonded											
Scope Mode	Automatic											
ehavior	Program Controlled											
Trim Contact	Program Controlled											
Trim erance	1.8391e-003 m											
ressed	No											
Display												
lement ormals	No											
Advanced												
ulation	Program Controlled											
Small Sliding	Program Controlled											
tection Method	Program Controlled											
etration erance	Program Controlled											
tic Slip erance	Program Controlled											
Normal tiffness	Program Controlled											
Update tiffness	Program Controlled											
Pinball Region	Program Controlled											
Geometric Modification												
Contact ometry rection	None											
Target ometry rection	None											

TABLE 36
Model (A4, B4) > Connections > Contacts > Contact Regions

Contact Region 101	*Contact Region 102*	*Contact Region 103*	*Contact Region 104*	*Contact Region 105*	*Contact Region 106*	*Contact Region 107*	*Contact Region 108*	*Contact Regi 109*

Fully Defined
Scope
Geometry Selection

2 Faces	1 Face	3 Faces	2 Faces	1 Face
6 Faces	1 Face	2 Faces	1 Face	

Right-Mounting-Ear\Right-Mounting-Ear

Right-Nut-3\Right-Nut-8	Right-Nut-9\Right-Nut-9	Right-Guidebar\Right-Guidebar	Screw2\Screw2	Screw5\Screw5	Screw6\Screw6	Screw15\Screw15	Screw17\Screw17	Screw18\Screw

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 > Contacts > Contact Regions

ct Region 112	*Contact Region 113*	*Contact Region 114*	*Contact Region 115*	*Contact Region 116*	*Contact Region 117*	*Contact Region 118*	*Contact Regi 119*
Fully Defined							
Scope							
Geometry Selection							
1 Face				2 Faces	1 Face	2 Faces	1 Face
1 Face							
Right-Mounting-Ear\Right-Mounting-Ear				Right-Nut-1\Right-Nut-1		Right-Nut-2\Right-Nut-2	
21\Screw21	Screw22\Screw22	Screw23\Screw23	Screw24\Screw24	Right-Guidebar\Right-Guidebar	Screw15\Screw15	Right-Guidebar\Right-Guidebar	Screw17\Screw
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 38
Model (A4, B4) > Connections > Contacts > Contact Regions

act Region 123	*Contact Region 124*	*Contact Region 125*	*Contact Region 126*	*Contact Region 127*	*Contact Region 128*	*Contact Region 129*	*Contact Region 130*
Fully Defined							
Scope							
Geometry Selection							
1 Face	2 Faces	1 Face	2 Faces	1 Face	2 Faces	1 Face	2 Faces
1 Face							
-Nut-4	Right-Nut-5\Right-Nut-5		Right-Nut-6\Right-Nut-6		Right-Nut-7\Right-Nut-7		Right-Nut-
19\Screw19	Right-Guidebar\Right-Guidebar	Screw20\Screw20	Right-Guidebar\Right-Guidebar	Screw21\Screw21	Right-Guidebar\Right-Guidebar	Screw22\Screw22	Right-Guidebar\Right-Guidebar
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 39
Model (A4, B4) > Connections > Contacts > Contact Regions

t Region 134	*Contact Region 135*	*Contact Region 136*	*Contact Region 137*	*Contact Region 138*	*Contact Region 139*	*Contact Region 140*	*Contact Region 141*
Fully Defined							
Scope							
Geometry Selection							
8 Faces				2 Faces			8 Faces
2 Faces							
Left-Guidebar\Left-Guidebar							
7\Screw7	Screw8\Screw8	Screw9\Screw9	Screw10\Screw10	Screw11\Screw11	Screw12\Screw12	Screw13\Screw13	Screw14\Screw14
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 40
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 145	*Contact Region 146*	*Contact Region 147*	*Contact Region 148*	*Contact Region 149*	*Contact Region 150*	*Contact Region 151*	
Fully Defined								
Scope								
Geometry Selection								
8 Faces		2 Faces		8 Faces				
2 Faces								
Right-Guidebar\Right-Guidebar								
	Screw18\Screw18	Screw19\Screw19	Screw20\Screw20	Screw21\Screw21	Screw22\Screw22	Screw23\Screw23	Screw24\Screw24	S
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 41
Model (A4, B4) > Connections > Contacts > Contact Regions

ject ame	*Contact Region 155*	*Contact Region 156*	*Contact Region 157*	*Contact Region 158*	*Contact Region 159*	*Contact Region 160*	*Contact Region 161*	*Contact Region 162*	*Contact Region 163*	*Contact Region 164*	*C Reg*
tate	Fully Defined										
Scope											
ping hod	Geometry Selection										
tact	1 Face										
rget	1 Face					11 Faces					
tact dies	Board\Board										
rget dies	PCI-Slots\PCI-4	PCI-Slots\PCI-5	PCI-Slots\PCI-6	PCI-Slots\PCI-7	Base\Base	DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VER					
cted	No										
Definition											
ype	Bonded										
ope ode	Automatic										
vior	Program Controlled										
Trim tact	Program Controlled										
Trim nce	1.8391e-003 m										
sed	No										
Display											
nent nals	No										
Advanced											
tion	Program Controlled										
mall ding	Program Controlled										
tion hod	Program Controlled										

tion nce	Program Controlled
Slip nce	Program Controlled
rmal ess	Program Controlled
date ess	Program Controlled
ball gion	Program Controlled
Geometric Modification	
tact etry tion	None
rget etry tion	None

TABLE 42
Model (A4, B4) > Connections > Contacts > Contact Regions

ion 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*
Fully Defined								
Scope								
Geometry Selection								
1 Face								
11 Faces								
Board\Board								
NER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VER							
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 43
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 177*	*Contact Region 178*	*Contact Region 179*	*Contact Region 180*	*Contact Region 181*	*Contact Region 182*	*Contact Region 183*	*Contact Region 184*	*Contact Region 185*	*Contact Region 186*	*Contact Region 187*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	1 Face										
Target	40 Faces							4 Faces			
Contact Bodies	Board\Board										
Target Bodies	DIMM_SLOT\DIMM_SLOT							DIMM1_CHIP\DIMM1_CHIP			
Protected	No										
Definition											
Type	Bonded										
Scope Mode	Automatic										
Behavior	Program Controlled										
Trim Contact	Program Controlled										
Trim Tolerance	1.8391e-003 m										
Suppressed	No										
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 44
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 188*	*Contact Region 189*	*Contact Region 190*	*Contact Region 191*	*Contact Region 192*	*Contact Region 193*	*Contact Region 194*	*Contact Region 195*	*Contact Region 196*	*Contact Region 197*	*Contact Region 198*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	1 Face										
Target	4 Faces				1 Face						
Contact Bodies	Board\Board										
Target Bodies	DIMM1_CHIP\DIMM1_CHIP				PEM-Fastener-1\PEM-Fastener-1	PEM-Fastener-2\PEM-Fastener-2	PEM-Fastener-3\PEM-Fastener-3	PEM-Fastener-4\PEM-Fastener-4	PEM-Fastener-5\PEM-Fastener-5	PEM-Fastener-6\PEM-Fastener-6	PEM-Fastener-7\PEM-Fastener-7
Protected	No										
Definition											
Type	Bonded										
Scope Mode	Automatic										
Behavior	Program Controlled										
Trim Contact	Program Controlled										
Trim Tolerance	1.8391e-003 m										
Suppressed	No										

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

Object Name	*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*	*Contact Region 209*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	1 Face										
Target	1 Face									2 Faces	1 Face
Contact Bodies	Board\Board										
Target Bodies	PEM-Fastener-8\PEM-Fastener-8	Screw-1\Screw-1	Screw-2\Screw-2	Screw-3\Screw-3	Screw-4\Screw-4	Screw-5\Screw-5	Screw-6\Screw-6	Screw-7\Screw-7	Screw-8\Screw-8	Nut-1\Nut-1	Standoff-1\Standoff-1
Protected	No										
Definition											
Type	Bonded										
Scope Mode	Automatic										

Behavior	Program Controlled
Trim Contact	Program Controlled
Trim Tolerance	1.8391e-003 m
Suppressed	No
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 46
Model (A4, B4) > Connections > Contacts > Contact Regions

213	*Contact Region 214*	*Contact Region 215*	*Contact Region 216*	*Contact Region 217*
Fully Defined				
Scope				
Geometry Selection				
1 Face		2 Faces		1 Face

1 Face					
ER_SCREW1_A		DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_B			
INER_TOP_ W_RETAINE DE	DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1	DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1	DIMM1_CHIP\DIMM1_CHIP	
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 47
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 224	*Contact Region 225*	*Contact Region 226*	*Contact Region 227*	*Con*
Fully Defined					
Scope					
Geometry Selection					

	1 Face	2 Faces			
2 Faces					
ER_SCREW1_B	DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_A				
_VE ETAI	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_B	DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_TOP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE	DIMM_SC RTICAL1\D NE

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 48
Model (A4, B4) > Connections > Contacts > Contact Regions

Contact Region 235	*Contact Region 236*	*Contact Region 237*	*Contact Region 238*	*Contact Region 239*
Fully Defined				
Scope				

Geometry Selection				
1 Face		2 Faces	1 Face	
1 Face		2 Faces		
V1_A	DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_B			
DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1	DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAIN SCREW1\DIMM_SCREW TAINER_SCREW1_
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 49
Model (A4, B4) > Connections > Contacts > Contact Regions

egion 246	*Contact Region 247*	*Contact Region 248*	*Contact Region 249*	*C*
Fully Defined				
Scope				
Geometry Selection				
2 Faces		1 Face		
		1 Face		
DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_A				DIMM_S
_RETAINER_SC CREW_RETAIN REW1_B	DIMM_SCREW_RETAINER_TOP_ OUTSIDE\DIMM_SCREW_RETAIN ER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_TOP _INSIDE\DIMM_SCREW_RETAIN ER_TOP_INSIDE	DIMM_SCREW_RETAINER_VE RTICAL1\DIMM_SCREW_RETAI NER_VERTICAL1	DIMM_SC OUTSIDE ER
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 50
Model (A4, B4) > Connections > Contacts > Contact Regions

Contact Region 257	*Contact Region 258*	*Contact Region 259*	*Contact Region 260*	*Contact Region 261*
Fully Defined				
Scope				
Geometry Selection				
	2 Faces	1 Face	2 Faces	
	2 Faces			
DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_B			DIMM_SCREW_RETAINER_SCR	
DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_SCREW1\DIMM_SCREW_RETAINER_SCREW1_B	DIMM_SCREW_RETAINER_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSID
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 51
Model (A4, B4) > Connections > Contacts > Contact Regions

ntact Region 268	*Contact Region 269*	*Contact Region 270*	*Contact Region 271*	*Contact R*
Fully Defined				
Scope				
Geometry Selection				
	1 Face	2 Faces		1 Face
	1 Face	2 Faces		1 F
SCREW_RETAINER_SCREW2\DIMM_SCREW_RETAINER_SCREW2_A				DIMM_SCREW
EW_RETAINER_TOP_OU _SCREW_RETAINER_TO P_OUTSIDE	DIMM_SCREW_RETAINER_TOP_IN SIDE\DIMM_SCREW_RETAINER_T OP_INSIDE	DIMM_SCREW_RETAINER_VERTI CAL2\DIMM_SCREW_RETAINER_ VERTICAL2	DIMM1_CHI P\DIMM1_C HIP	DIMM_SCREW_RE TSIDE\DIMM_SCRE P_OU
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 52
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 279	*Contact Region 280*	*Contact Region 281*	*Contact Region 282*	*Contact Region 283*
		Fully Defined			
Scope					
		Geometry Selection			
	1 Face		2 Faces	1 Face	2
		1 Face	2 Faces		
		DIMM_SCREW_RETAINER_SCREW2\DIMM_SCREW_RETAINER_SCREW2_B			DIM
_VE ETAI	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_SCREW2\DIMM_SCREW_RETAINER_SCREW2_B
		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 53
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 290	*Contact Region 291*	*Contact Region 292*	*Contact Region 293*	*Cont*
Fully Defined					
Scope					
Geometry Selection					
	1 Face	2 Faces		1 Face	
2 Faces				1 Face	
R_SCREW2_B	DIMM_SCREW_RETAINER_SCREW2\DIMM_SCREW_RETAINER_SCREW2_A				
VE TAI	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_SCREW2\DIMM_SCREW_RETAINER_SCREW2_B	DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_TOP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE	DIMM_SC RTICAL2\D NE
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 54
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 301	*Contact Region 302*	*Contact Region 303*	*Contact Region 304*	*Cor*
	Fully Defined				
Scope					
	Geometry Selection				
	1 Face	2 Faces	1 Face		
	1 Face	2 Faces	1 Face		
	CREW2\DIMM_SCREW_RETAINER_SCREW2_A		DIMM_SCREW_RETAINER_SCREW2\DIMM_S		
_O ER	DIMM_SCREW_RETAINER_TOP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCI TICAL2\DI ER
	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 55
Model (A4, B4) > Connections > Contacts > Contact Regions

ontact Region 312	*Contact Region 313*	*Contact Region 314*	*Contact Region 315*	*Contact Re*
Fully Defined				
Scope				
Geometry Selection				
Face	2 Faces	1 Face	2 Faces	
1 Face	2 Faces			
SCREW_RETAINER_SCREW2\DIMM_SCREW_RETAINER_SCREW2_B			DIMM_SCREW	
EW_RETAINER_TOP_OU M_SCREW_RETAINER_T OP_OUTSIDE	DIMM_SCREW_RETAINER_VERTI CAL2\DIMM_SCREW_RETAINER_ VERTICAL2	DIMM1_CH IP\DIMM1_ CHIP	DIMM_SCREW_RETAINER_SCR EW2\DIMM_SCREW_RETAINER_ SCREW2_B	DIMM_SCREW_RET TSIDE\DIMM_SCRE OP_OUT
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 56
Model (A4, B4) > Connections > Contacts > Contact Regions

ntact Region 323	*Contact Region 324*	*Contact Region 325*	*Contact Region 326*
Fully Defined			
Scope			
Geometry Selection			
2 Faces		1 Face	2 Faces
Faces		1 Face	2 Faces
DIMM_SCREW_RETAINER_SCREW2\DIMM_SCREW_RETAINER_SCREW2_A			
REW_RETAINER_SCR M_SCREW_RETAINER_ SCREW2_B	DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_TOP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2
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 57
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 334	*Contact Region 335*	*Contact Region 336*	*Contact Region 337*	*Cor*

Fully Defined

Scope

Geometry Selection

2 Faces	4 Faces	6 Faces	19 Faces	
1 Face	5 Faces	6 Faces	17 Faces	

DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE

_VE ETAI	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE	DIMM_SCREW_RETAINER_TOP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE	DIMM_SC RTICAL1\I NE

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 58
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 345	*Contact Region 346*	*Contact Region 347*	*Contact Region 348*	*Contact Region 349*	
Fully Defined						
Scope						
Geometry Selection						
	4 Faces	19 Faces	2 Faces		4 Faces	
	5 Faces	17 Faces	1 Face		5 Faces	
DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE						
VER AIN	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_TOP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE	DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2	DIMM1_CHIP\DIMM1_CHIP	
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 59
Model (A4, B4) > Connections > Contacts > Contact Regions

Region 356	*Contact Region 357*	*Contact Region 358*	*Contact Region 359*	*Contact Region 360*
Fully Defined				
Scope				
Geometry Selection				
Faces	2 Faces		4 Faces	6 Faces
Faces	1 Face		5 Faces	6 Faces
DIMM_SCREW_RETAINER_TOP_OUTSIDE\DIMM_SCREW_RETAINER_TOP_OUTSIDE				
_RETAINER_TOP _SCREW_RETAIN P_INSIDE	DIMM_SCREW_RETAINER_VE RTICAL1\DIMM_SCREW_RETAI NER_VERTICAL1	DIMM_SCREW_RETAINER_VE RTICAL2\DIMM_SCREW_RETAI NER_VERTICAL2	DIMM1_C HIP\DIMM 1_CHIP	DIMM_SCREW_RETAINER_TOP_ OUTSIDE\DIMM_SCREW_RETAI ER_TOP_OUTSIDE
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 60
Model (A4, B4) > Connections > Contacts > Contact Regions

Contact Region 367	*Contact Region 368*	*Contact Region 369*	*Contact Region 370*	*R*
Fully Defined				
Scope				
Geometry Selection				
	4 Faces			
	5 Faces	1 Face		
ER_TOP_OUTSIDE		DIMM_SCREW_RETAINER_T		
MM_SCREW_RETAINER_VERTICA\DIMM_SCREW_RETAINER_VERTICAL2	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2	D P
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 61
Model (A4, B4) > Connections > Contacts > Contact Regions

ntact Region 378	*Contact Region 379*	*Contact Region 380*	*Contact Region 381*	*Contact Re*
Fully Defined				
Scope				
Geometry Selection				

1 Face				
1 Face		3 Faces		1 Face
DIMM_SCREW_RETAINER_TOP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE				
REW_RETAINER_VERTI M_SCREW_RETAINER_V ERTICAL1	DIMM_SCREW_RETAINER_VERTI CAL2\DIMM_SCREW_RETAINER_V ERTICAL2	DIMM1_CHI P\DIMM1_C HIP	DIMM_SCREW_RETAINER_VERTI CAL1\DIMM_SCREW_RETAINER_V ERTICAL1	DIMM_SCREW_RE CAL2\DIMM_SCRE ERTIC
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 62
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 389	*Contact Region 390*	*Contact Region 391*	*Contact Region 392*	
Fully Defined					
Scope					
Geometry Selection					
1 Face					
	3 Faces	1 Face		3 Faces	

OP_INSIDE\DIMM_SCREW_RETAINER_TOP_INSIDE					
L2\ L2	DIMM1_CHIP\ DIMM1_CHIP	DIMM_SCREW_RETAINER_VERTICAL1\ DIMM_SCREW_RETAINER_VERTICAL1	DIMM_SCREW_RETAINER_VERTICAL2\ DIMM_SCREW_RETAINER_VERTICAL2	DIMM1_CHIP\ DIMM1_CHIP	DIMM_SC DIMM_SC

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 63
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 400	*Contact Region 401*	*Contact Region 402*	*Contact Region 403*	*Contact Region 404*
Fully Defined					
Scope					
Geometry Selection					
	129 Faces	42 Faces	129 Faces	42 Faces	10 Faces
	98 Faces	17 Faces	98 Faces	17 Faces	10 Faces
DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCREW_RETAINER_VERTICAL1					
_	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_VERTICAL1\DIMM_SCRETAINER_VERTICAL1
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 64
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 411	*Contact Region 412*	*Contact Region 413*	*Contact Region 414*	*Contact Region 415*
			Fully Defined		
			Scope		
			Geometry Selection		
	129 Faces	42 Faces	129 Faces	42 Faces	10 Faces
	98 Faces	17 Faces	98 Faces	17 Faces	10 Faces
SCREW_RETAINER_VERTICAL1					DIMM_SCREW
_	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2

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 65
Model (A4, B4) > Connections > Contacts > Contact Regions

	Contact Region 422	*Contact Region 423*	*Contact Region 424*	*Contact Region 425*	*Contact Region 426*
			Fully Defined		
Scope					
			Geometry Selection		
	128 Faces	42 Faces	128 Faces	42 Faces	10 Faces
	99 Faces	13 Faces	99 Faces	13 Faces	10 Faces
			DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2		
_	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SCREW_RETAINER_VERTICAL2\DIMM_SC RETAINER_VERTICAL2
			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 66
Model (A4, B4) > Connections > Contacts > Contact Regions

n 432	*Contact Region 433*	*Contact Region 434*	*Contact Region 435*	*Contact Region 436*
Fully Defined				
Scope				
Geometry Selection				
	127 Faces	42 Faces	128 Faces	42 Faces
	98 Faces	13 Faces	99 Faces	13 Faces
TAINER_VERTICAL2\DIMM_SCREW_RETAINER_VERTICAL2				
DIMM_SCREW_RETAINER_VER	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_HIP
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 67
Model (A4, B4) > Connections > Contacts > Contact Regions

Contact Region 443	*Contact Region 444*	*Contact Region 445*	*Contact Region 446*	*Contact Region 447*	*Contac*
Fully Defined					
Scope					
Geometry Selection					
es	8 Faces	171 Faces	8 Faces	172 Faces	8
es	8 Faces	43 Faces	8 Faces	43 Faces	8
DIMM_SLOT\DIMM_SLOT					
MM1_CHIP	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SLOT\DIMM_SLOT	DIMM1_CHIP\DIMM1_CHIP	DIMM_SL
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
Program Controlled
Geometric Modification
None
None

TABLE 68
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 452*	*Contact Region 453*	*Contact Region 454*	*Contact Region 455*	*Contact Region 456*	*Contact Region 457*	*Contact Region 458*	*Contact Region 459*	*Contact Region 460*	*Contact Region 461*	*Contact Region 462*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	2 Faces								1 Face		
Target	9 Faces								1 Face		
Contact Bodies	Plate\Plate										
Target Bodies	PEM-Fastener-1\PEM-Fastener-1	PEM-Fastener-2\PEM-Fastener-2	PEM-Fastener-3\PEM-Fastener-3	PEM-Fastener-4\PEM-Fastener-4	PEM-Fastener-5\PEM-Fastener-5	PEM-Fastener-6\PEM-Fastener-6	PEM-Fastener-7\PEM-Fastener-7	PEM-Fastener-8\PEM-Fastener-8	Screw-1\Screw-1	Screw-2\Screw-2	Screw-3\Screw-3
Protected	No										
Definition											
Type	Bonded										
Scope Mode	Automatic										
Behavior	Program Controlled										

Trim Contact	Program Controlled
Trim Tolerance	1.8391e-003 m
Suppressed	No
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 69
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 463*	*Contact Region 464*	*Contact Region 465*	*Contact Region 466*	*Contact Region 467*	*Contact Region 468*	*Contact Region 469*	*Contact Region 470*	*Contact Region 471*	*Contact Region 472*	*Contact Region 473*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	1 Face					2 Faces	1 Face	2 Faces			
Target	1 Face					2 Faces	8 Faces	2 Faces			
Contact Bodies	Plate\Plate							PEM-Fastener-1\PEM-Fastener-1	PEM-Fastener-2\PEM-Fastener-2	PEM-Fastener-3\PEM-Fastener-3	PEM-Fastener-4\PEM-Fastener-4
Target Bodies	Screw-4\Screw-4	Screw-5\Screw-5	Screw-6\Screw-6	Screw-7\Screw-7	Screw-8\Screw-8	Screw-9\Screw-9	Nut-1\Nut-1	Screw-3\Screw-3	Screw-8\Screw-8	Screw-7\Screw-7	Screw-1\Screw-1

Protected	No
Definition	
Type	Bonded
Scope Mode	Automatic
Behavior	Program Controlled
Trim Contact	Program Controlled
Trim Tolerance	1.8391e-003 m
Suppressed	No
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 70
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 474*	*Contact Region 475*	*Contact Region 476*	*Contact Region 477*	*Contact Region 478*	*Contact Region 479*
State	Fully Defined					
Scope						
Scoping Method	Geometry Selection					
Contact	2 Faces					1 Face
Target	2 Faces				4 Faces	1 Face
Contact Bodies	PEM-Fastener-	PEM-Fastener-	PEM-Fastener-	PEM-Fastener-	Screw-9\Screw-9	

	5\PEM-Fastener-5	6\PEM-Fastener-6	7\PEM-Fastener-7	8\PEM-Fastener-8		
Target Bodies	Screw-6\Screw-6	Screw-2\Screw-2	Screw-5\Screw-5	Screw-4\Screw-4	Nut-1\Nut-1	Standoff-1\Standoff-1
Protected	No					
Definition						
Type	Bonded					
Scope Mode	Automatic					
Behavior	Program Controlled					
Trim Contact	Program Controlled					
Trim Tolerance	1.8391e-003 m					
Suppressed	No					
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					

Mesh

TABLE 71
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	8.0248e-005 m²
Minimum Edge Length	7.5077e-006 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	555628
Elements	283240

TABLE 72
Model (A4, B4) > Mesh > Mesh Controls

Object Name	*Smallest*	*Small*	*Medium*	*Big*	*Biggest*
State	Fully Defined				
Scope					
Scoping Method	Geometry Selection				
Geometry	1803 Faces	14984 Faces	628 Faces	72 Faces	21 Faces
Definition					
Suppressed	No				
Type	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

Named Selections

TABLE 73
Model (A4, B4) > Named Selections > Named Selections

Object Name	*DIMM1*	*DIMM2*	*DIMM3*	*DIMM4*	*DIMM5*	*DIMM6*	*DIMM7*	*DIMM8*
State	Fully Defined							
Scope								
Scoping Method	Geometry Selection							
Geometry	1 Body							
Definition								
Send to Solver	Yes							
Protected	Program Controlled							
Visible	Yes							
Program Controlled Inflation	Exclude							
Statistics								
Type	Manual							
Total Selection	1 Body							
Suppressed	0							
Used by Mesh Worksheet	No							

Modal (A5)

TABLE 74
Model (A4, B4) > Analysis

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 75
Model (A4, B4) > Modal (A5) > Initial Condition

Object Name	*Pre-Stress (None)*
State	Fully Defined
Definition	
Pre-Stress Environment	None Available

TABLE 76
Model (A4, B4) > Modal (A5) > Analysis Settings

Name	*Analysis Settings*
State	Fully Defined

Options	
odes to Find	6
Search Range	No
emand ansion	No
Solver Controls	
amped	No
r Type	Direct
Rotordynamics Controls	
s Effect	Off
mpbell iagram	Off
Advanced	
ct Split (DMP)	Off
Output Controls	
Stress	Yes
Surface Stress	No
Stress	No
Strain	Yes
ct Data	No
Forces	Constrained Nodes
me and Energy	No
Angles	No
lculate actions	Yes
Modal Results	Program Controlled
General aneous	No
ult File ession	Program Controlled
Analysis Data Management	
r Files rectory	\\iowa.uiowa.edu\shared\engineering\home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\screw_project_files\dp0\SYS\
Future nalysis	MSUP Analyses
Scratch r Files rectory	
MAPDL db	Yes
Contact mmary	Program Controlled
Delete eeded Files	Yes

r Units	Active System
er Unit System	mks

TABLE 77
Model (A4, B4) > Modal (A5) > Loads

Object Name	*Fixed Support*
State	Fully Defined
Scope	
Scoping Method	Geometry Selection
Geometry	2 Faces
Definition	
Type	Fixed Support
Suppressed	No

Solution (A6)

TABLE 78
Model (A4, B4) > Modal (A5) > Solution

Object Name	*Solution (A6)*
State	Solved
Adaptive Mesh Refinement	
Max Refinement Loops	1.
Refinement Depth	2.
Information	
Status	Done
MAPDL Elapsed Time	5 m 38 s
MAPDL Memory Used	8.5703 GB
MAPDL Result File Size	658.63 MB
Post Processing	
Beam Section Results	No

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

FIGURE 1
Model (A4, B4) > Modal (A5) > Solution (A6)

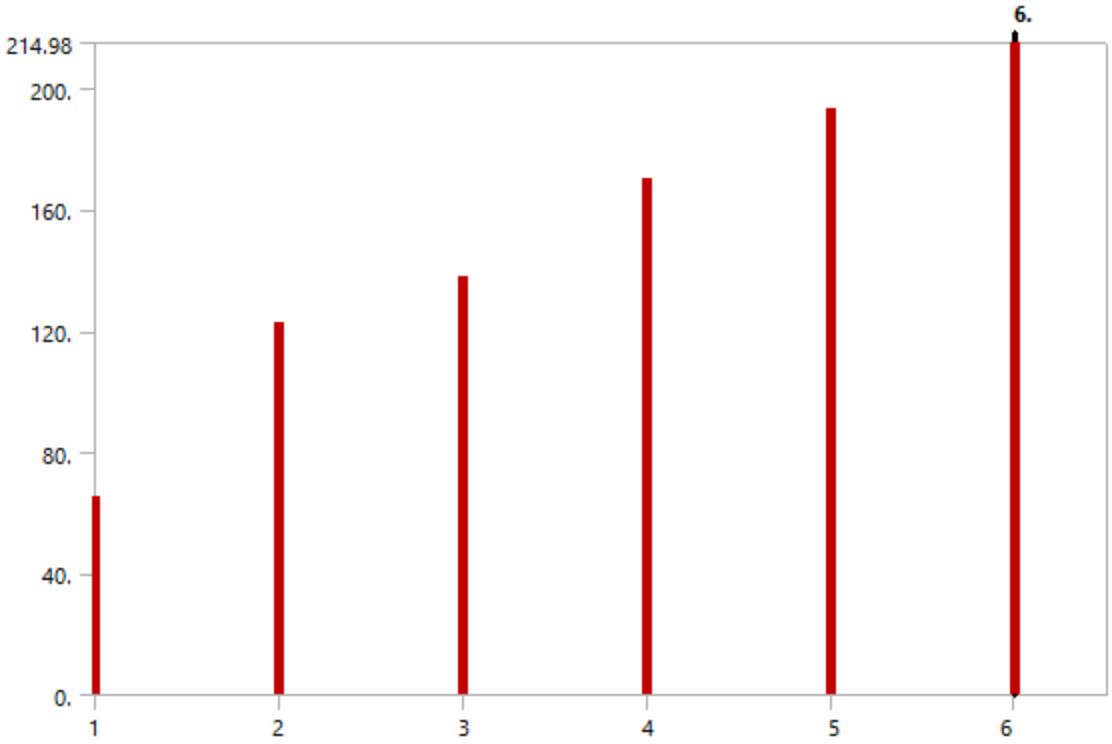


TABLE 79
Model (A4, B4) > Modal (A5) > Solution (A6)

Mode	Frequency [Hz]
1.	65.543
2.	122.51
3.	137.66
4.	169.86
5.	193.39
6.	214.98

TABLE 80
Model (A4, B4) > Modal (A5) > Solution (A6) > Solution Information

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 81
Model (A4, B4) > Modal (A5) > Solution (A6) > Results

Object Name	*Total Deformation*	*Total Deformation 2*	*Total Deformation 3*	*Total Deformation 4*
State	Solved			
Scope				
Scoping Method	Geometry Selection			
Geometry	All Bodies			
Definition				
Type	Total Deformation			
Mode	1.	2.	3.	4.
Identifier				
Suppressed	No			
Results				
Minimum	0. m			
Maximum	0.98029 m	1.173 m	1.2895 m	1.298 m
Average	0.40991 m	0.37876 m	0.39904 m	0.38923 m
Minimum Occurs On	Left-Mounting-Ear\Left-Mounting-Ear			
Maximum Occurs On	Board\Board	Plate\Plate		
Information				
Frequency	65.543 Hz	122.51 Hz	137.66 Hz	169.86 Hz

TABLE 82
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation

Mode	Frequency [Hz]
1.	65.543
2.	122.51
3.	137.66
4.	169.86
5.	193.39
6.	214.98

FIGURE 2
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation > 1stModeShape

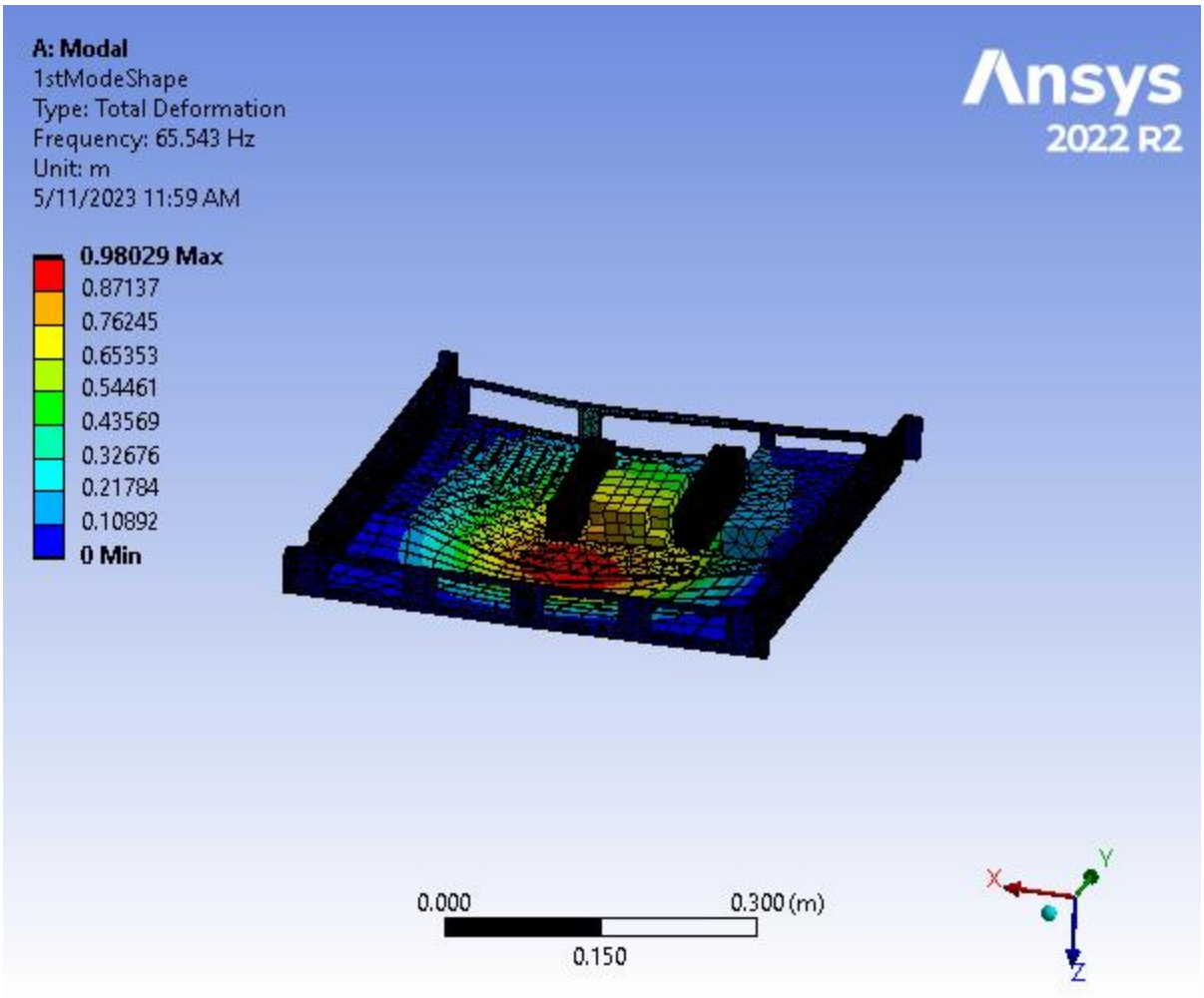


TABLE 83
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation 2

Mode	Frequency [Hz]
1.	65.543
2.	122.51
3.	137.66
4.	169.86
5.	193.39
6.	214.98

TABLE 84
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation 3

Mode	Frequency [Hz]
1.	65.543
2.	122.51
3.	137.66
4.	169.86
5.	193.39
6.	214.98

TABLE 85
Model (A4, B4) > Modal (A5) > Solution (A6) > Total Deformation 4

Mode	Frequency [Hz]
1.	65.543
2.	122.51
3.	137.66
4.	169.86
5.	193.39
6.	214.98

Harmonic Response (B5)

TABLE 86
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 87
Model (A4, B4) > Harmonic Response (B5) > Initial Condition

Object Name	*Modal (Modal)*
State	Fully Defined
Definition	
Modal Environment	Modal
Pre-Stress Environment	None

TABLE 88
Model (A4, B4) > Harmonic Response (B5) > Analysis Settings

ject Name	*Analysis Settings*
State	Fully Defined
Step Controls	
tiple Steps	No
Options	
Frequency Spacing	Linear
Range Minimum	49. Hz
Range Maximum	100. Hz
Solution Intervals	51
er Defined equencies	Off

Solution Method	Mode Superposition
Include Residual Vector	No
Cluster Results	No
n Demand Expansion	No
re Results At All equencies	Yes
Rotordynamics Controls	
iolis Effect	Off
Output Controls	
Stress	Yes
Surface Stress	No
ack Stress	No
Strain	Yes
ntact Data	Yes
dal Forces	No
olume and Energy	Yes
ler Angles	Yes
Calculate Reactions	Yes
General cellaneous	No
Expand sults From	Program Controlled
Expansion	Modal Solution
Result File mpression	Program Controlled
Damping Controls	
. Damping Ratio From Modal	No
Damping Define By	Damping Ratio
Damping Ratio	0.1
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\screw_project_files\dp0\S 1\MECH\
Future Analysis	None
Scratch olver Files Directory	
ve MAPDL db	No
Contact Summary	Program Controlled
Delete Unneeded Files	Yes
olver Units	Active System
Solver Unit System	mks

TABLE 89
Model (A4, B4) > Harmonic Response (B5) > Accelerations

Object Name	*Acceleration*
State	Suppressed
Scope	
Boundary Condition	Fixed Support
Definition	
Base Excitation	Yes
Absolute Result	Yes
Define By	Magnitude - Phase
Magnitude	45.4 m/s²
Phase Angle	0. °
Direction	X Axis
Suppressed	Yes

TABLE 90
Model (A4, B4) > Harmonic Response (B5) > Loads

Object Name	*Force*	*Force 2*
State	Fully Defined	
Scope		
Scoping Method	Geometry Selection	
Geometry	1 Face	
Definition		
Type	Force	
Define By	Components	
Applied By	Direct	
Coordinate System	Global Coordinate System	
X Component	0. N	
Y Component	0. N	
Z Component	-188. N	188. N
X Phase Angle	0. °	
Y Phase Angle	0. °	

Z Phase Angle	0. °	180. °
Suppressed	No	

Solution (B6)

TABLE 91
Model (A4, B4) > Harmonic Response (B5) > Solution

Object Name	*Solution (B6)*
State	Solved
Information	
Status	Done
MAPDL Elapsed Time	12 m 3 s
MAPDL Memory Used	6.4824 GB
MAPDL Result File Size	15.734 GB
Post Processing	
Beam Section Results	No

FIGURE 3
Model (A4, B4) > Harmonic Response (B5) > Solution (B6)

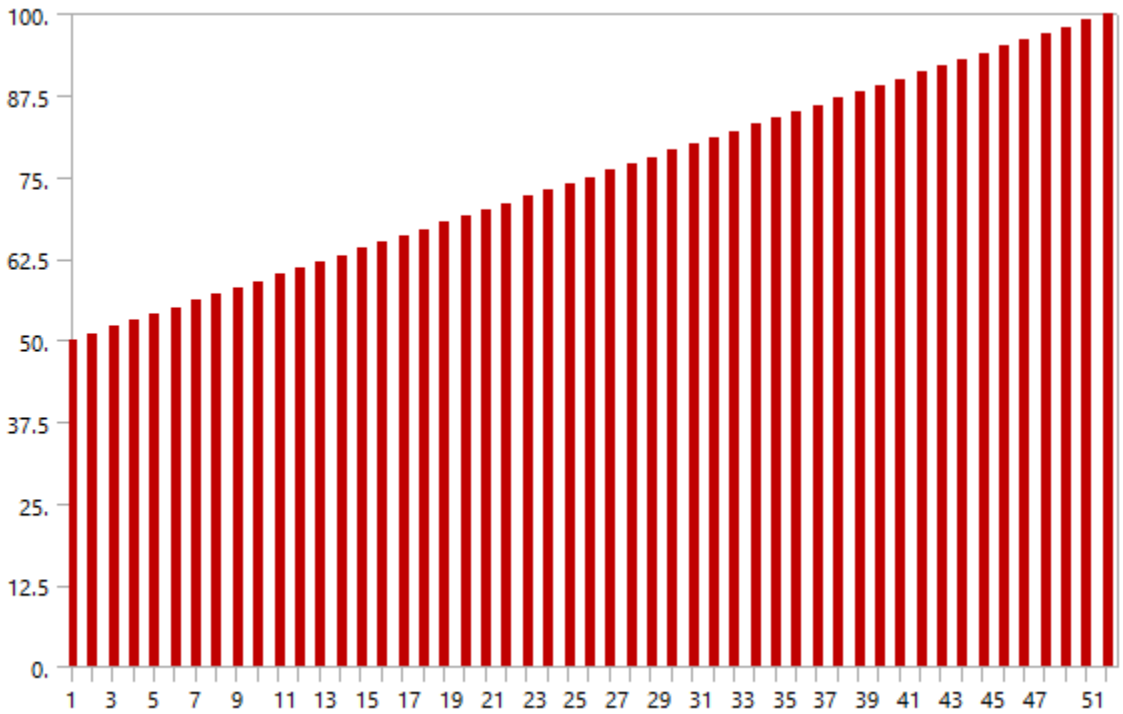


TABLE 92
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Solution Information

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 93
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

ionFrequencyRespons eDIMM1x	*AccelerationFrequencyRespons eDIMM1y*	*AccelerationFrequencyRespons eDIMM1z*	*DeformationFrequencyRespons eDIMM1x*	*DeformationFre eDI*
Solved				
Scope				
Geometry Selection				
1 Body				
Use Average				
Definition				
Directional Acceleration			Directional	
X Axis	Y Axis	Z Axis	X Axis	Y A
Global Coordinate System				
No				
Options				
Use Parent				
49. Hz				
100. Hz				
Bode				
Log Y				
Results				

17.501 m/s²	31.873 m/s²	322.4 m/s²	1.0072e-004 m	1.8768
67. Hz	66. Hz			
71.293 °	85.447 °	-96.14 °	-100.2 °	-85
5.613 m/s²	2.5301 m/s²	-34.48 m/s²	-1.783e-005 m	1.3614
16.576 m/s²	31.773 m/s²	-320.55 m/s²	-9.9131e-005 m	-1.8719

FIGURE 4
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1x

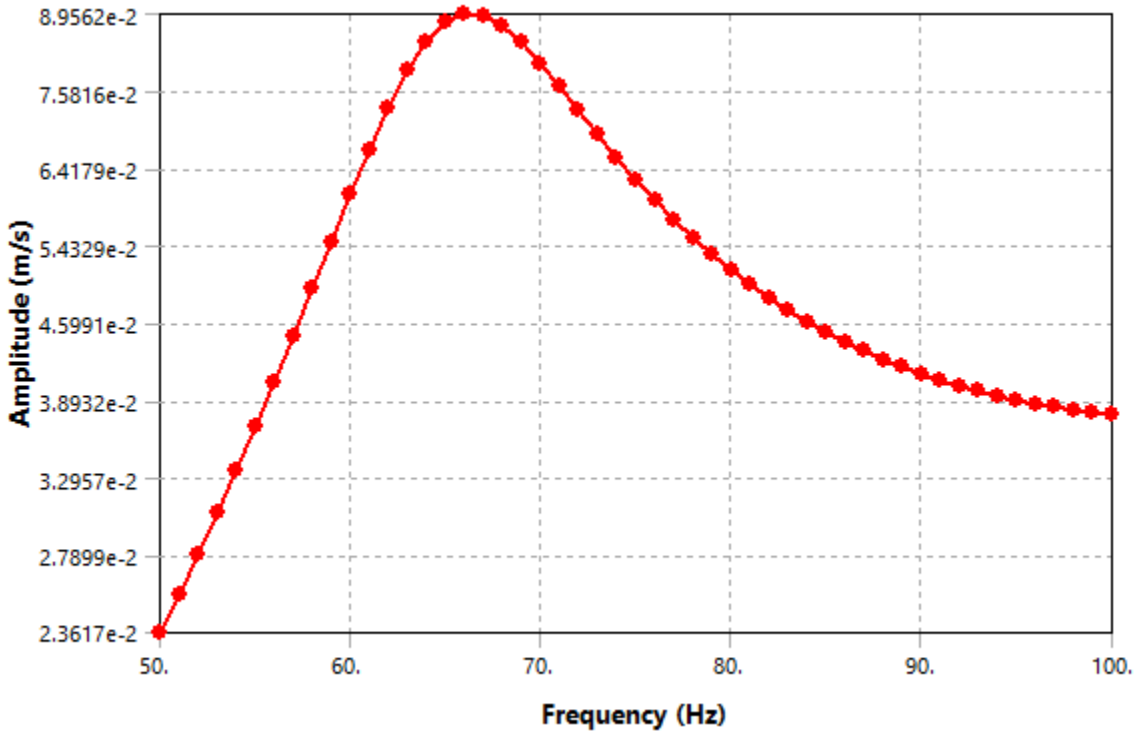


FIGURE 5
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1y

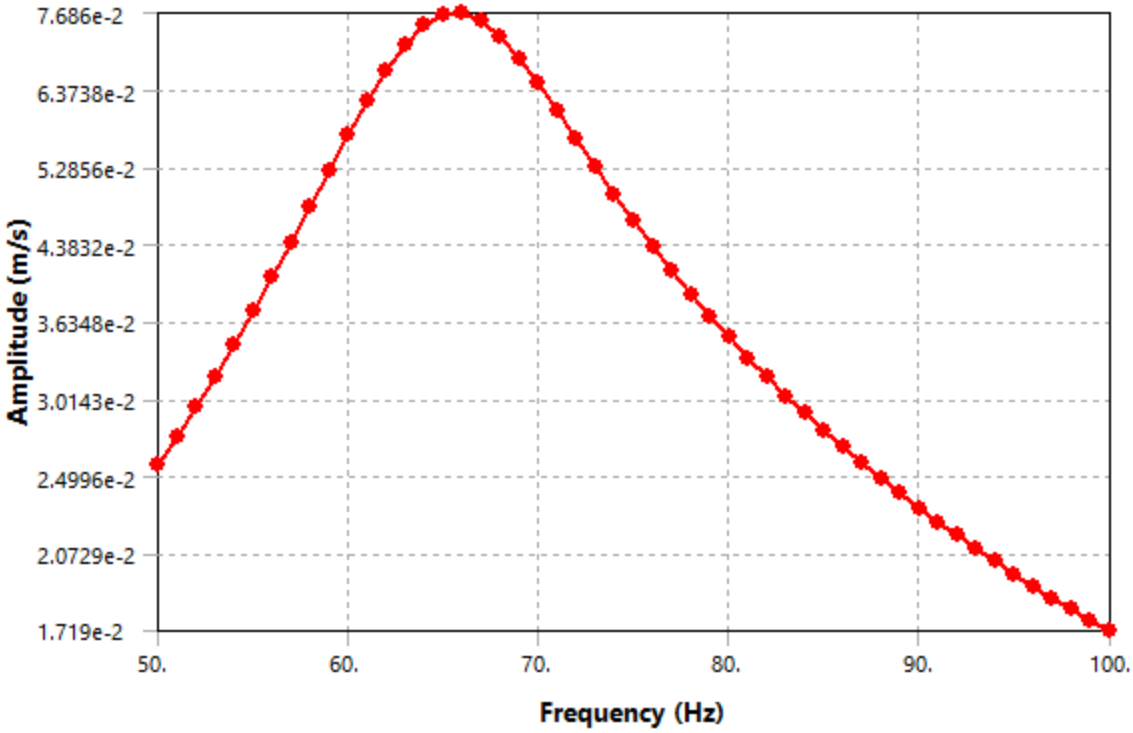


FIGURE 6
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1z

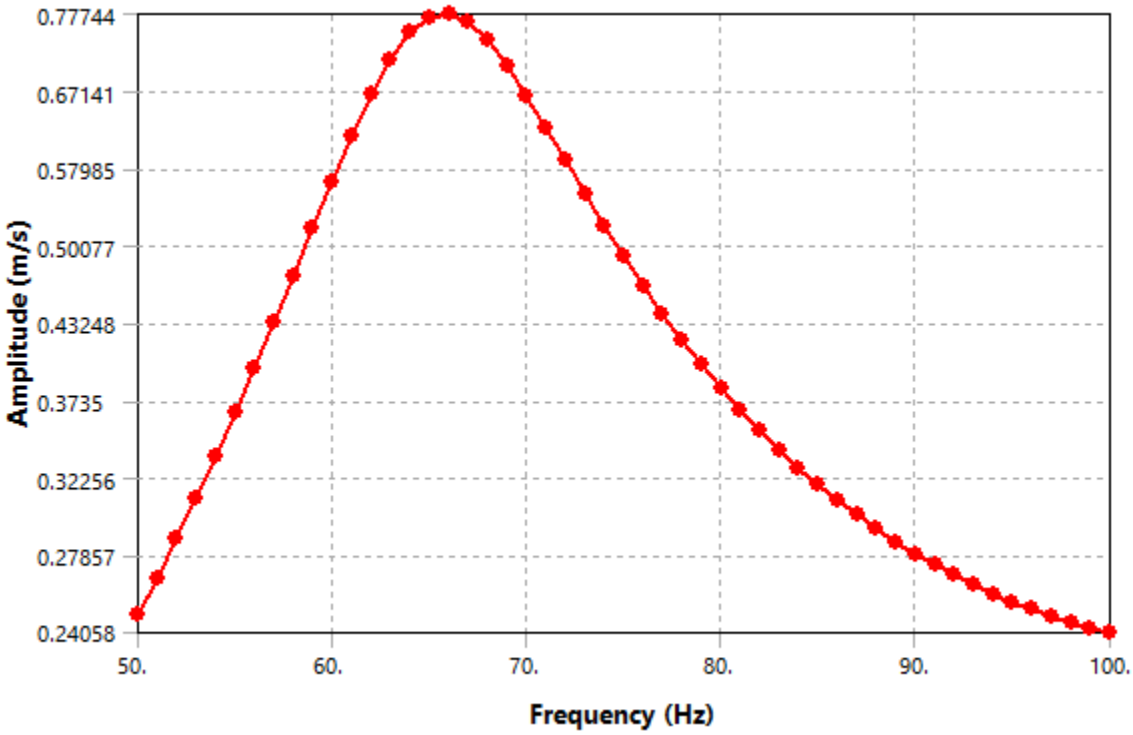


FIGURE 7
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1x

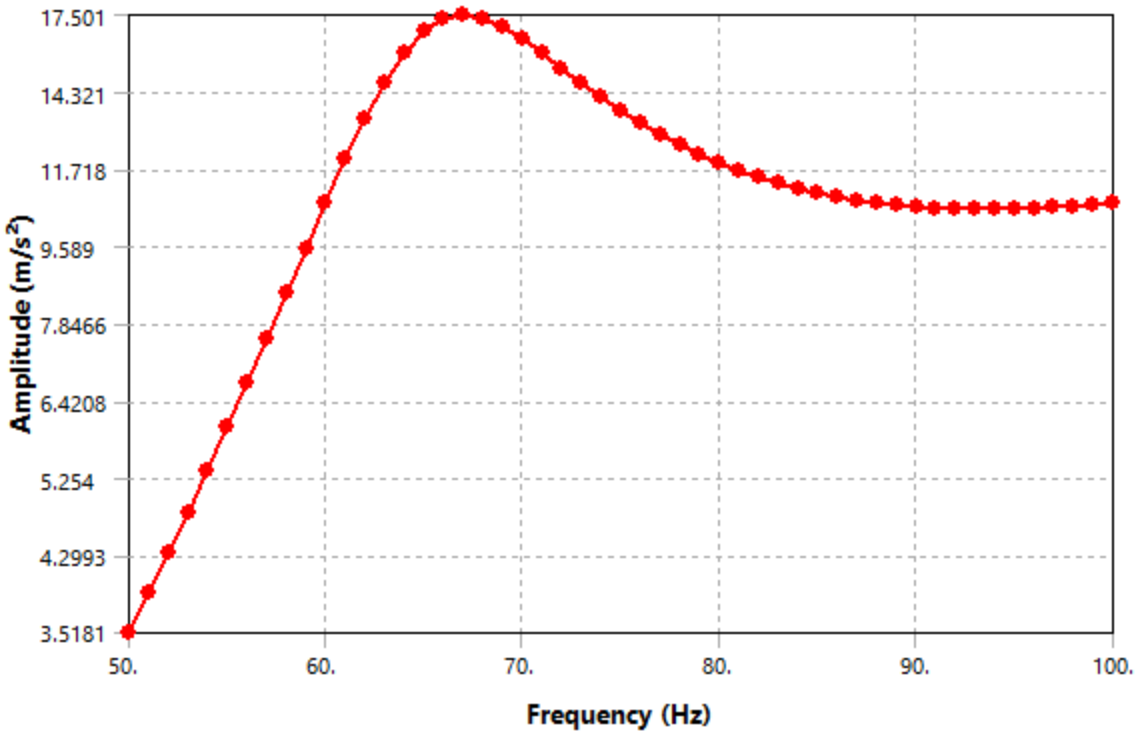


FIGURE 8
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1y

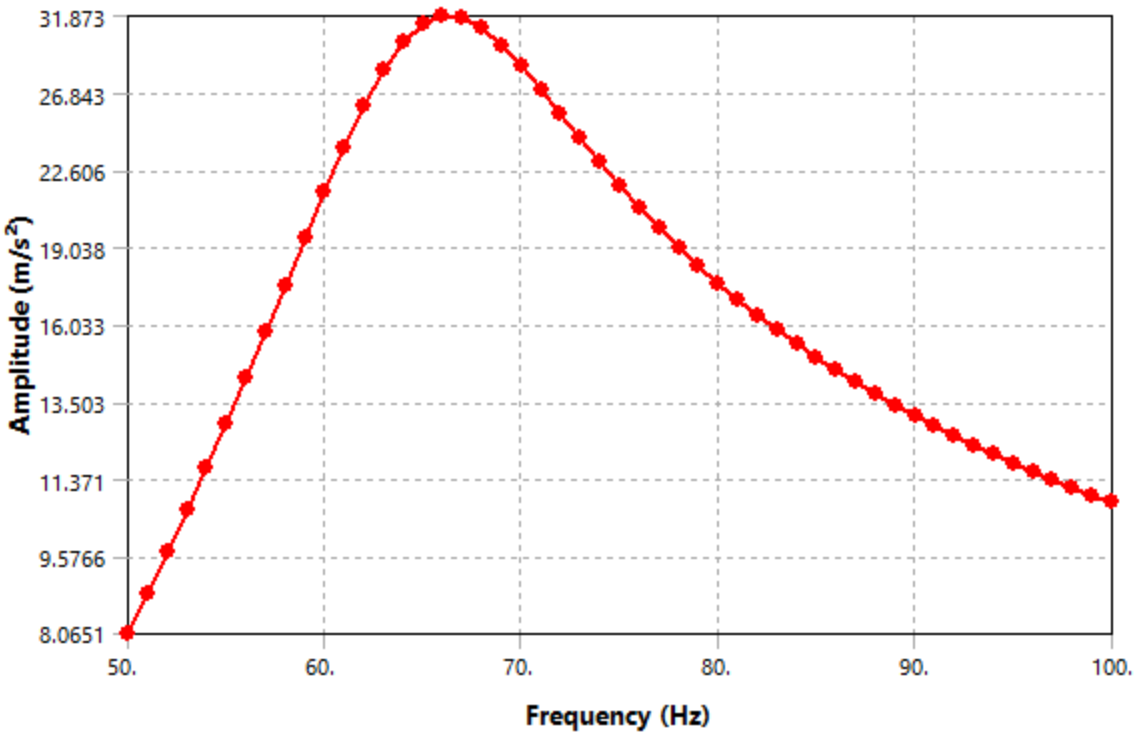


FIGURE 9
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1z

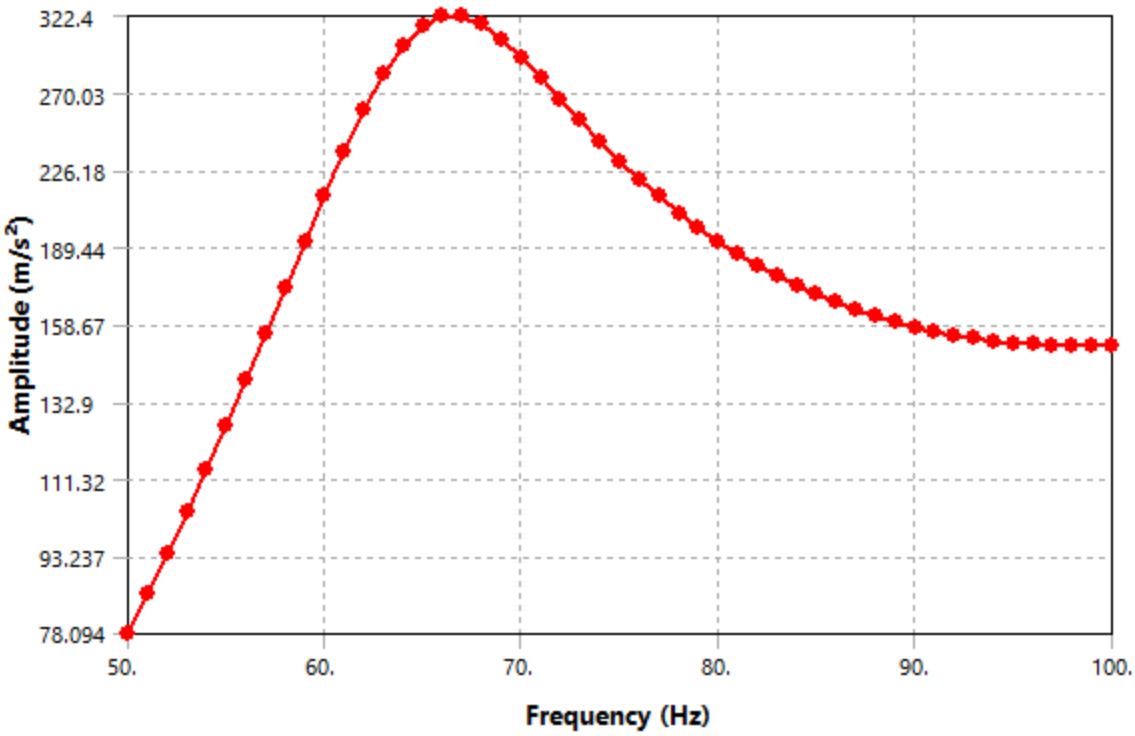


FIGURE 10
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM1x

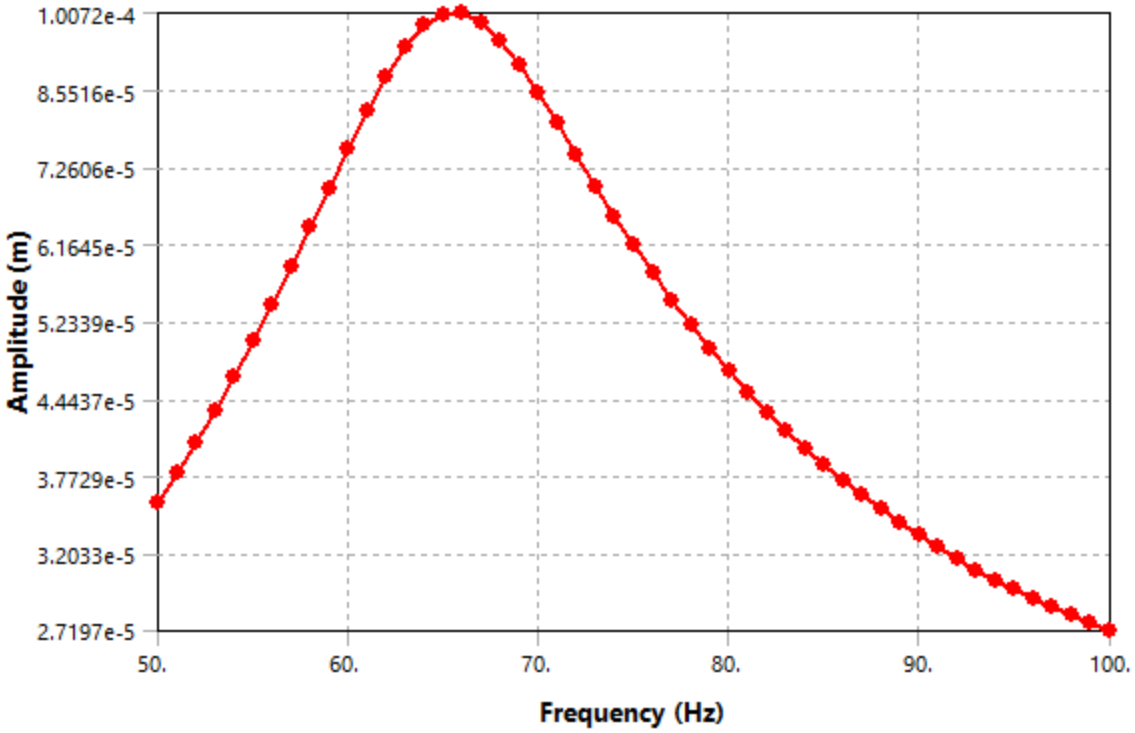


FIGURE 11
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM1y

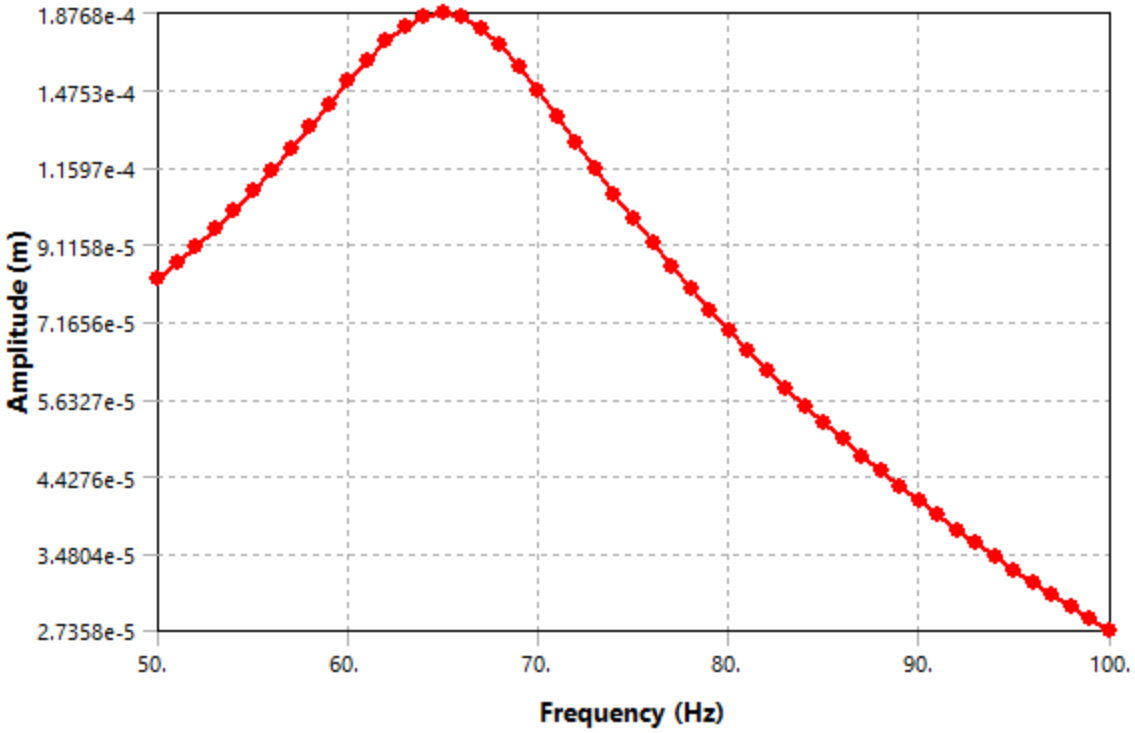


FIGURE 12
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM1z

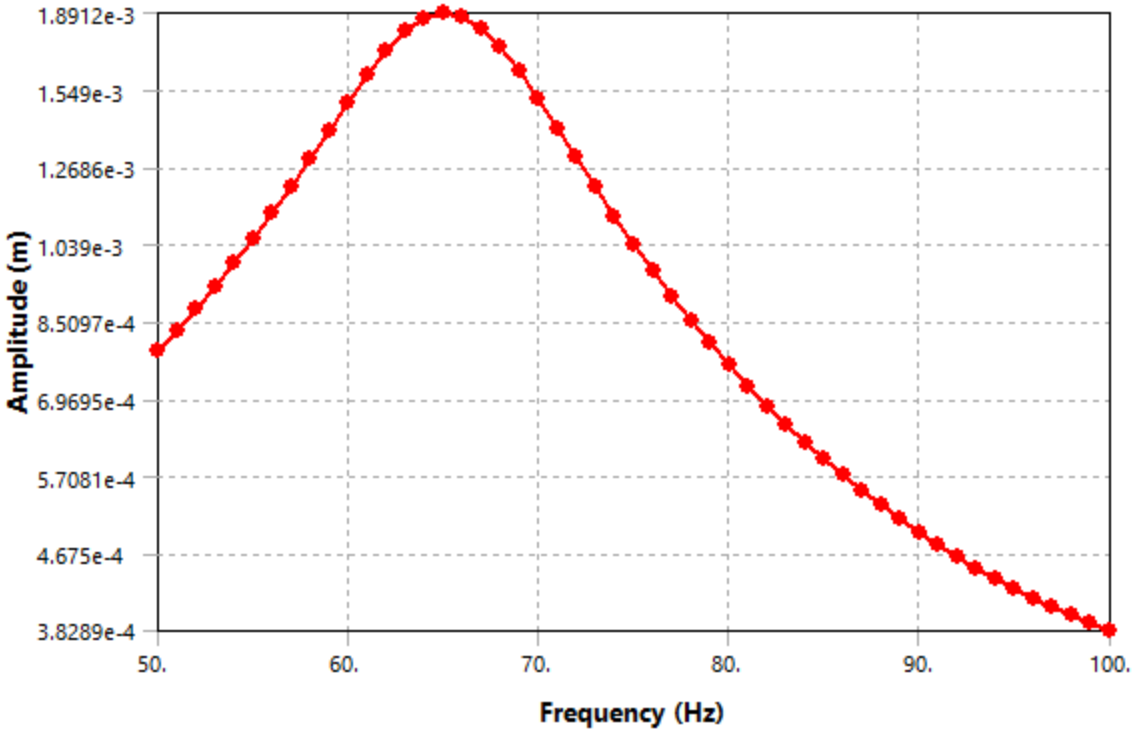


FIGURE 13
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2x

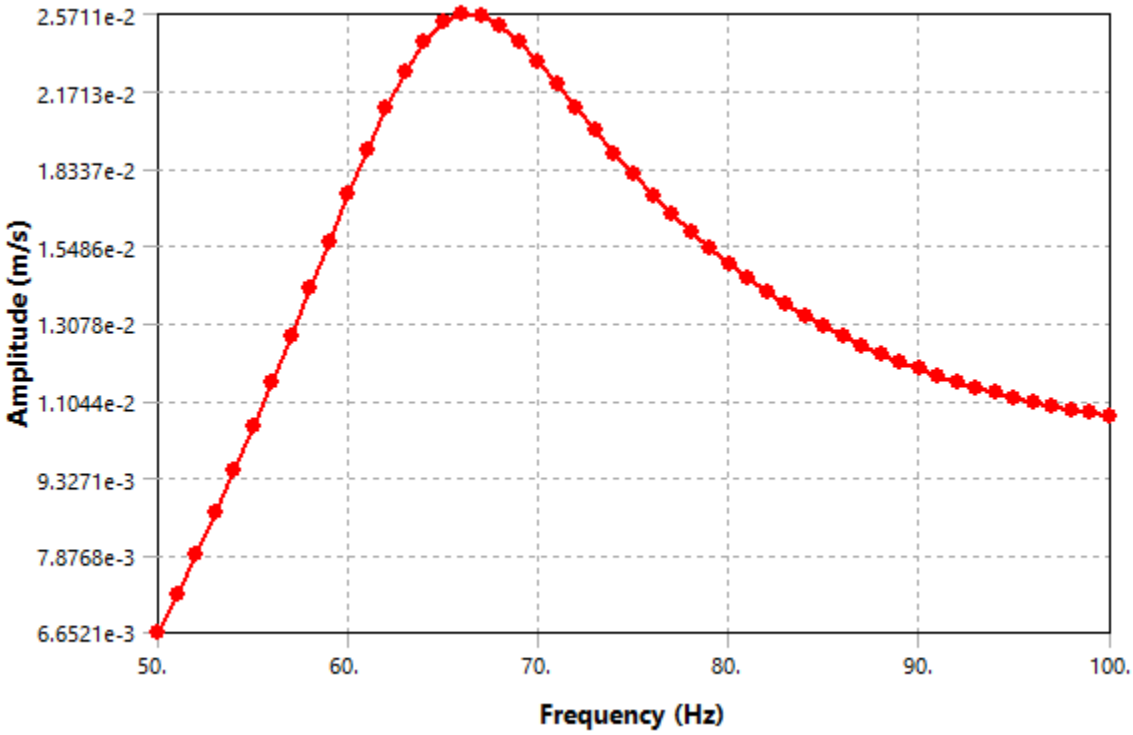


FIGURE 14
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2y

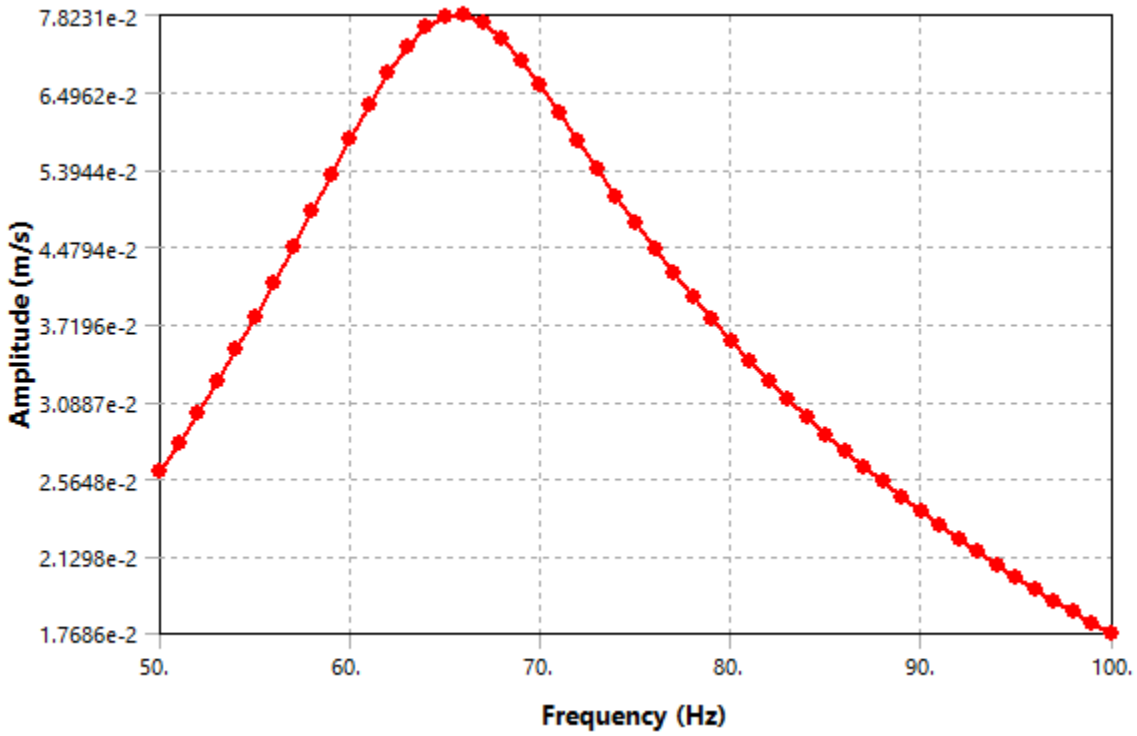


TABLE 94
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

celerationFrequencyRespon seDIMM2z	*DeformationFrequencyRespon seDIMM2x*	*DeformationFrequencyRespon seDIMM2y*	*DeformationFrequencyRespon seDIMM2z*	*VelocityFre e*
Solved				
Scope				
Geometry Selection				
1 Body				
Use Average				
Definition				
	Directional Deformation			
Z Axis	X Axis	Y Axis	Z Axis	
Global Coordinate System				
No				
Options				

Use Parent
49. Hz
100. Hz
Bode
Log Y

Results				
327.82 m/s²	6.2e-005 m	1.9099e-004 m	1.9226e-003 m	1.060
66. Hz		65. Hz		
-96.231 °	-100.86 °	-85.92 °	92.581 °	-1
-35.579 m/s²	-1.168e-005 m	1.3589e-005 m	-8.657e-005 m	1.039
-325.88 m/s²	-6.089e-005 m	-1.905e-004 m	1.9206e-003 m	-2.096

FIGURE 15
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2z

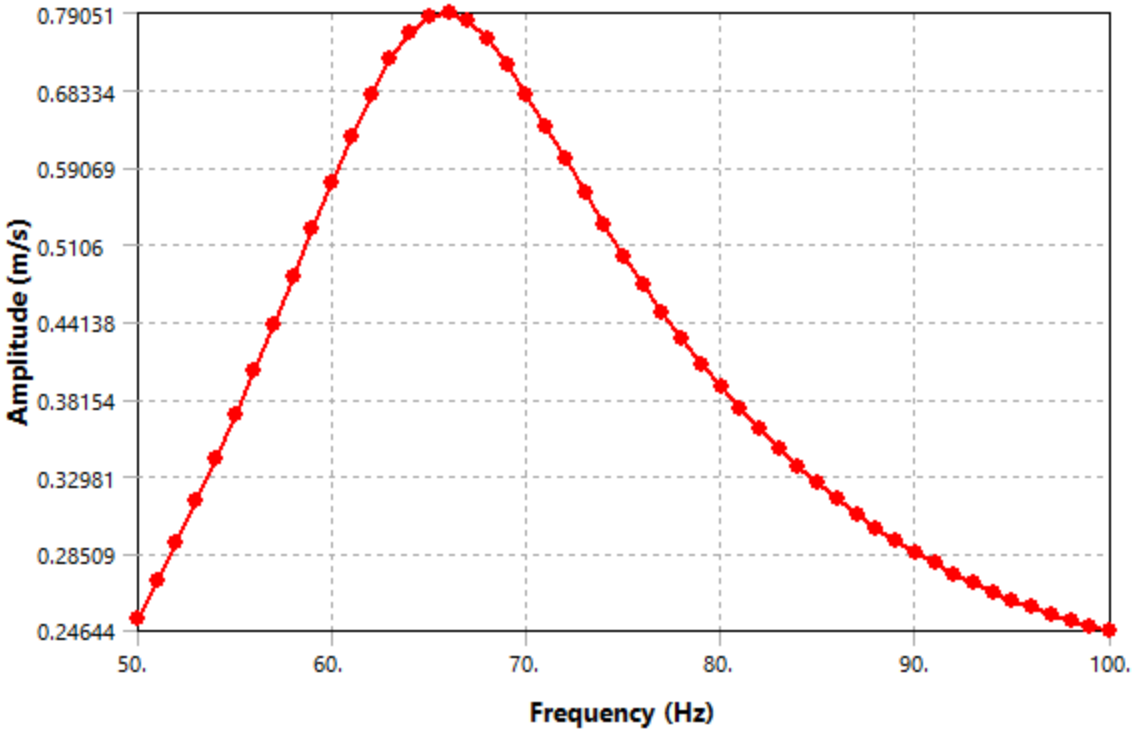


FIGURE 16
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2x

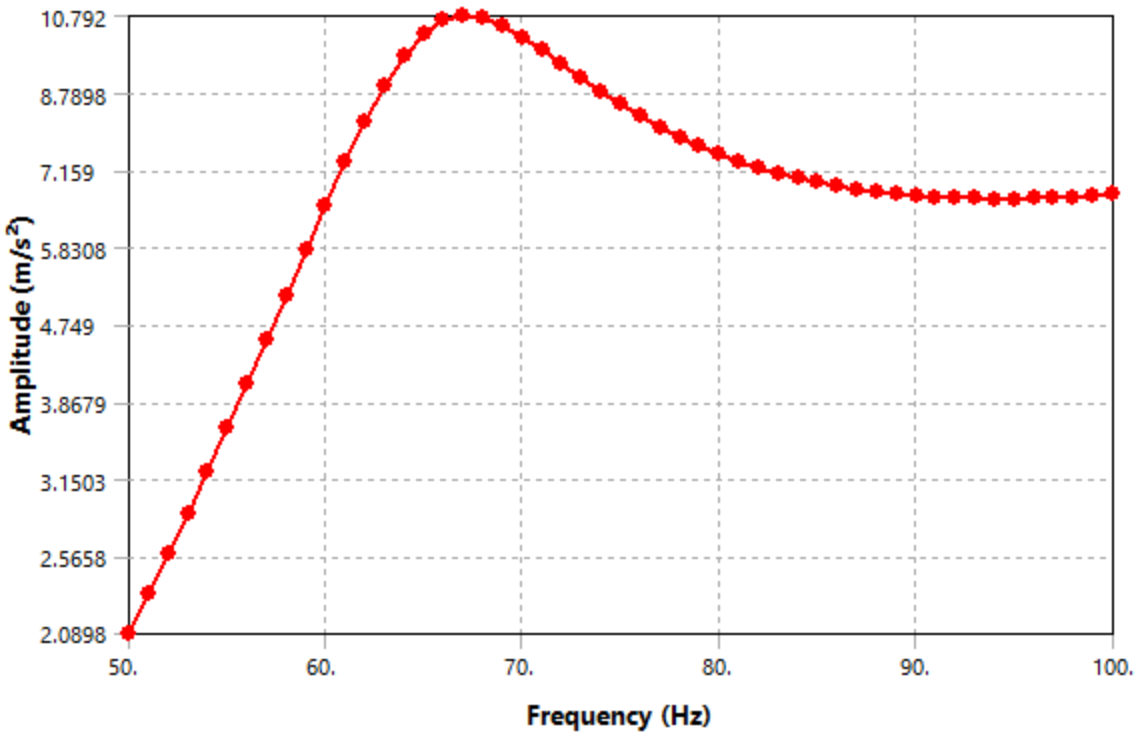


FIGURE 17
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2y

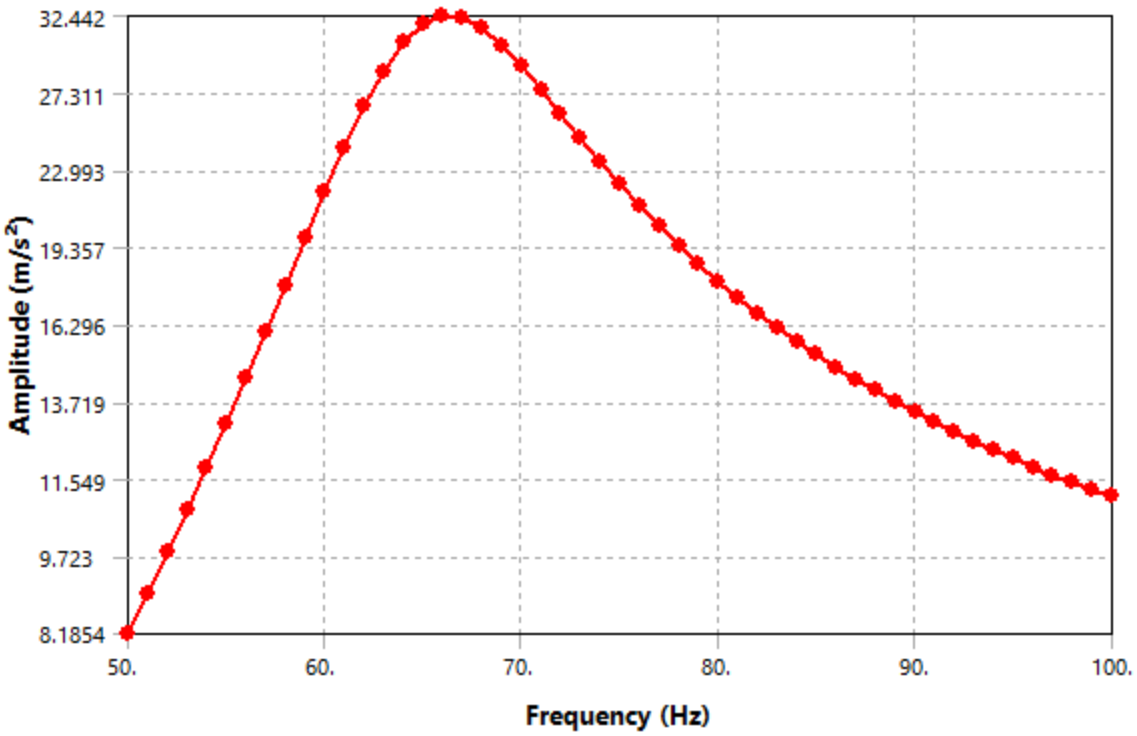


FIGURE 18
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2z

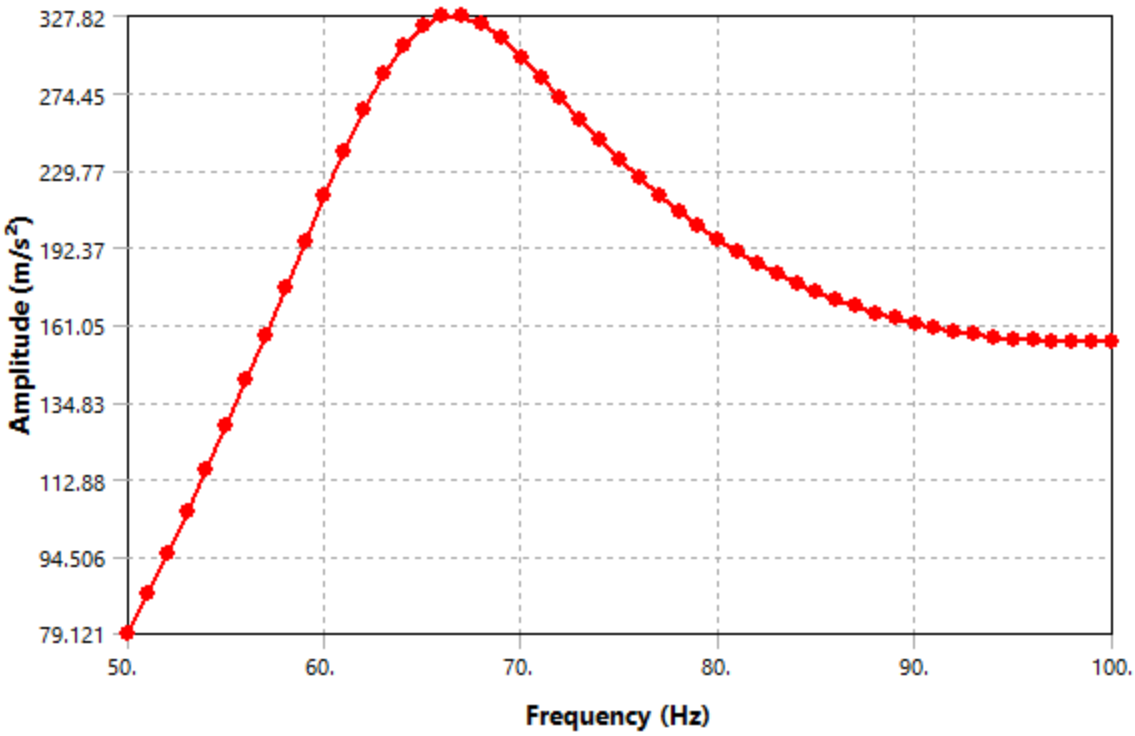


FIGURE 19
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2x

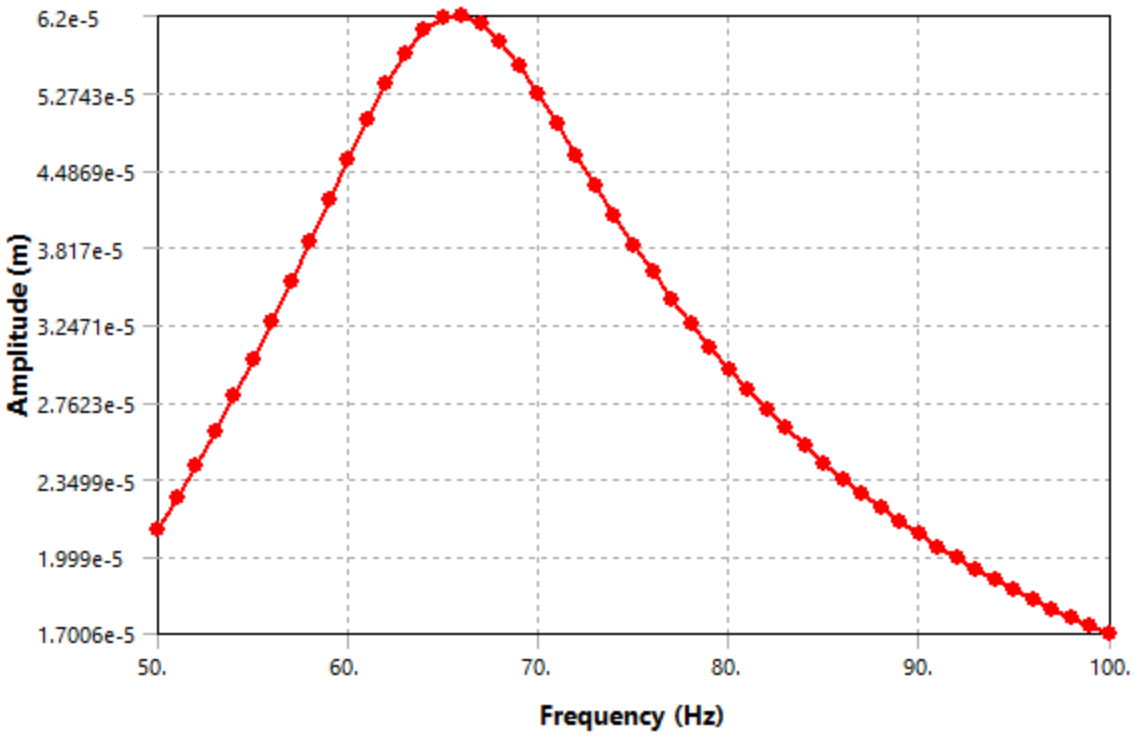


FIGURE 20
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2y

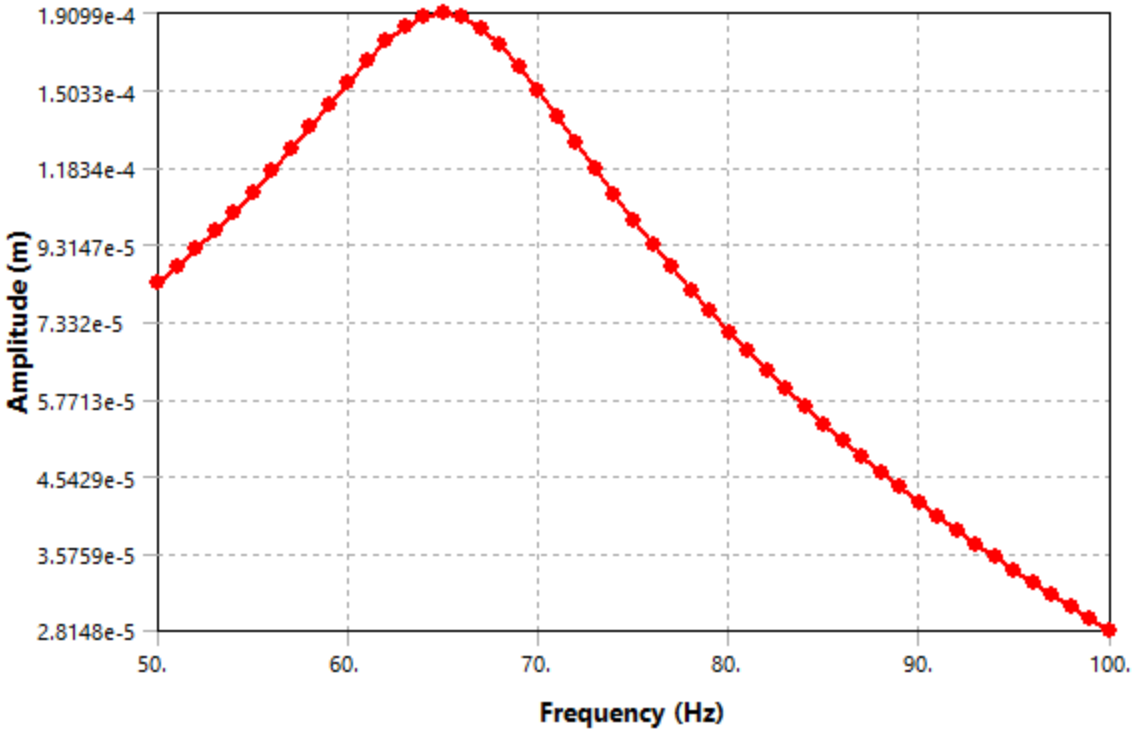


FIGURE 21
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2z

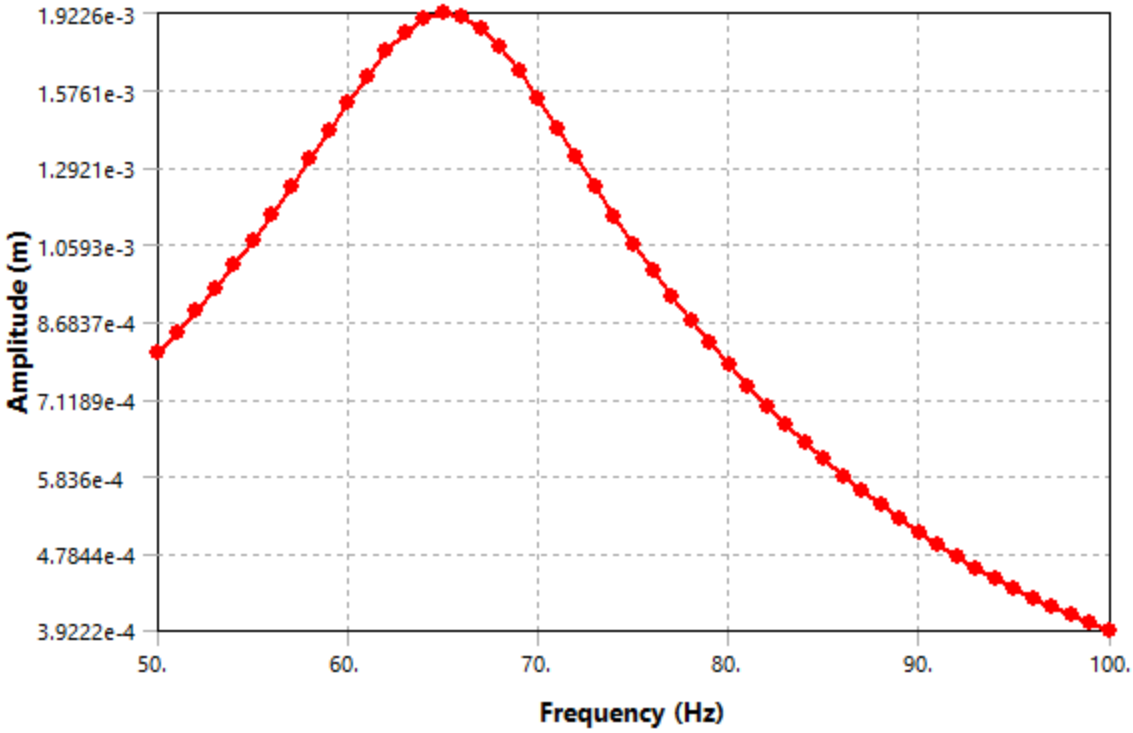


FIGURE 22
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3x

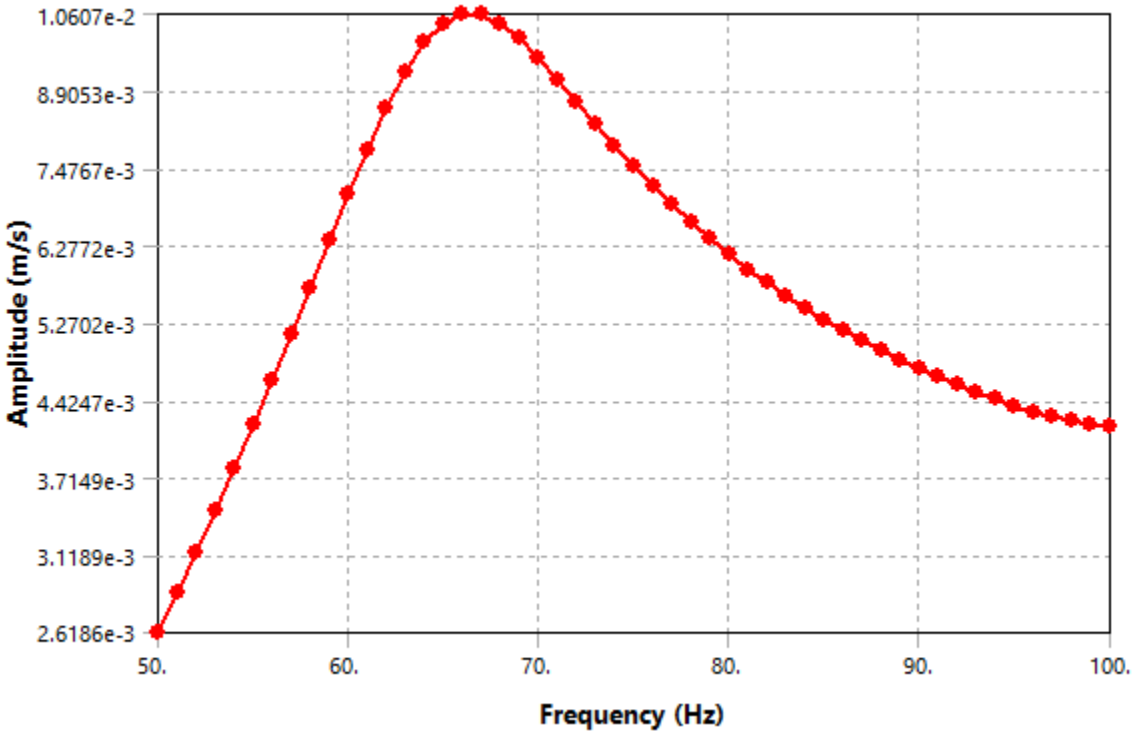


FIGURE 23
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3y

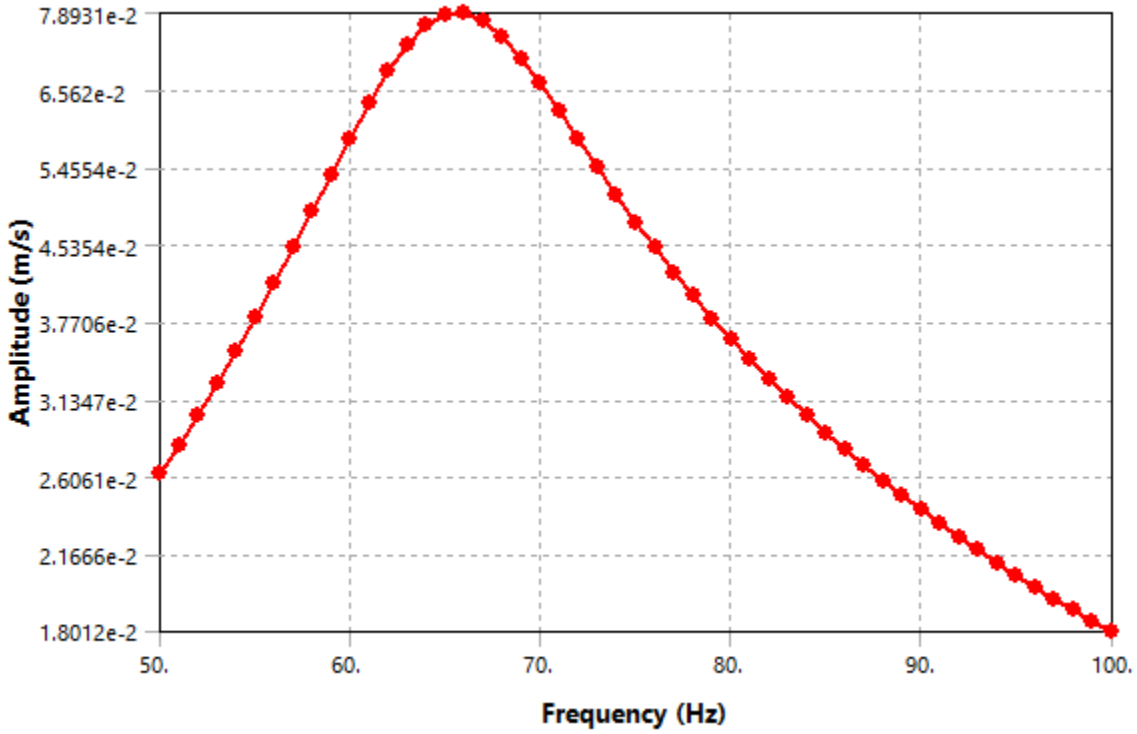


FIGURE 24
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3z

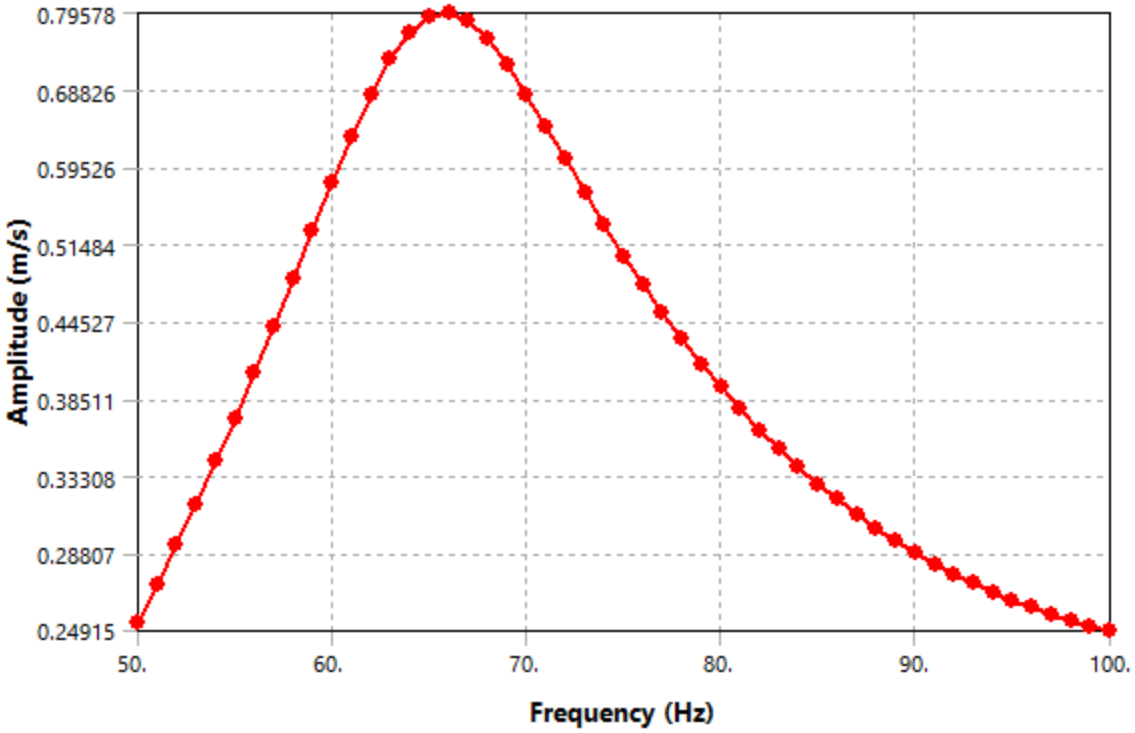


FIGURE 25
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3x

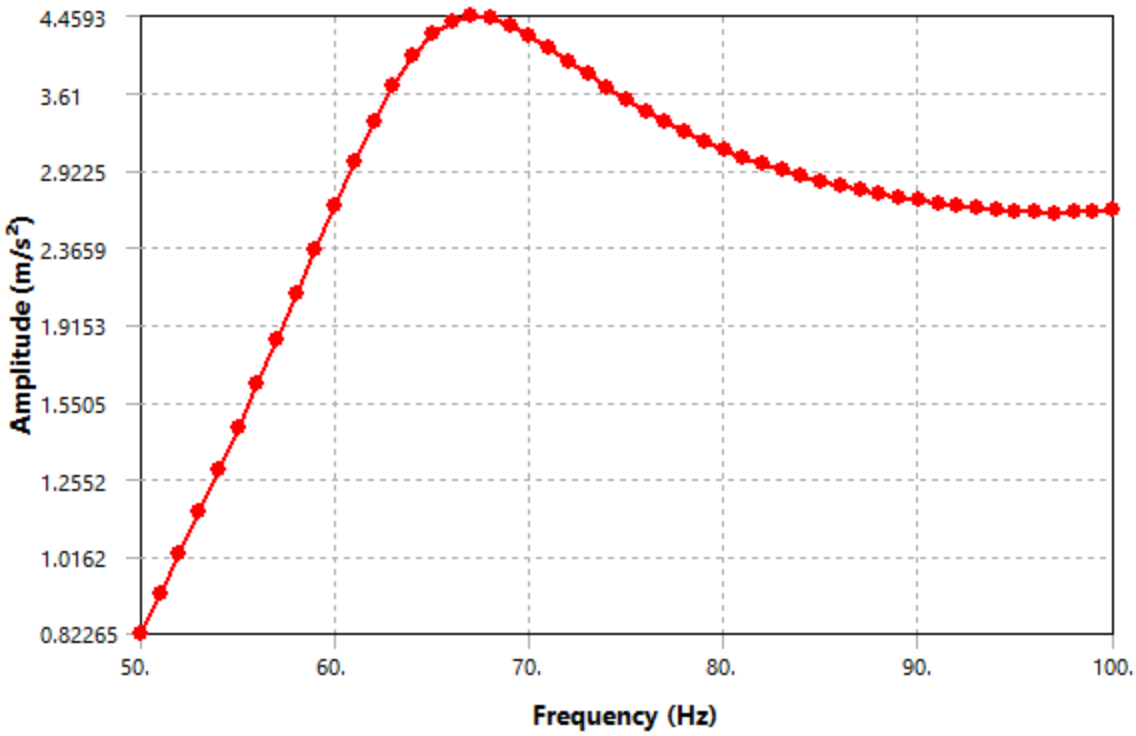


TABLE 95
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

DeformationFrequencyResponseDIMM3y	*DeformationFrequencyResponseDIMM3z*	*VelocityFrequencyResponseDIMM4x*	*VelocityFrequencyResponseDIMM4y*	*VelocityFrequenDIMM*
Solved				
Scope				
Geometry Selection				
1 Body				
Use Average				
Definition				
Directional Deformation		Directional Velocity		
Y Axis	Z Axis	X Axis	Y Axis	Z Axis
Global Coordinate System				
No				
Options				
Use Parent				

49. Hz
100. Hz
Bode
Log Y

Results				
1.9266e-004 m	1.9351e-003 m	4.0792e-003 m/s	7.9302e-002 m/s	0.79363
65. Hz		66. Hz		
-85.992 °	92.521 °	167.98 °	-4.7586 °	173.69
1.3466e-005 m	-8.5114e-005 m	-3.9898e-003 m/s	7.9029e-002 m/s	-0.78882
-1.9219e-004 m	1.9332e-003 m	8.4963e-004 m/s	-6.5787e-003 m/s	8.7251e-00

FIGURE 26
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3y

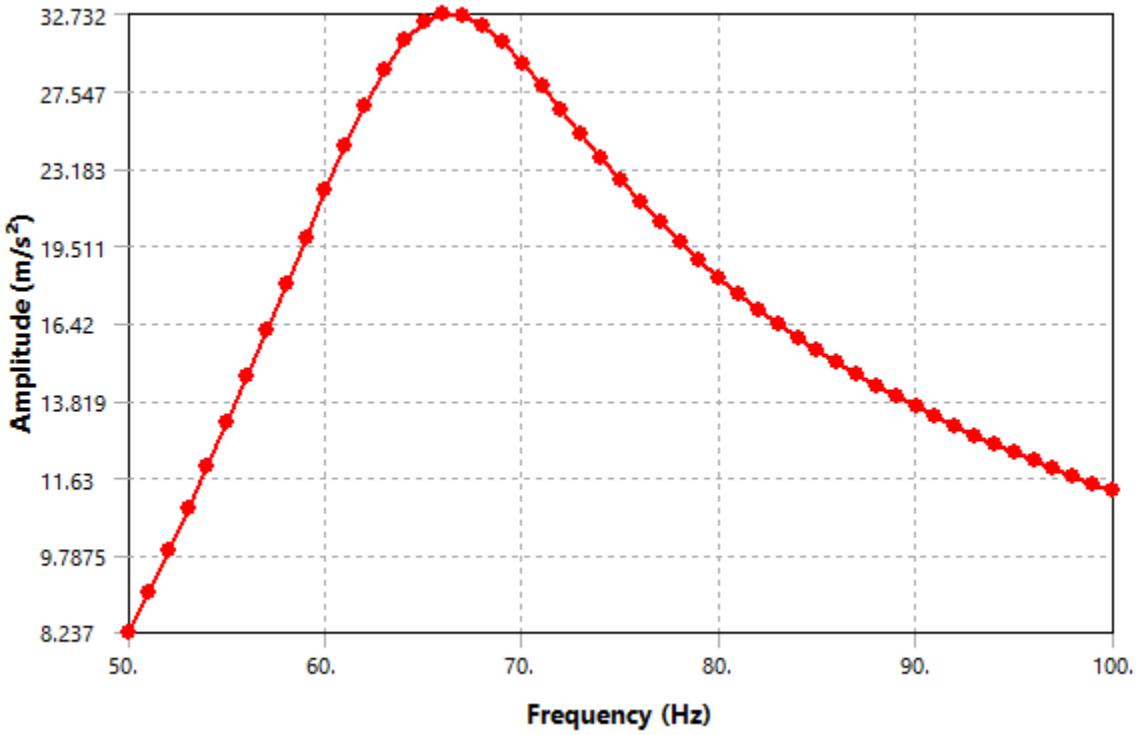


FIGURE 27
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3z

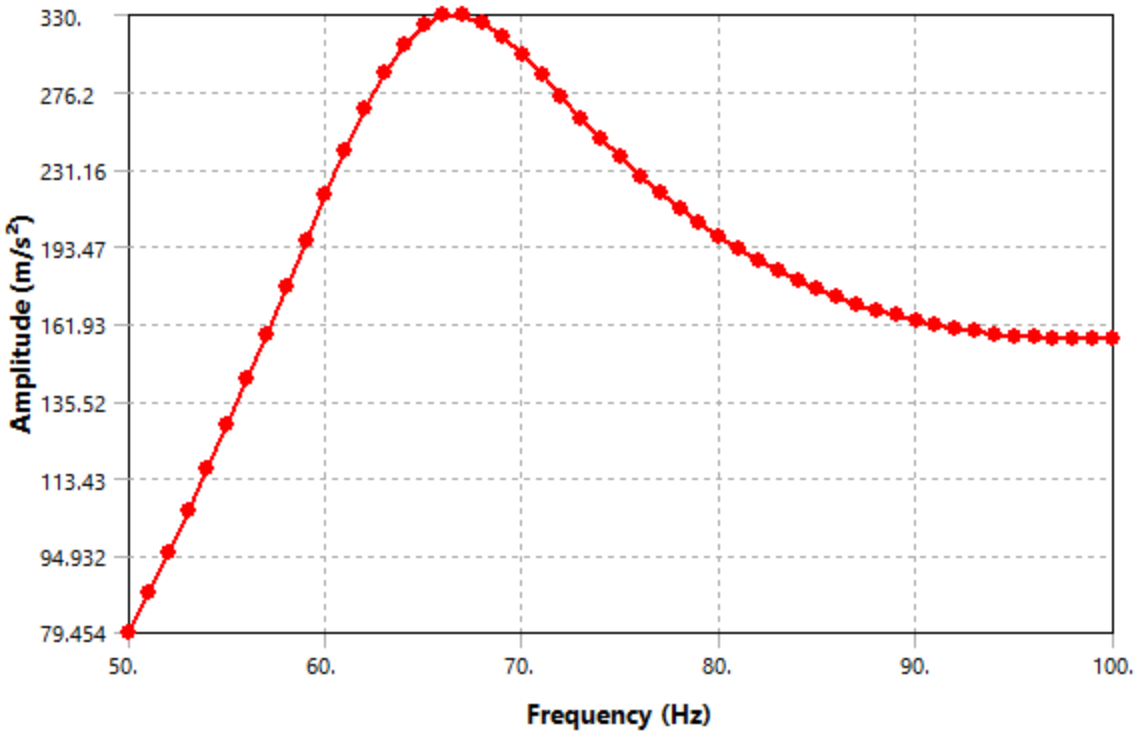


FIGURE 28
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3x

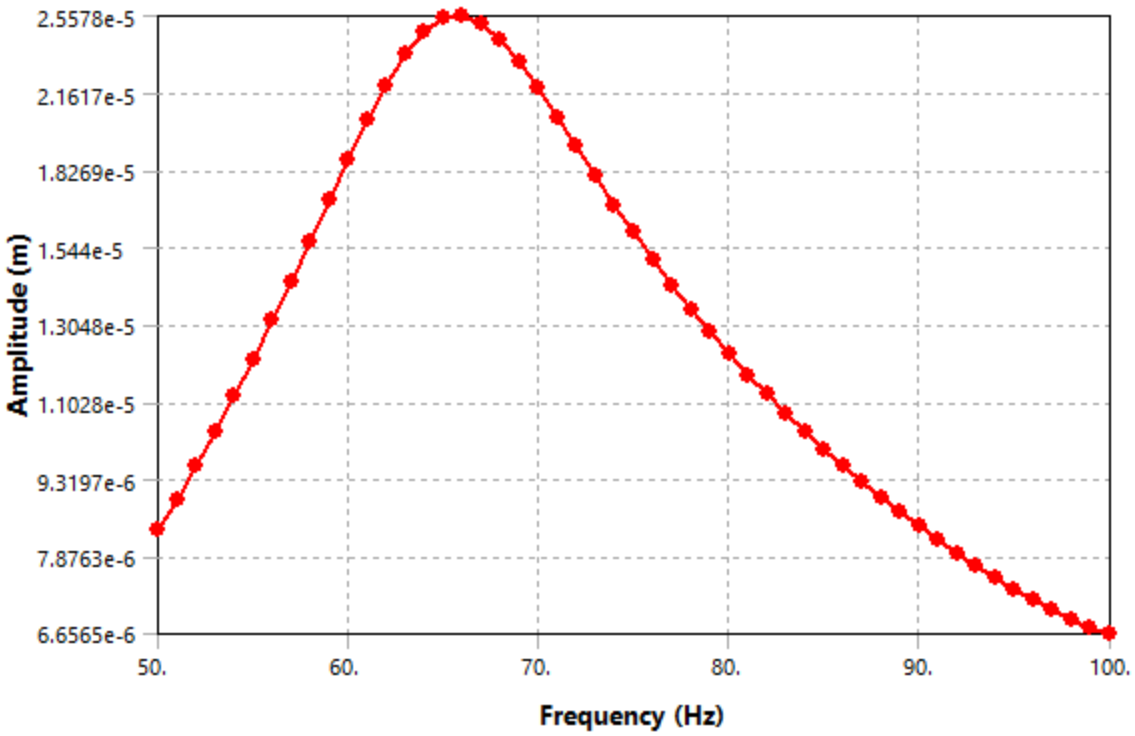


FIGURE 29
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3y

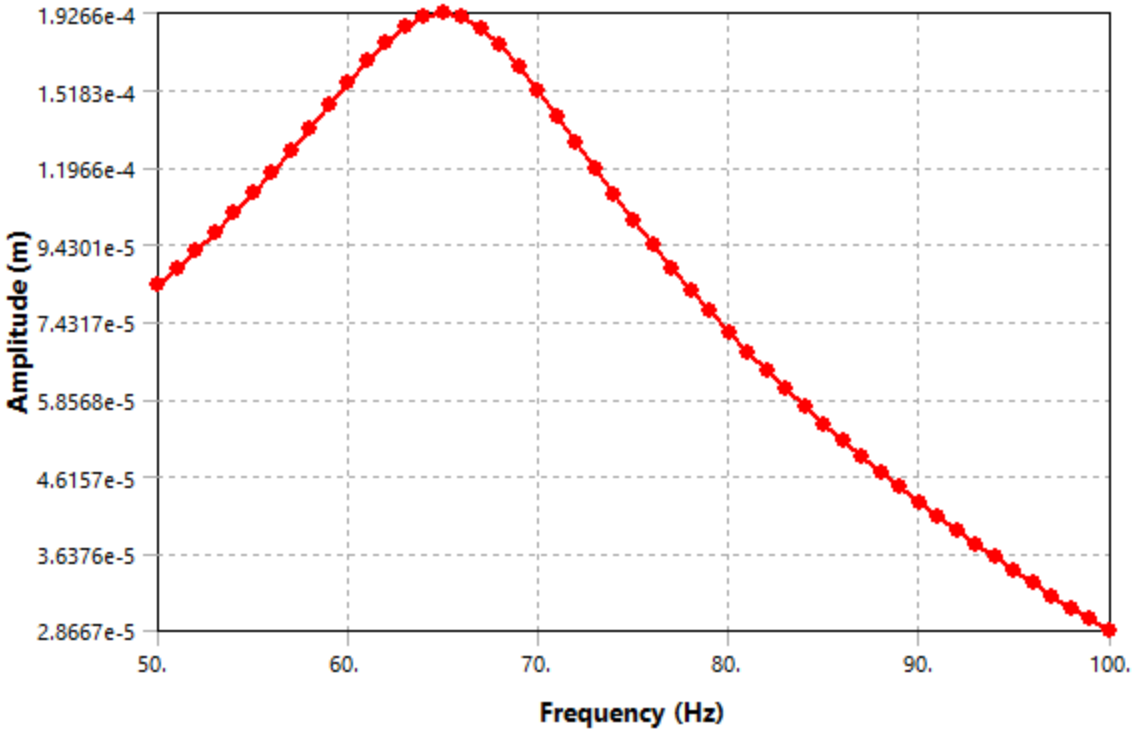


FIGURE 30
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3z

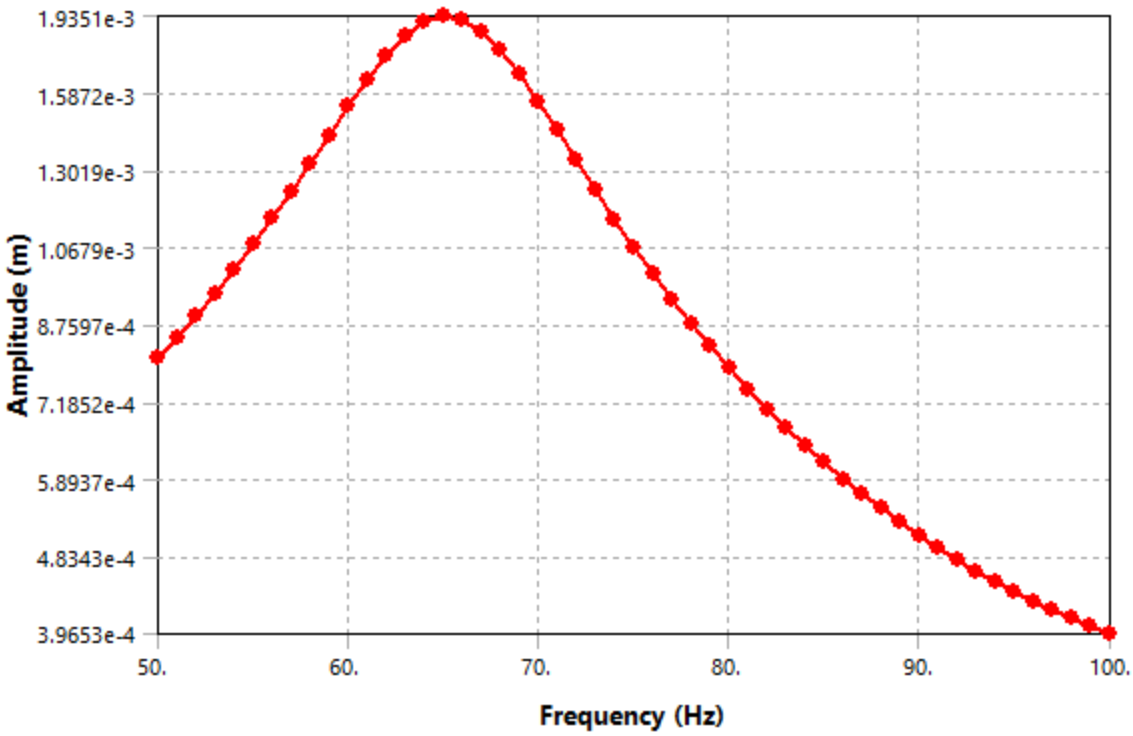


FIGURE 31
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4x

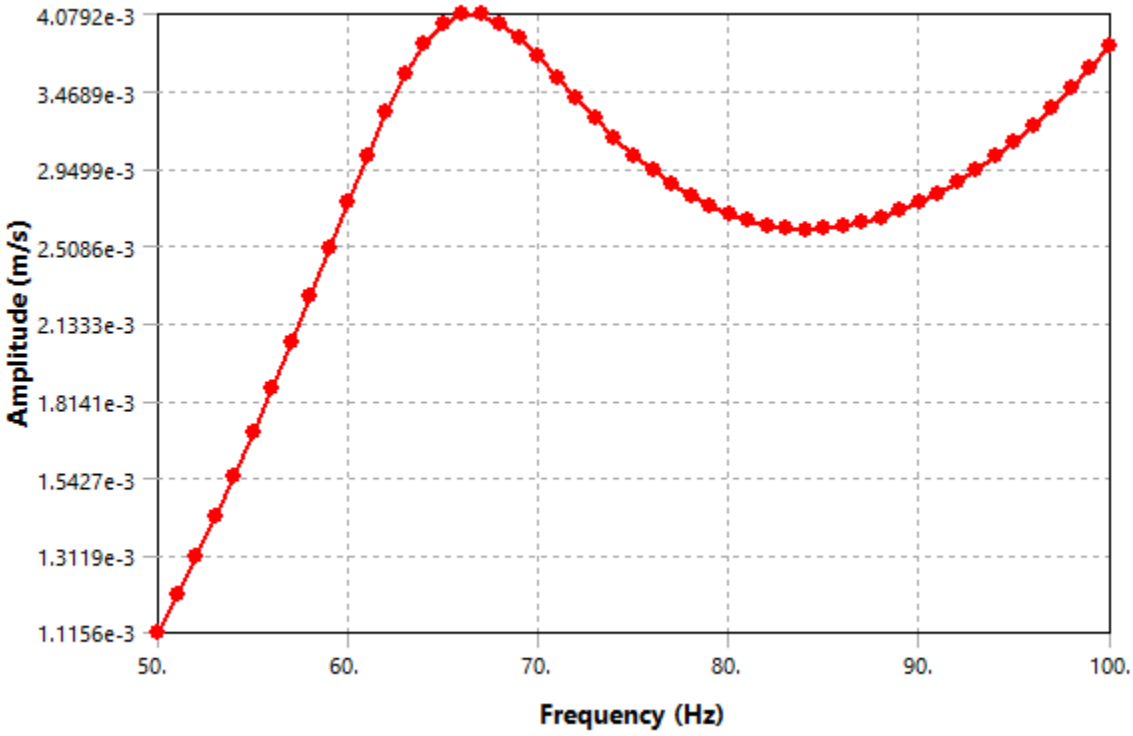


FIGURE 32
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4y

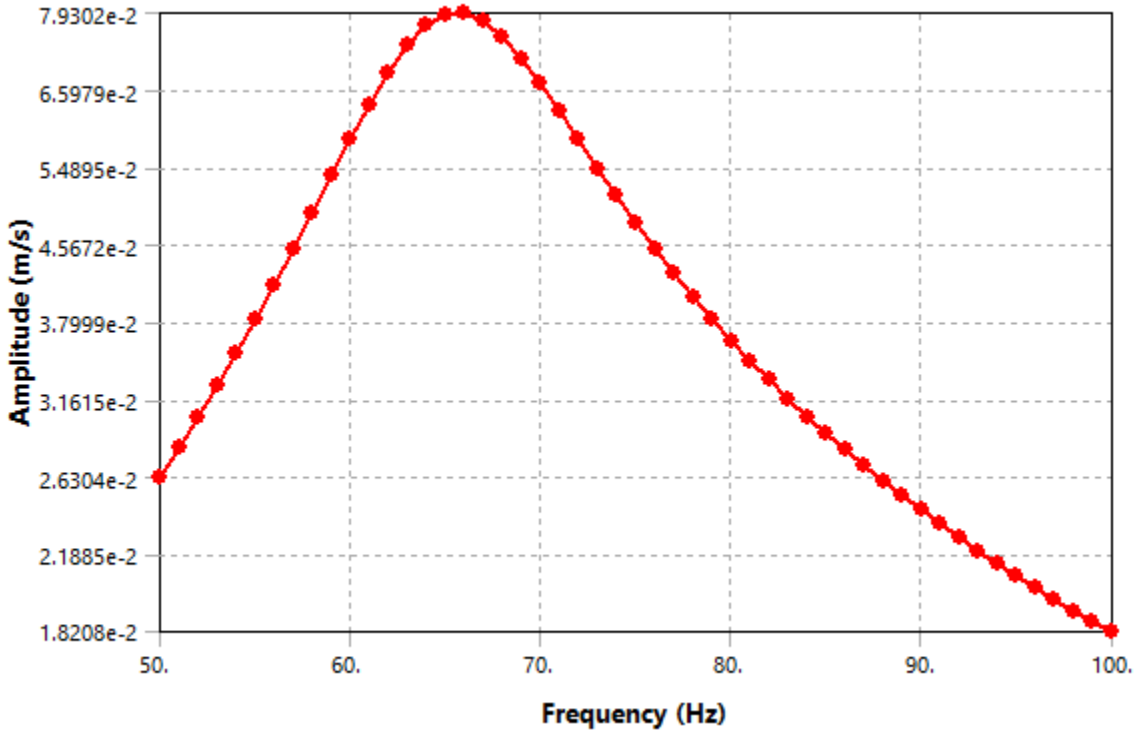


FIGURE 33
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4z

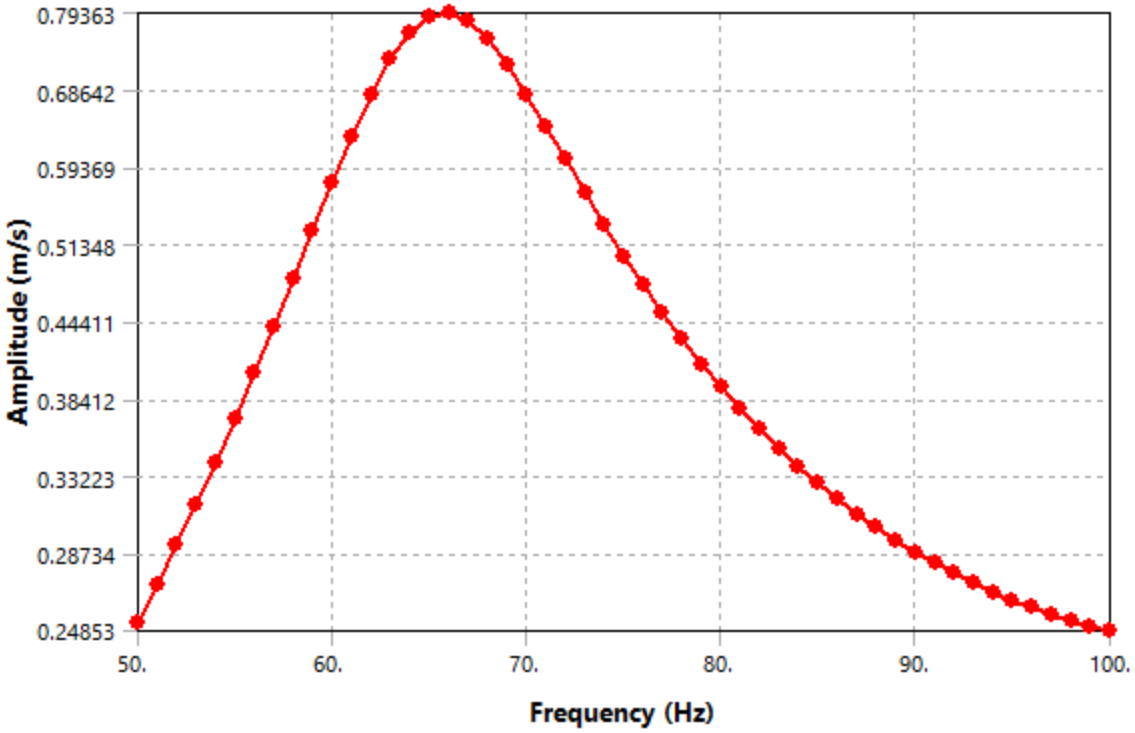


FIGURE 34
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4x

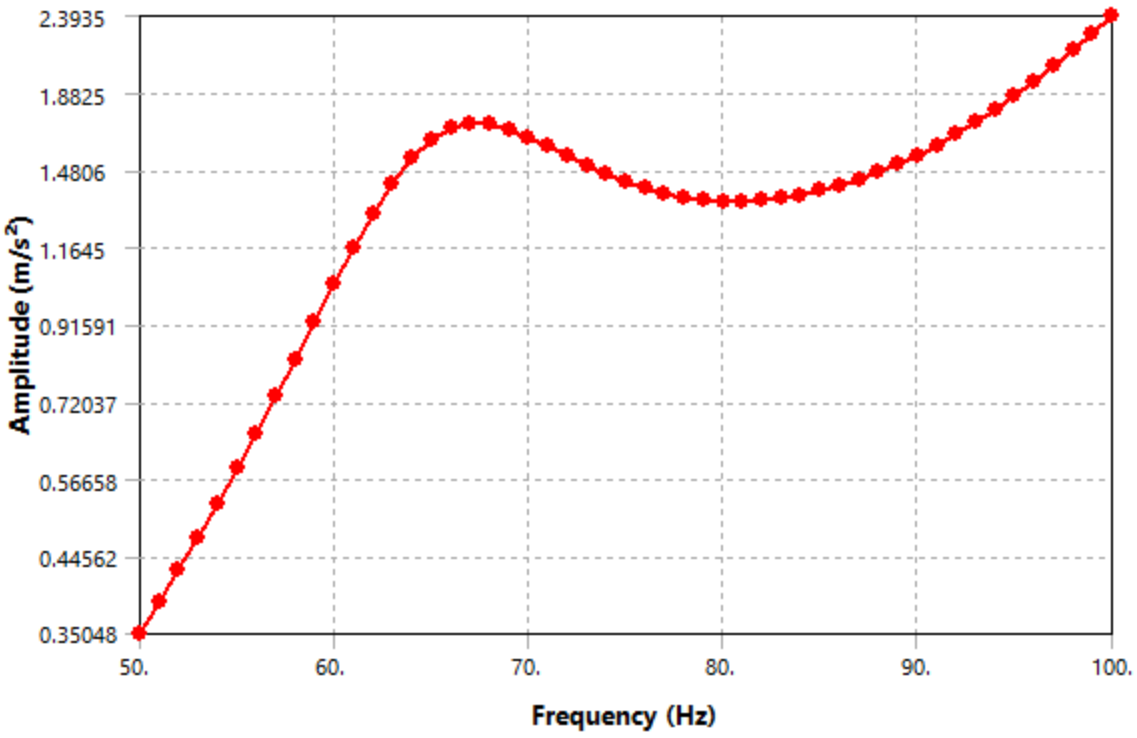


FIGURE 35
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4y

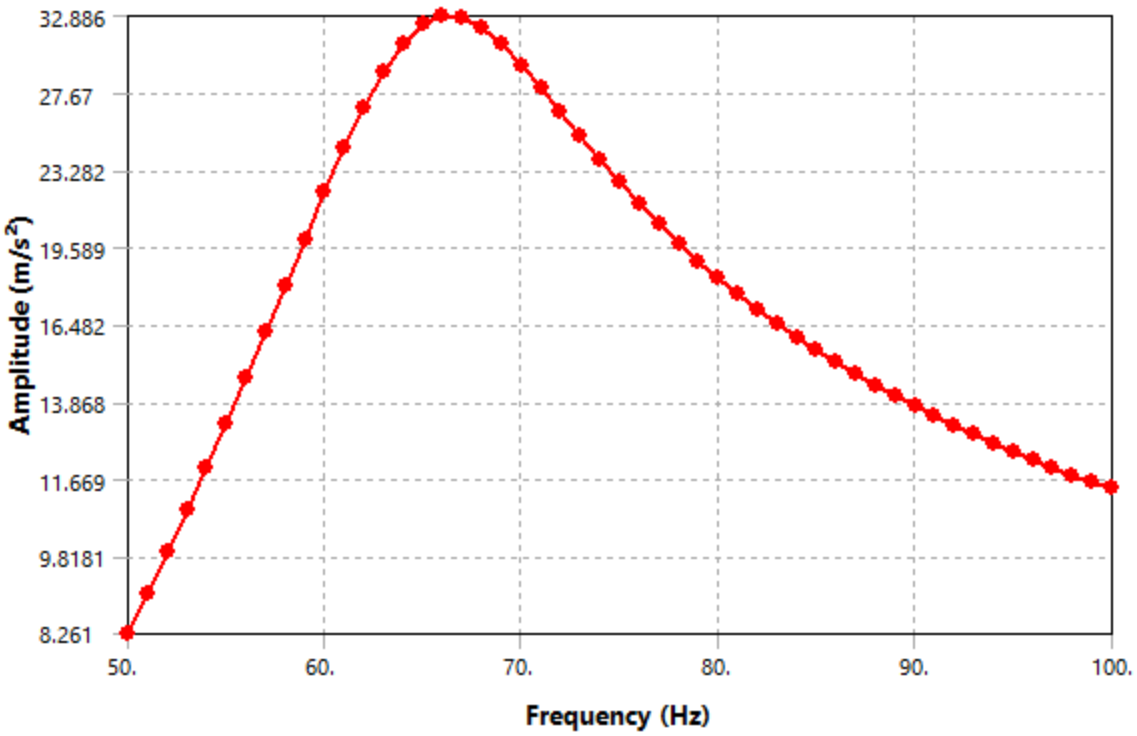


FIGURE 36
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4z

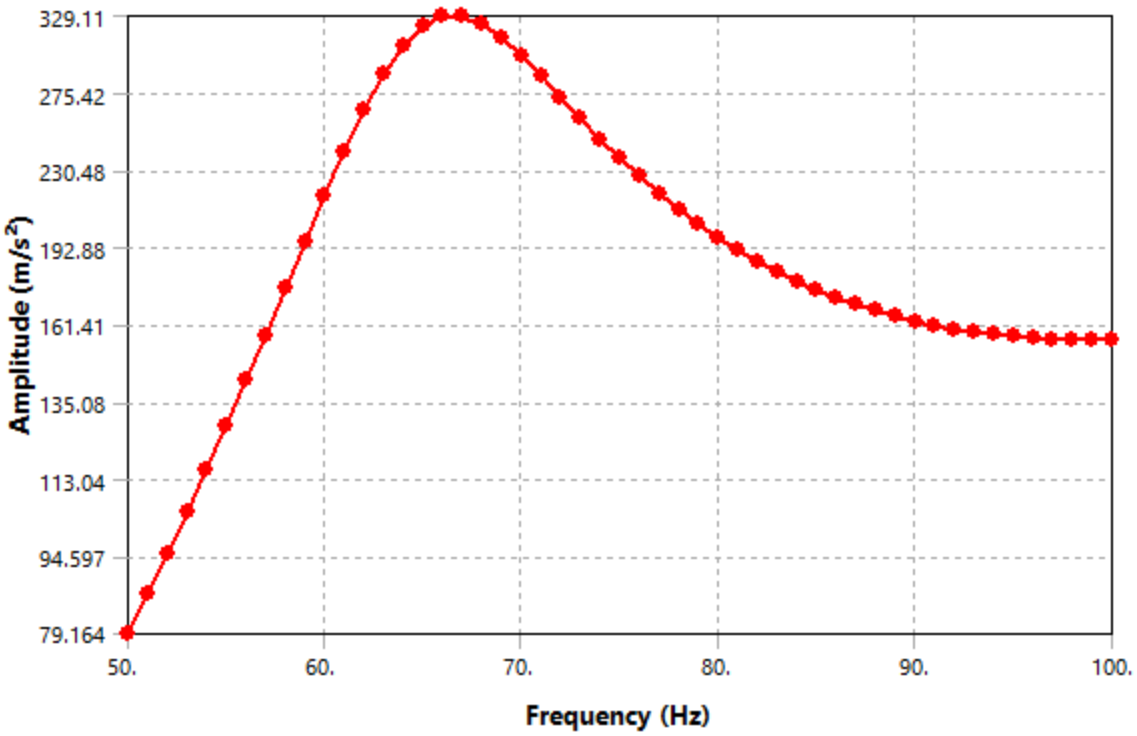


TABLE 96
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

VelocityFrequencyResponseDIMM5x	*VelocityFrequencyResponseDIMM5y*	*VelocityFrequencyResponseDIMM5z*	*AccelerationFrequencyResponseDIMM5x*	*AccelerationFrequeseDIMM5*
Solved				
Scope				
Geometry Selection				
1 Body				
Use Average				
Definition				
Directional Velocity			Directional Acce	
X Axis	Y Axis	Z Axis	X Axis	Y Axis
Global Coordinate System				
No				
Options				
Use Parent				

49. Hz
100. Hz
Bode
Log Y

Results				
3.2357e-002 m/s	8.1269e-002 m/s	0.5222 m/s	13.61 m/s²	33.701 m/
66. Hz			67. Hz	
168.28 °	-4.7289 °	175.3 °	-110.32 °	85.271 °
-3.1683e-002 m/s	8.0992e-002 m/s	-0.52044 m/s	-4.7256 m/s²	2.7784 m/
6.5727e-003 m/s	-6.6999e-003 m/s	4.2822e-002 m/s	-12.763 m/s²	33.587 m/

FIGURE 37
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4x

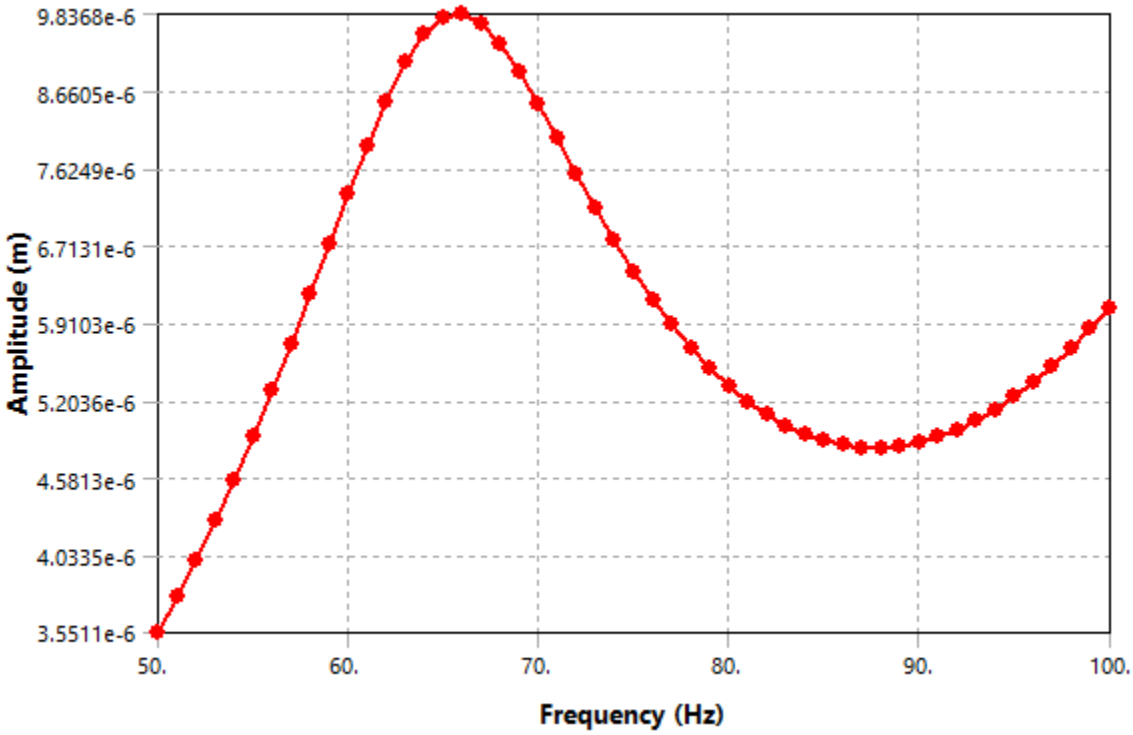


FIGURE 38
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4y

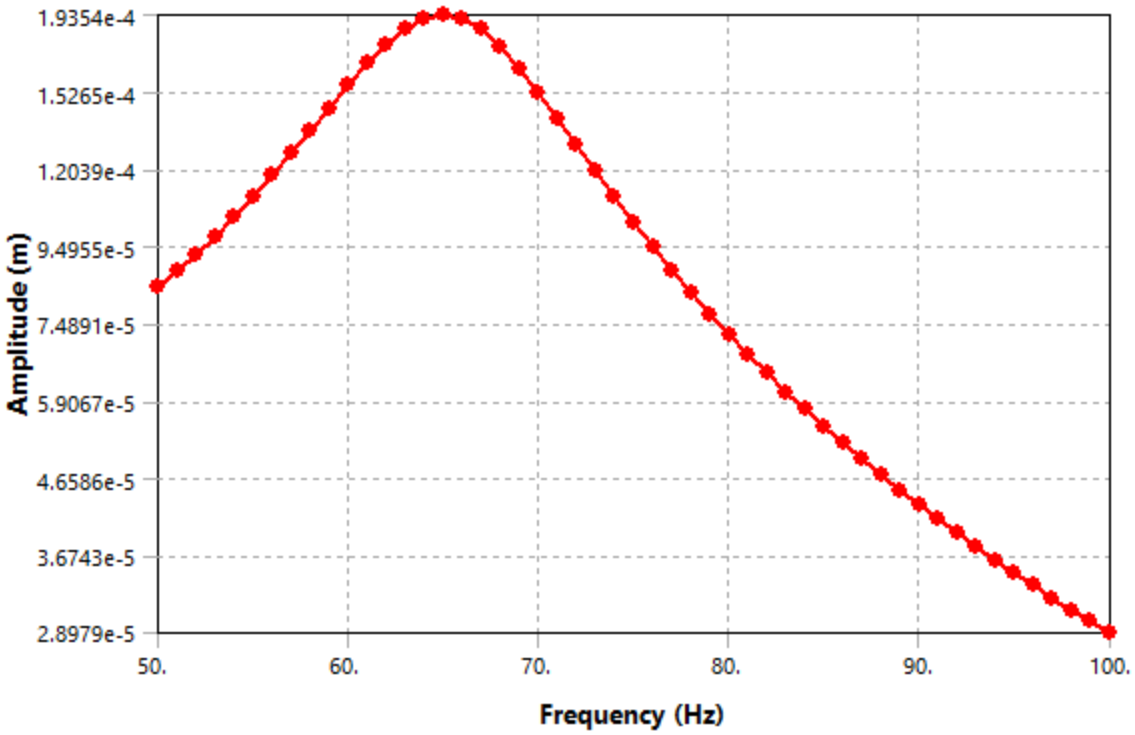


FIGURE 39
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4z

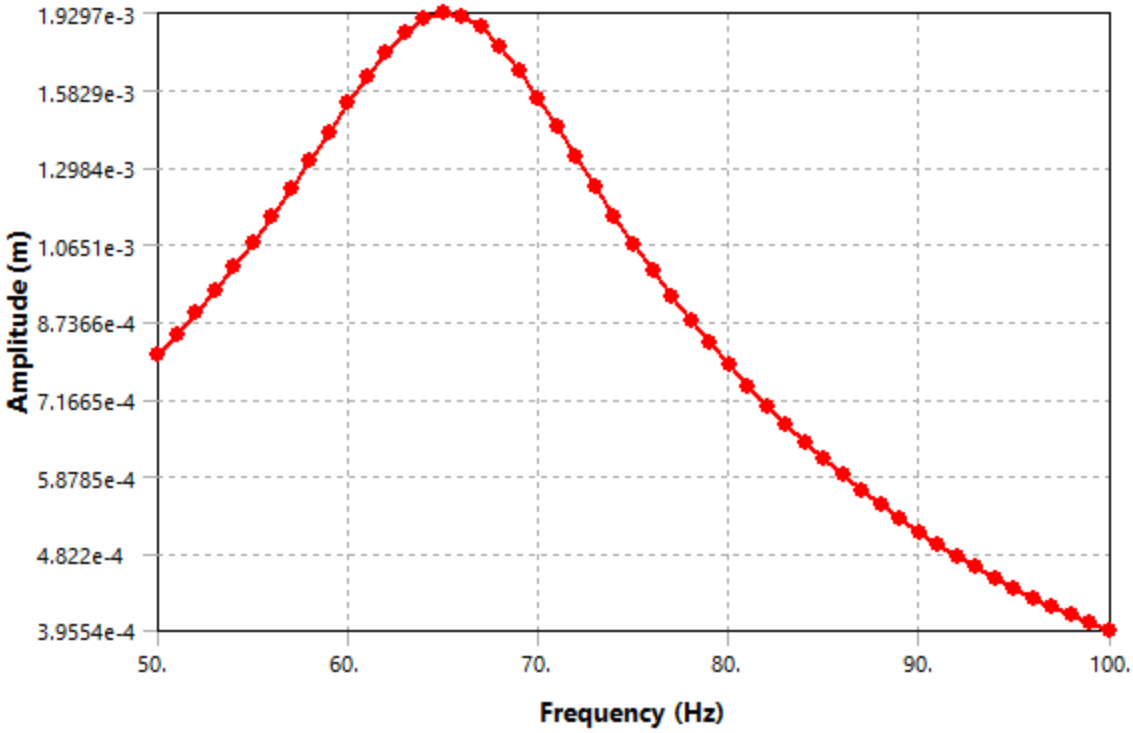


FIGURE 40
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5x

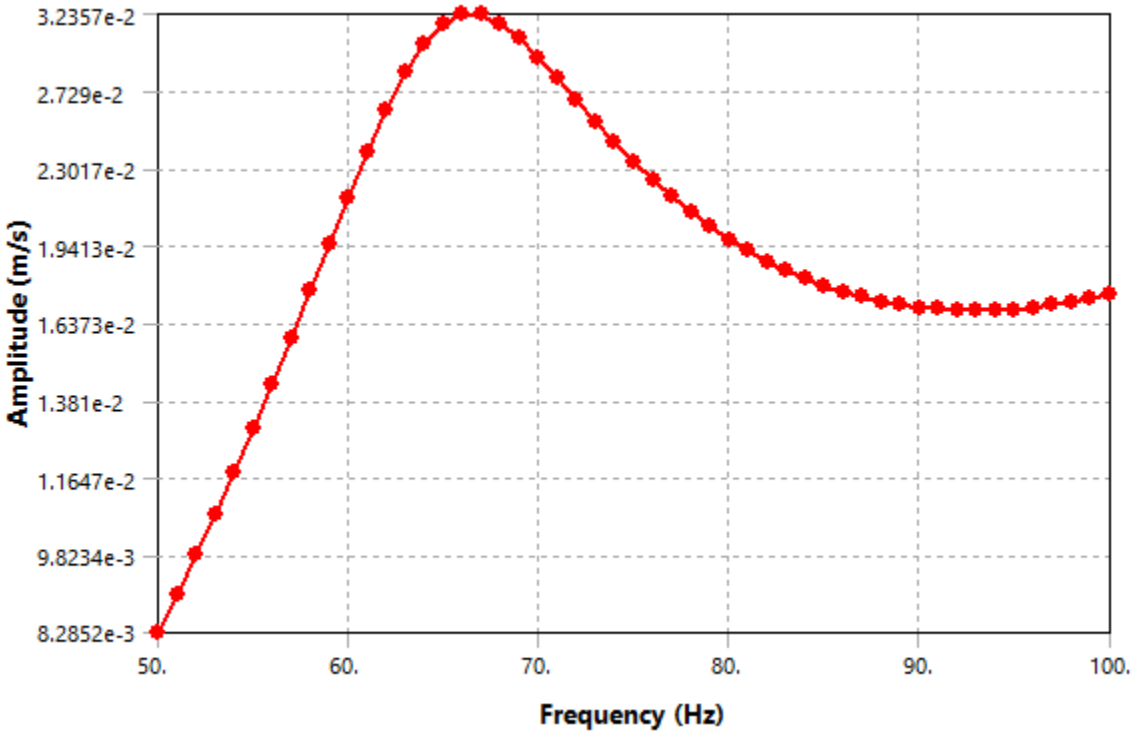


FIGURE 41
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5y

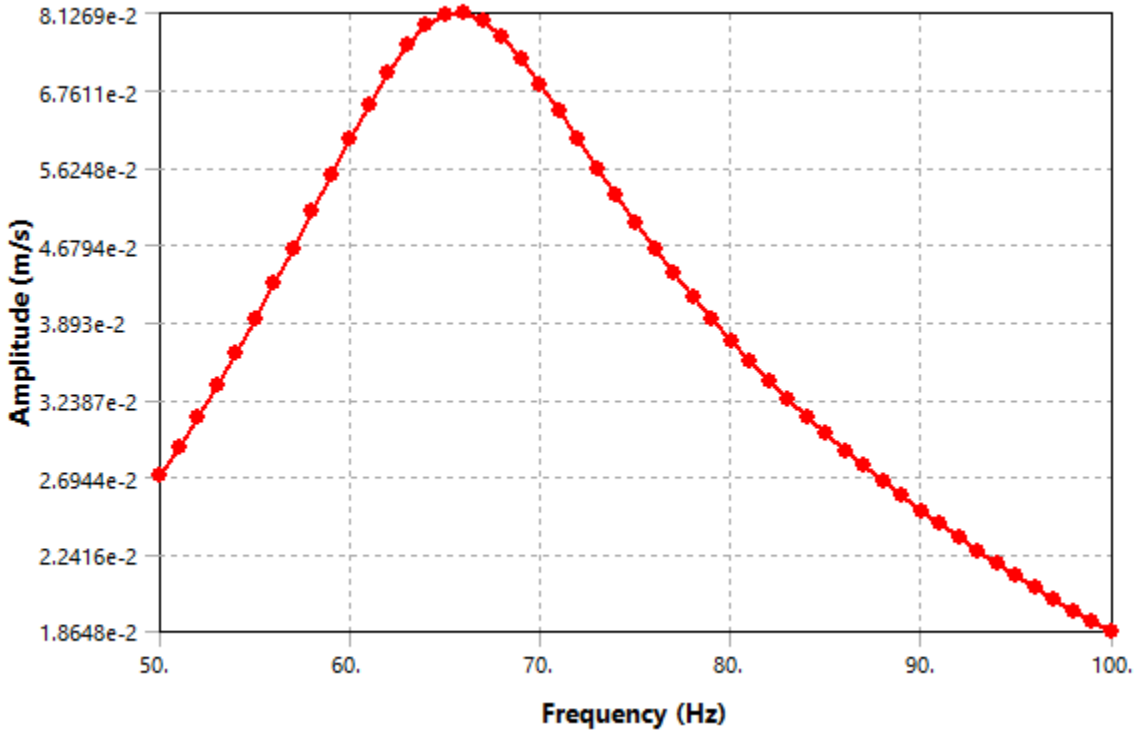


FIGURE 42
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5z

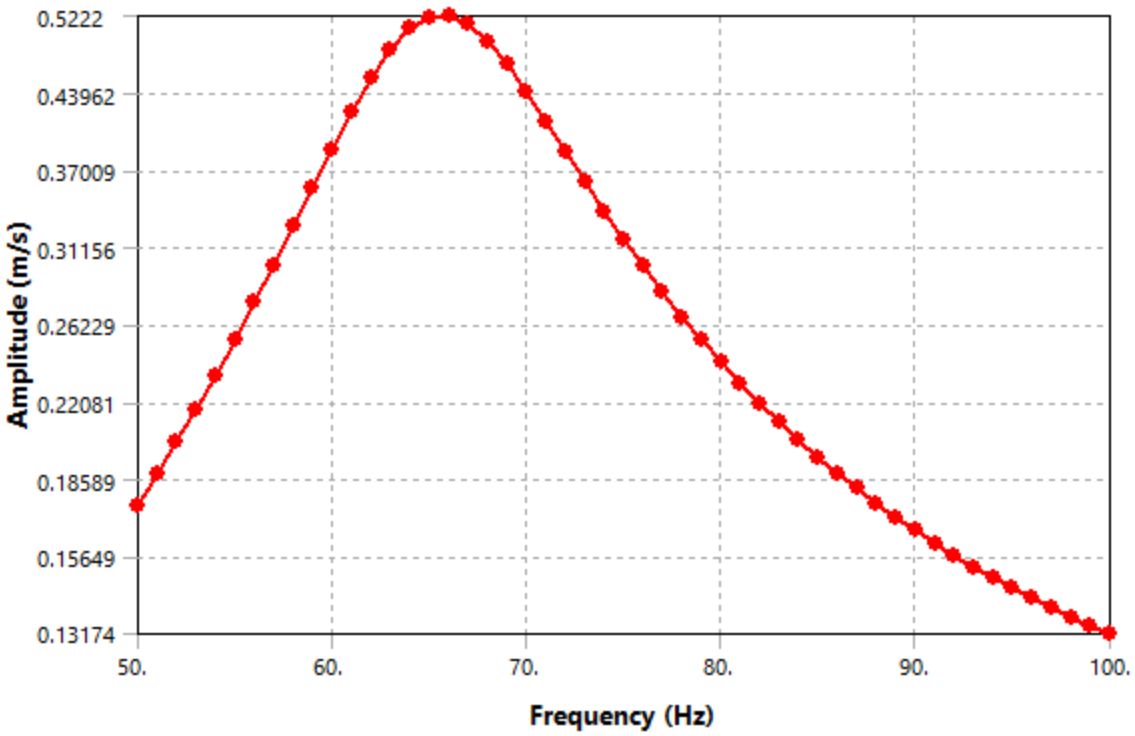


FIGURE 43
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5x

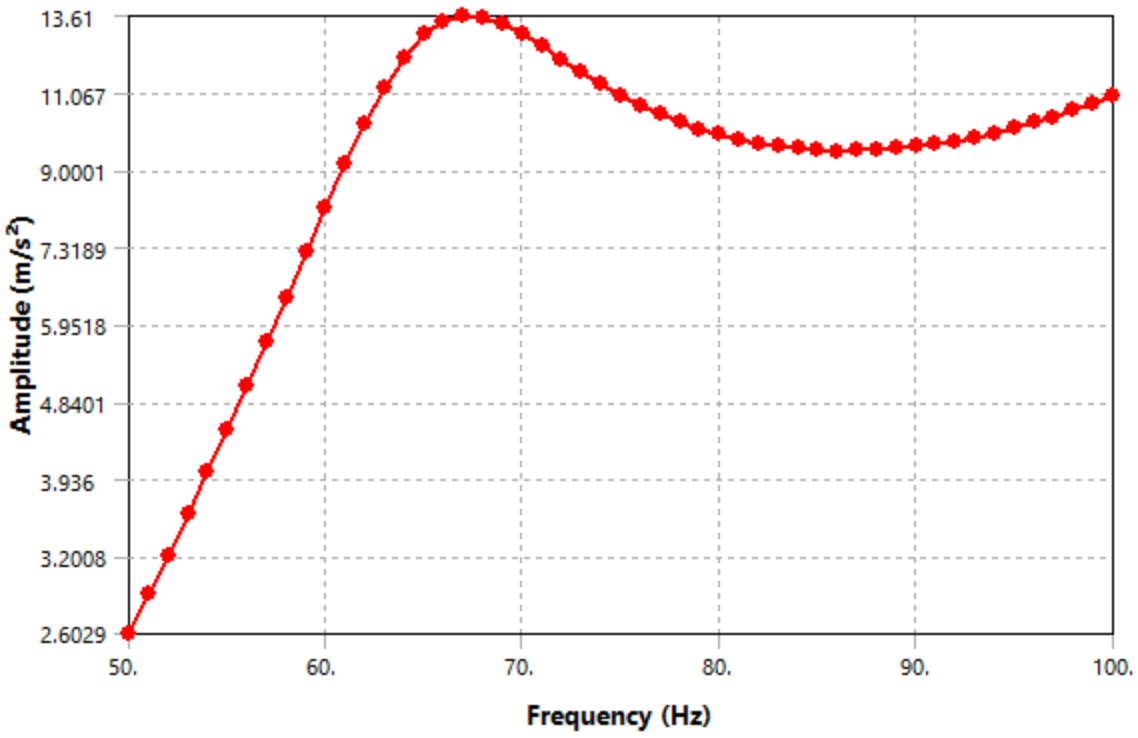


FIGURE 44
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5y

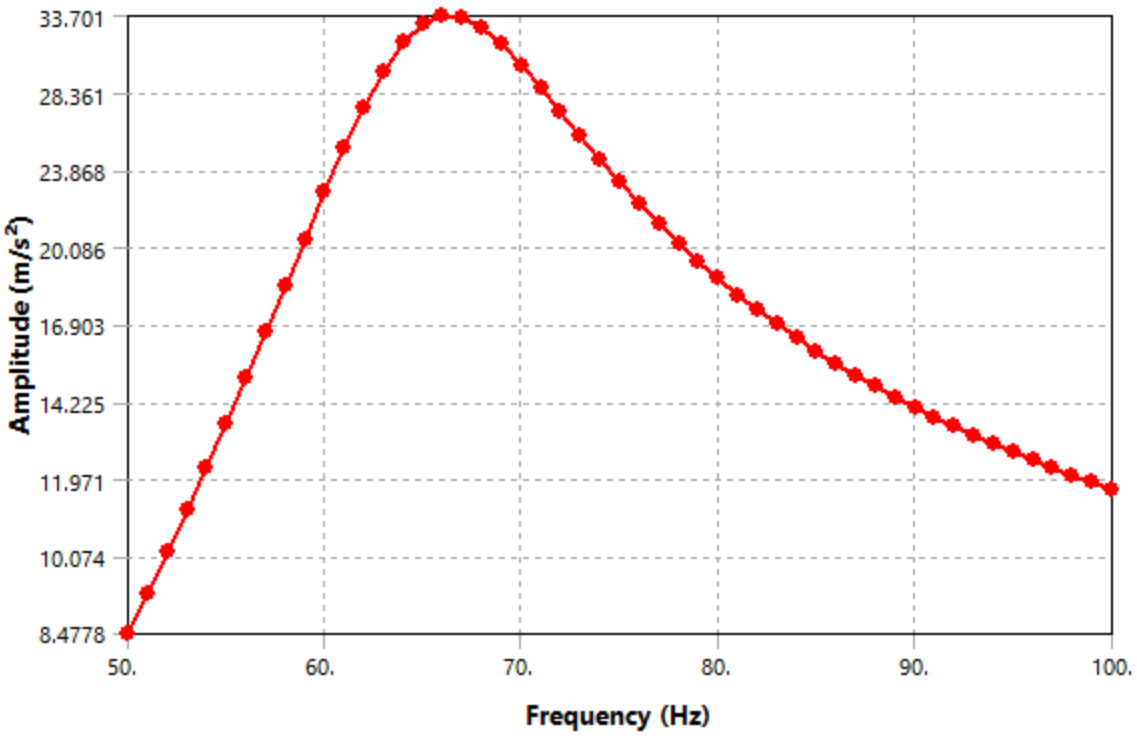


FIGURE 45
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5z

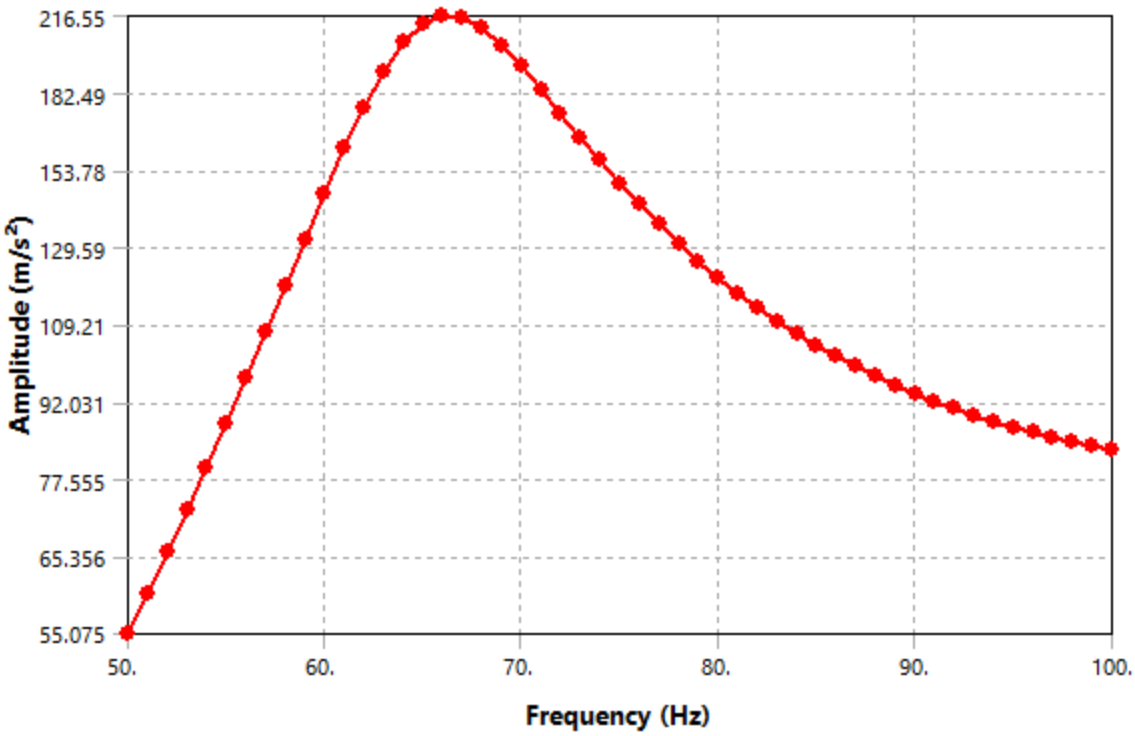


FIGURE 46
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5x

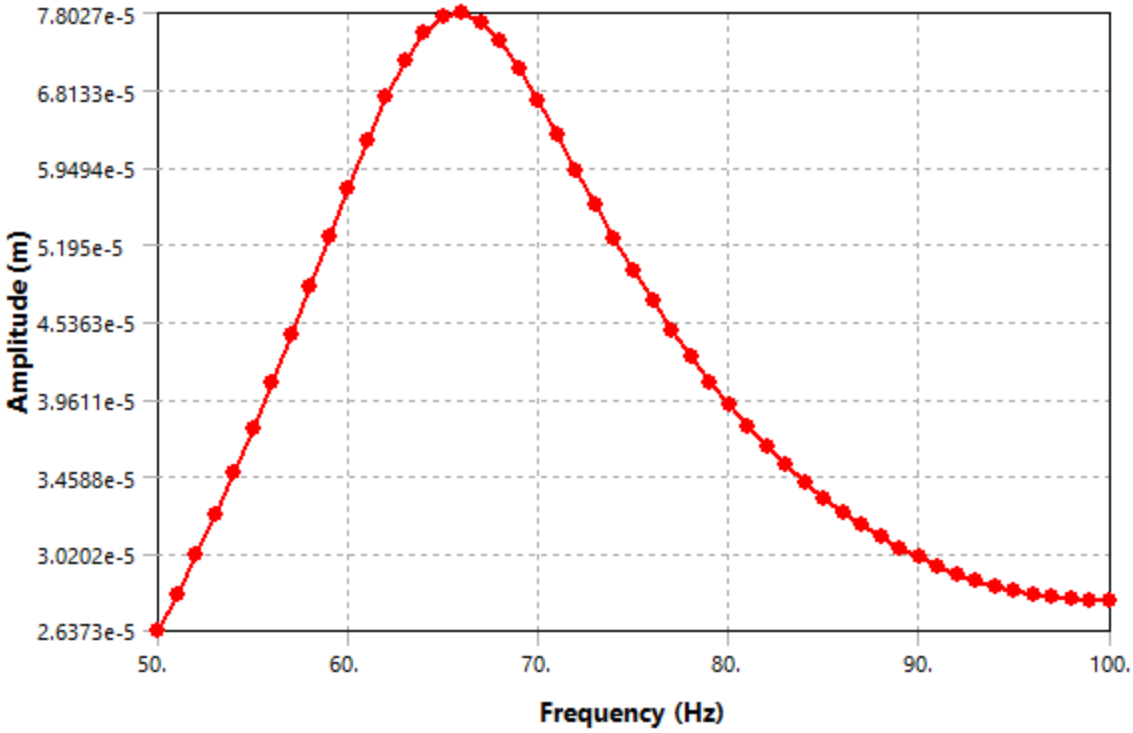


FIGURE 47
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5y

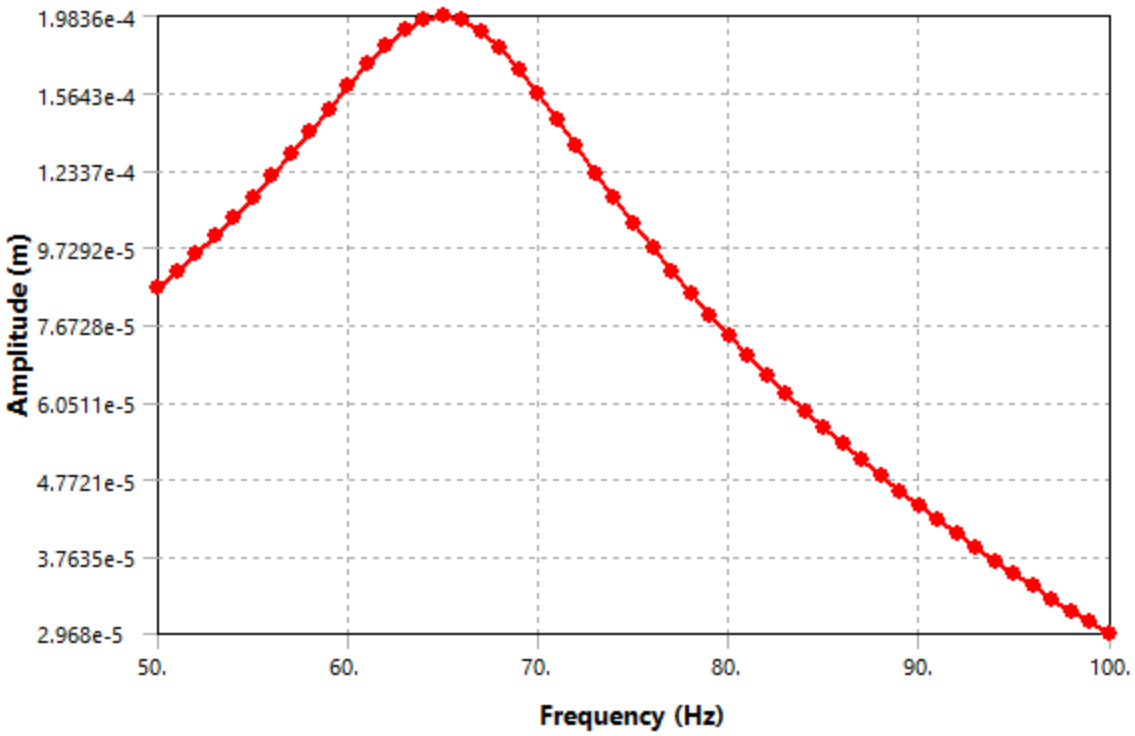


TABLE 97
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

yFrequencyResponseDIMM6z	*AccelerationFrequencyResponseDIMM6x*	*AccelerationFrequencyResponseDIMM6y*	*AccelerationFrequencyResponseDIMM6z*	*DeformationFreqseDIMI*
Solved				
Scope				
Geometry Selection				
1 Body				
Use Average				
Definition				
	Directional Acceleration			
Z Axis	X Axis	Y Axis	Z Axis	X Ax
Global Coordinate System				
No				
Options				
Use Parent				

49. Hz
100. Hz
Bode
Log Y

Results				
0.50341 m/s	13.09 m/s²	33.689 m/s²	208.76 m/s²	7.5065e-(
	67. Hz	66. Hz		
175.49 °	-110.24 °	85.309 °	-94.507 °	78.36
-0.50186 m/s	-4.5285 m/s²	2.755 m/s²	-16.405 m/s²	1.5144e-(
.9558e-002 m/s	-12.282 m/s²	33.576 m/s²	-208.11 m/s²	7.3522e-(

FIGURE 48
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5z

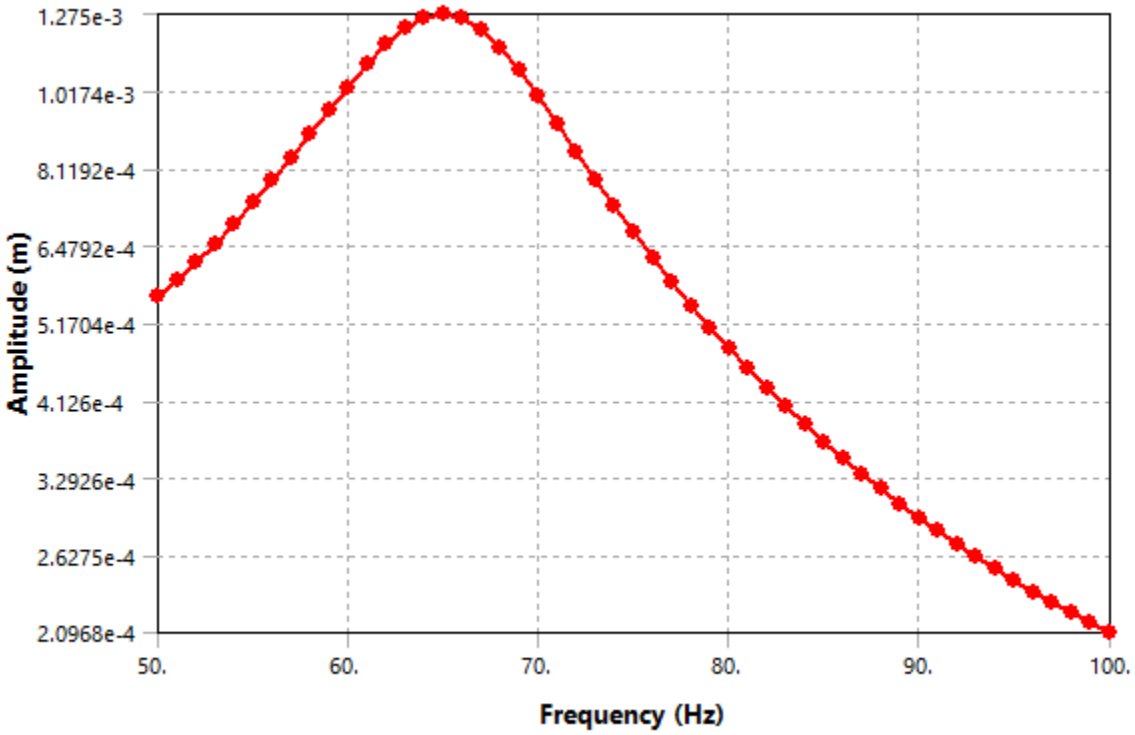


FIGURE 49
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6x

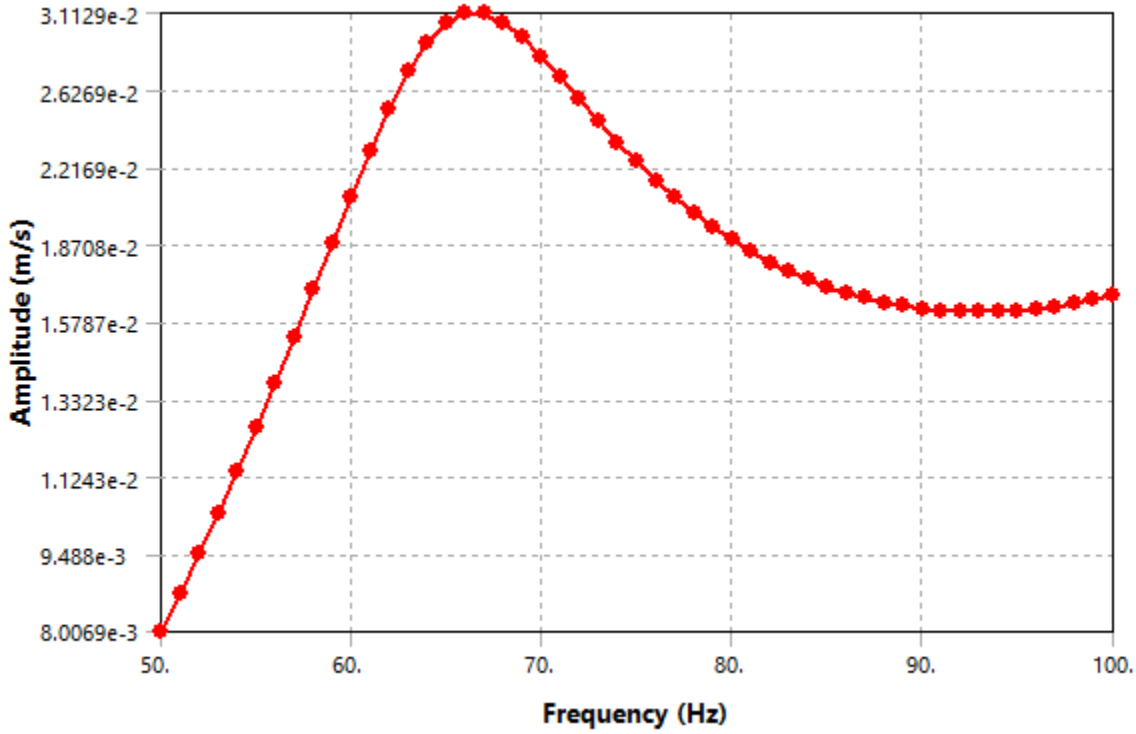


FIGURE 50
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6y

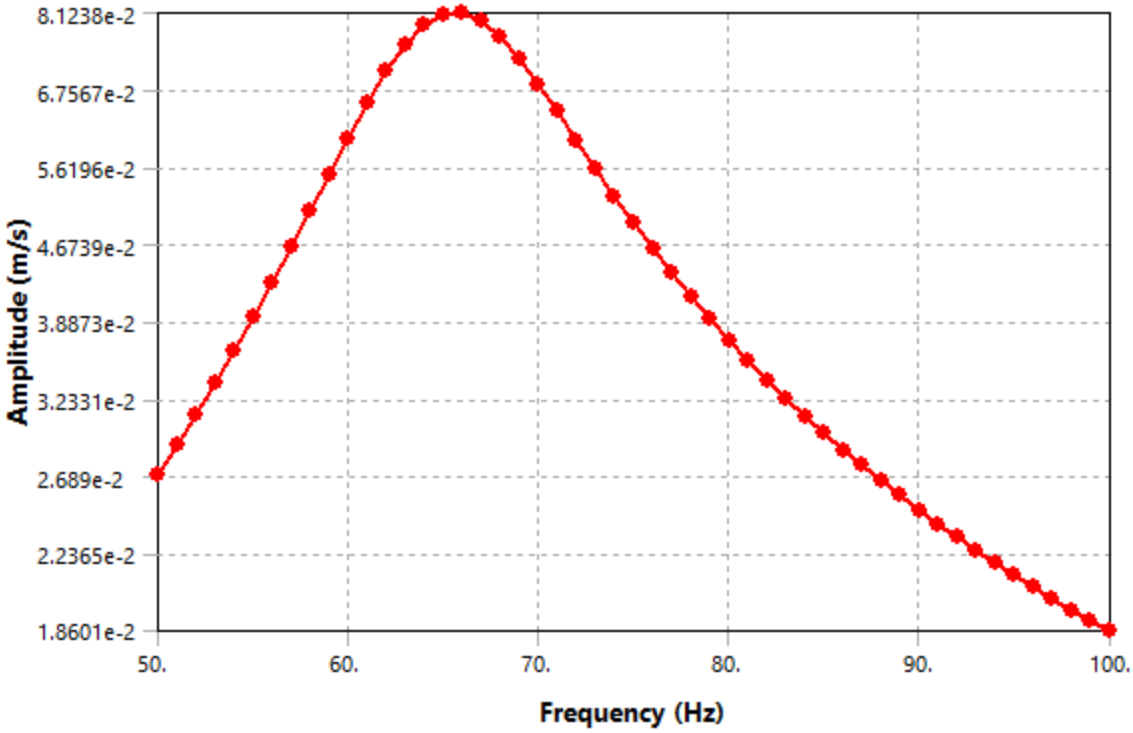


FIGURE 51
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6z

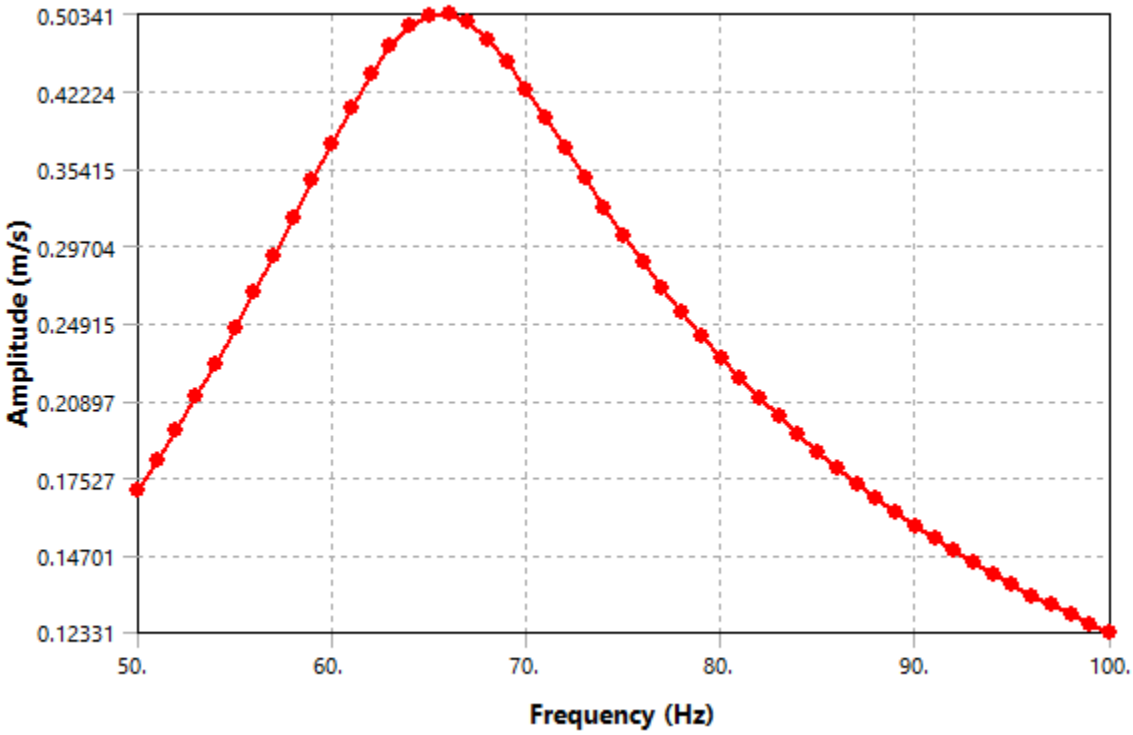


FIGURE 52
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6x

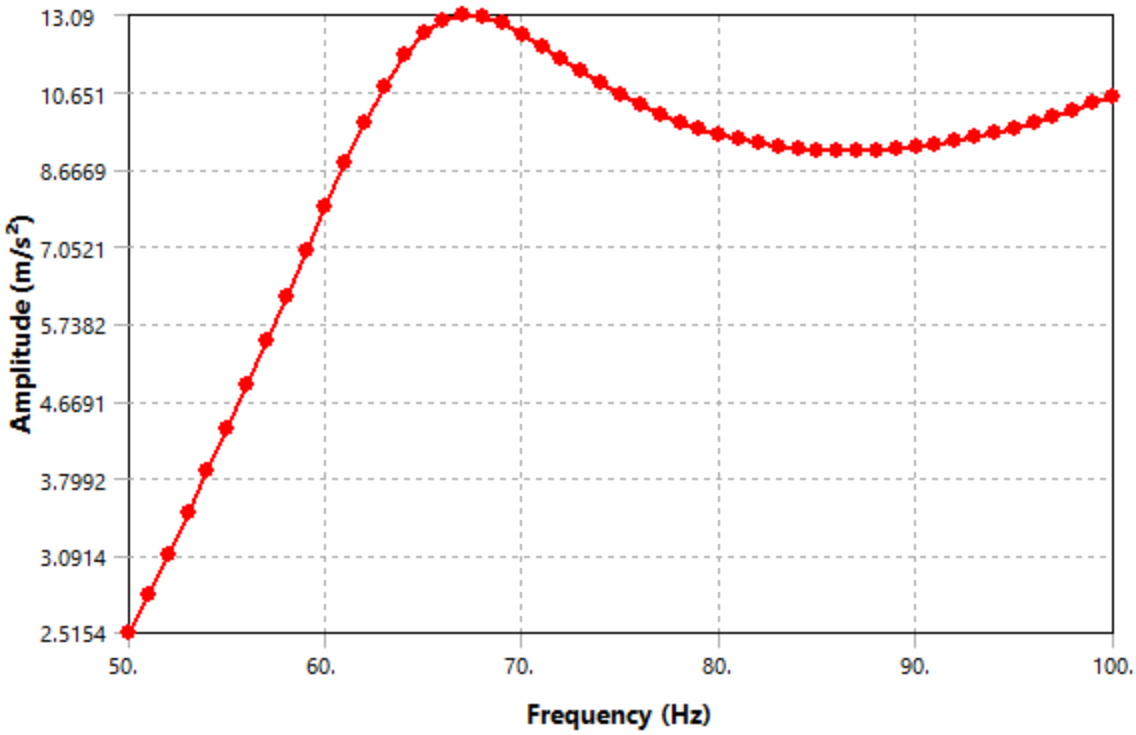


FIGURE 53
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6y

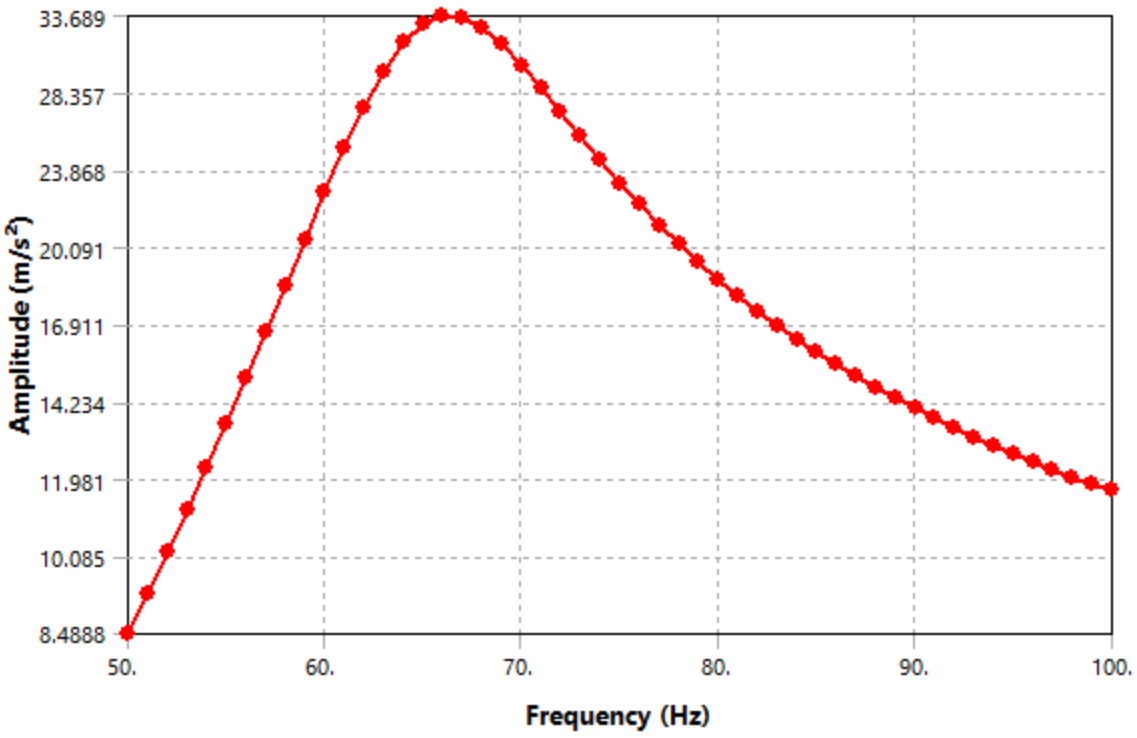


FIGURE 54
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6z

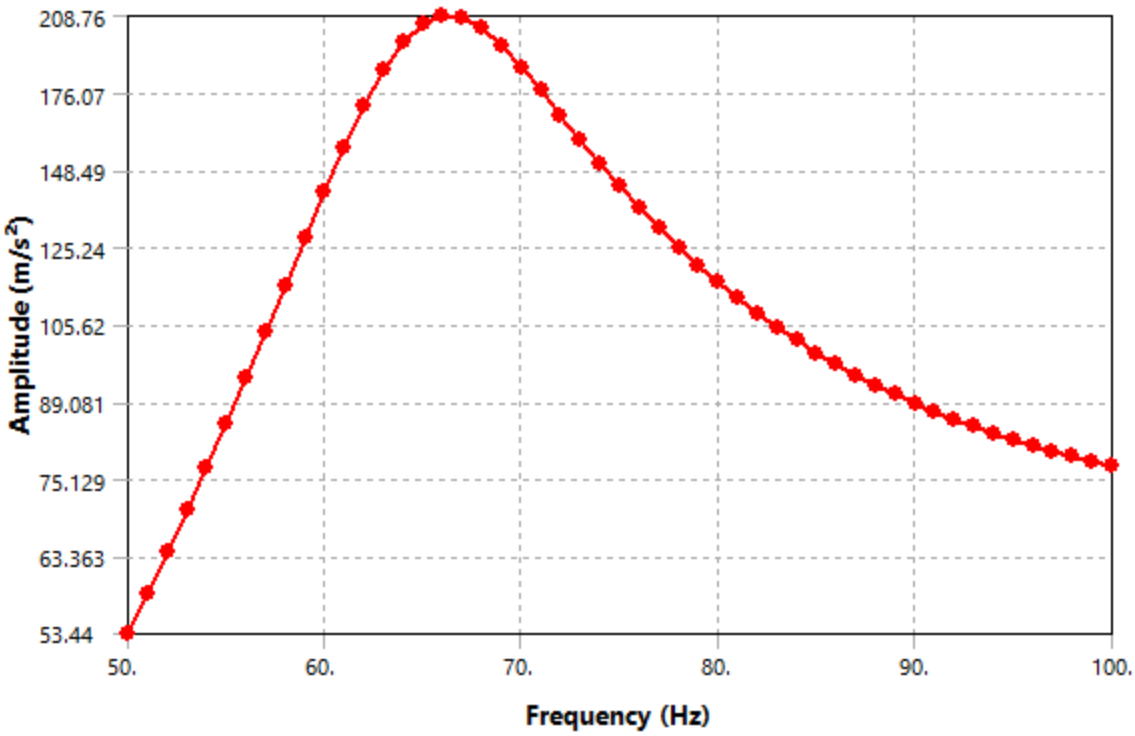


FIGURE 55
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6x

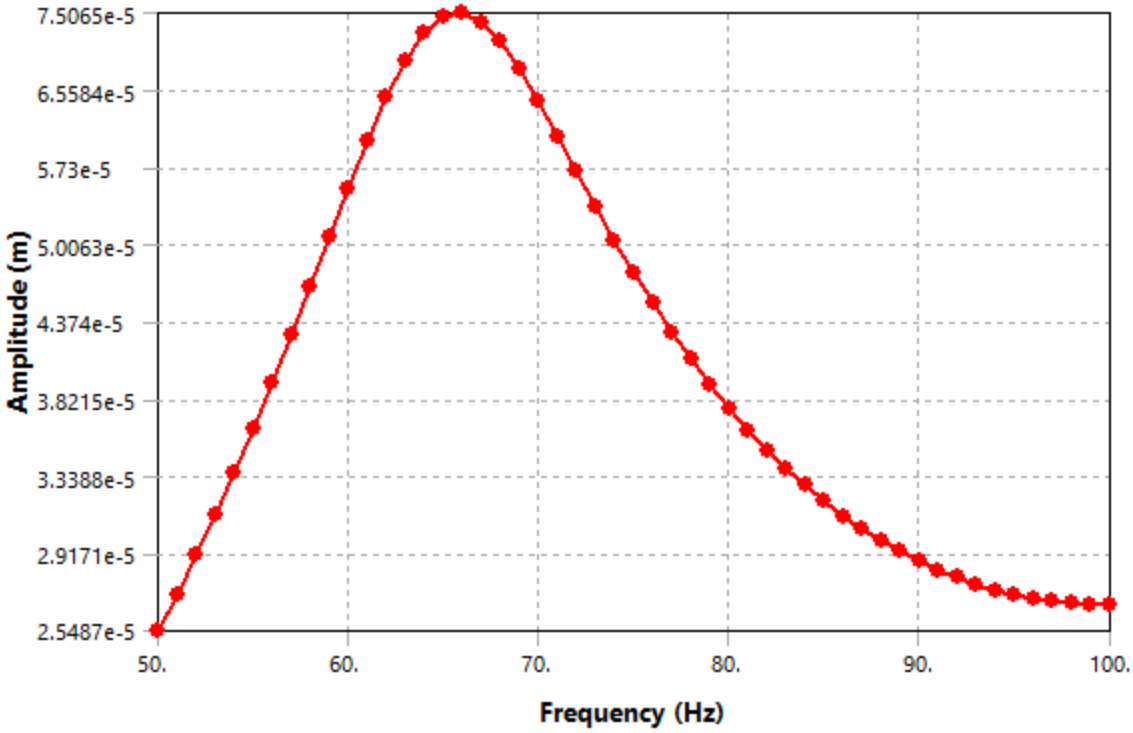


FIGURE 56
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6y

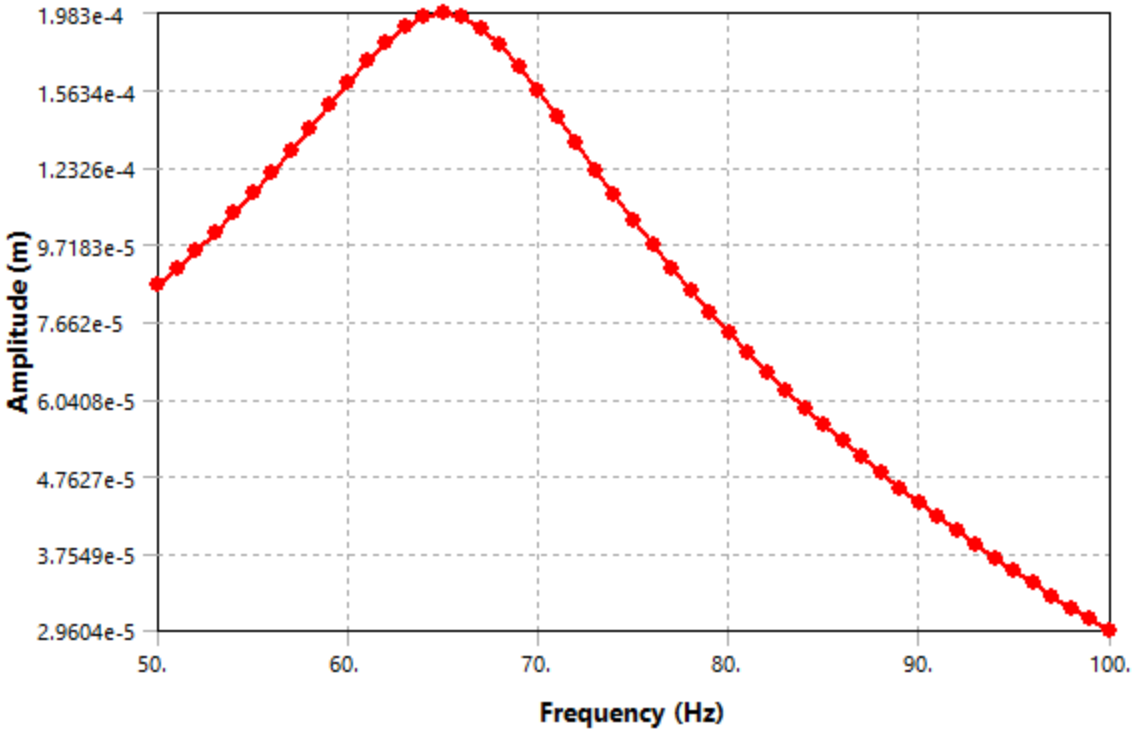


FIGURE 57
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6z

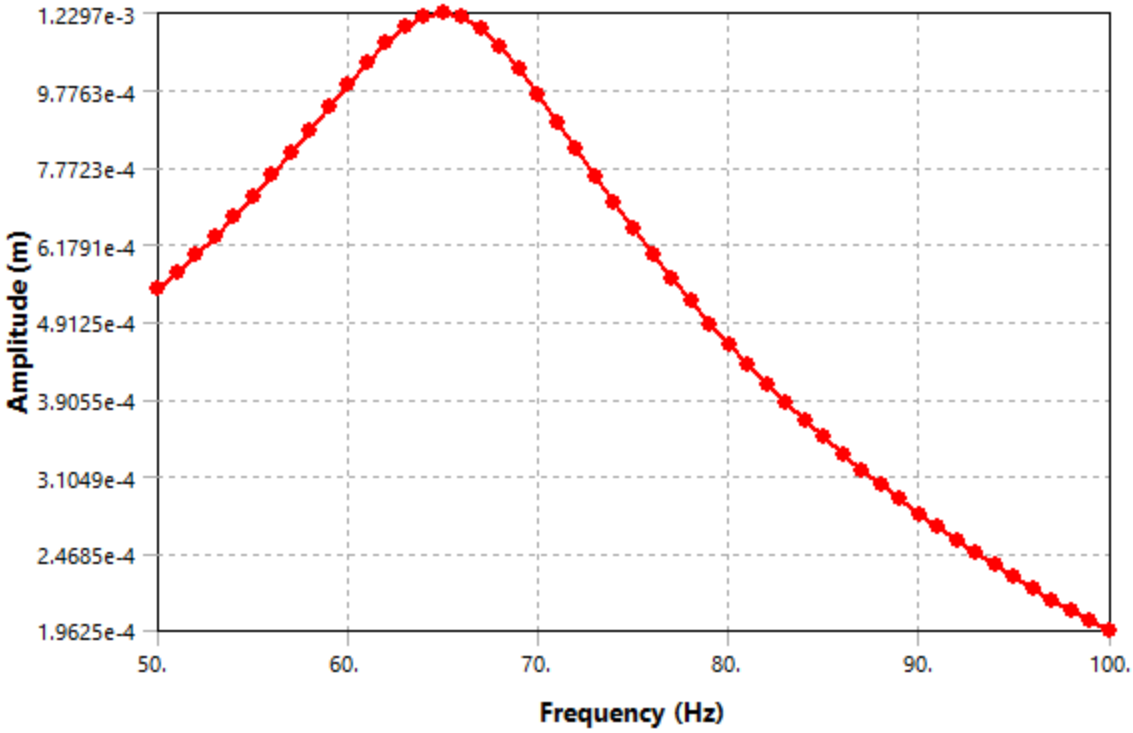


FIGURE 58
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7x

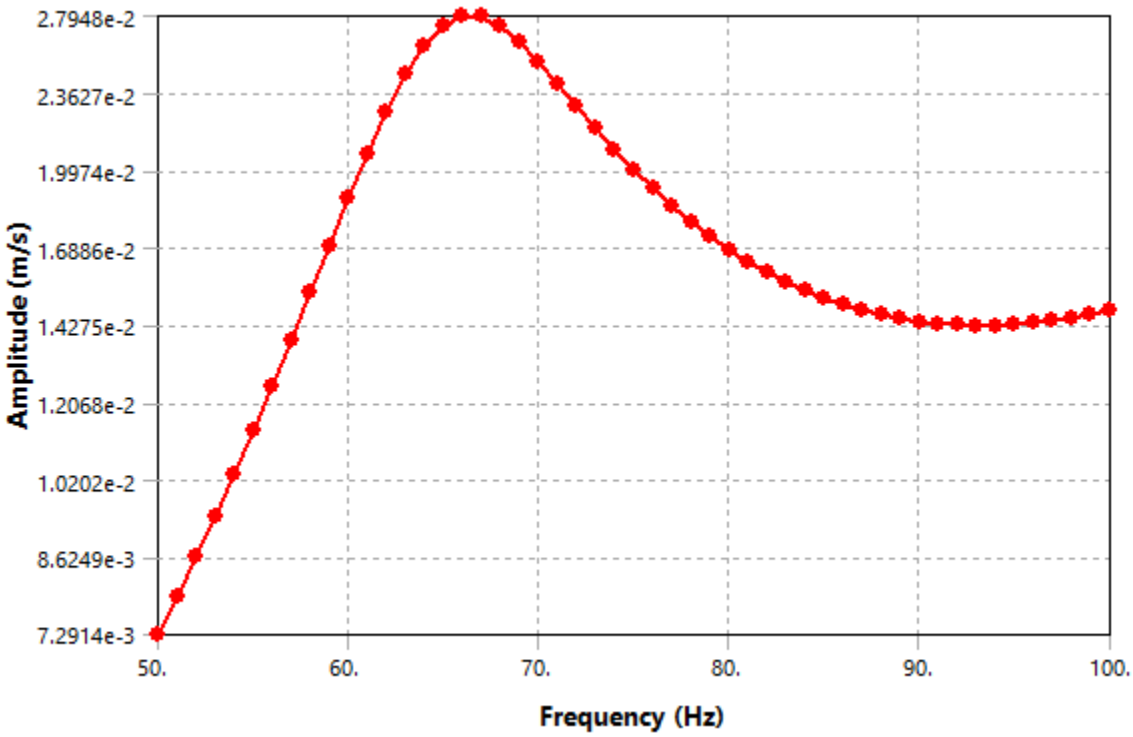


TABLE 98
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

erationFrequencyResponseDIMM7y	*AccelerationFrequencyResponseDIMM7z*	*DeformationFrequencyResponseDIMM7x*	*DeformationFrequencyResponseDIMM7y*	*Deformation*
Solved				
Scope				
Geometry Selection				
1 Body				
Use Average				
Definition				
rectional Acceleration		Directional Deformation		
Y Axis	Z Axis	X Axis	Y Axis	
Global Coordinate System				
No				
Options				
Use Parent				
49. Hz				
100. Hz				
Bode				
Log Y				
Results				
33.711 m/s²	201.46 m/s²	6.7394e-005 m	1.9844e-004 m	1.18
66. Hz			65. Hz	
85.331 °	-94.314 °	78.662 °	-85.949 °	
2.744 m/s²	-15.153 m/s²	1.325e-005 m	1.402e-005 m	-9.1
33.599 m/s²	-200.89 m/s²	6.6079e-005 m	-1.9795e-004 m	1.18

FIGURE 59
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7y

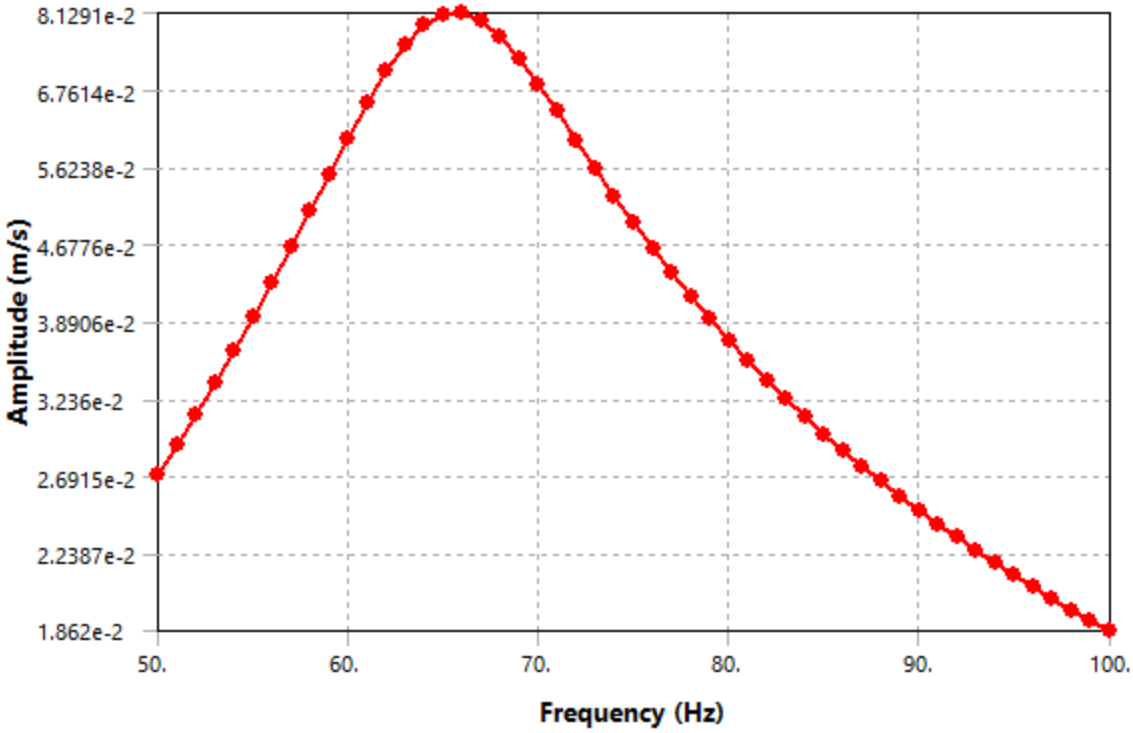


FIGURE 60
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7z

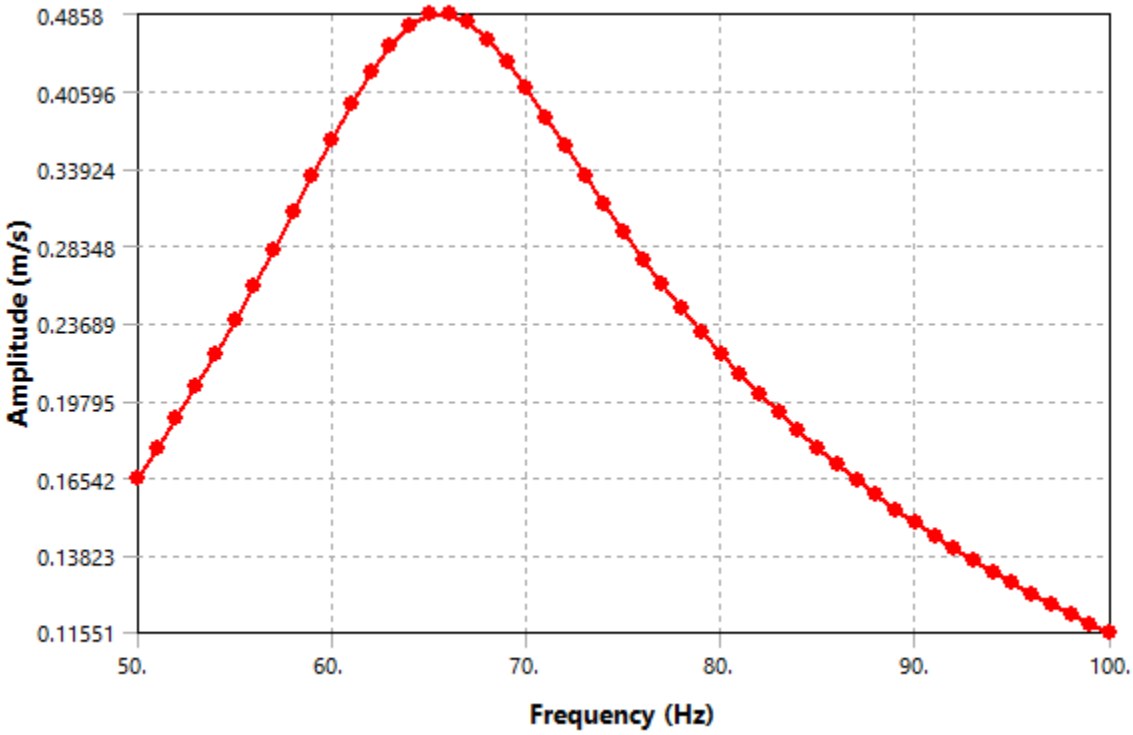


FIGURE 61
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7x

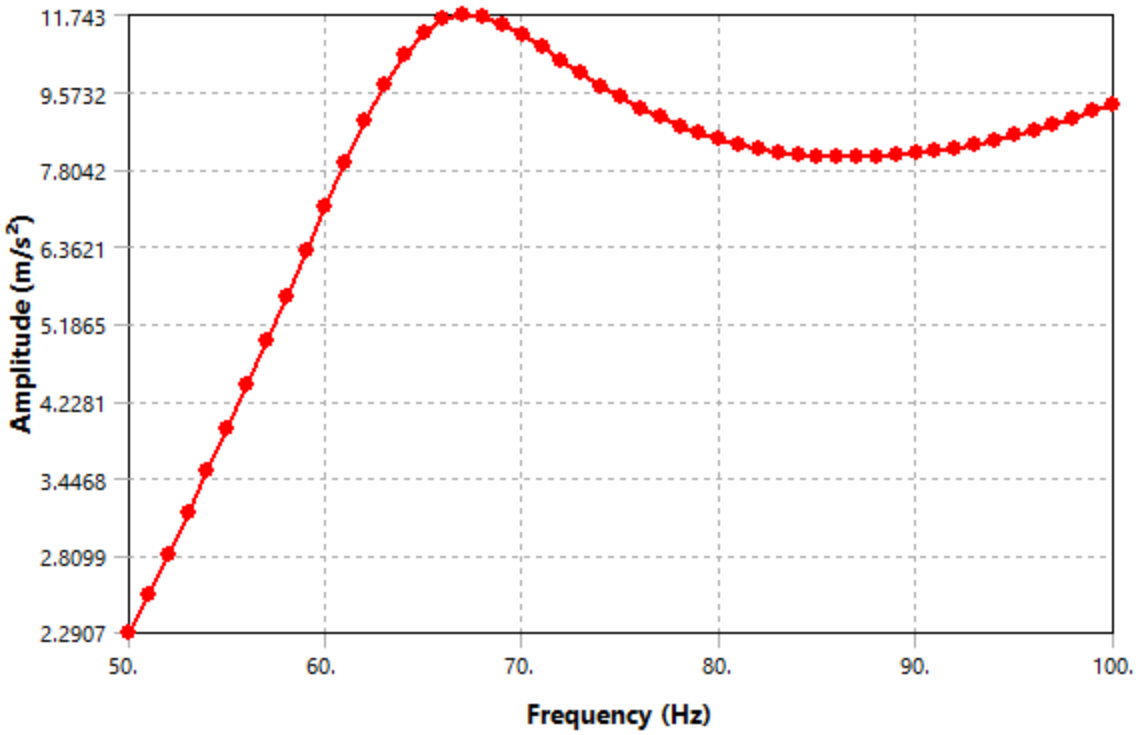


FIGURE 62
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7y

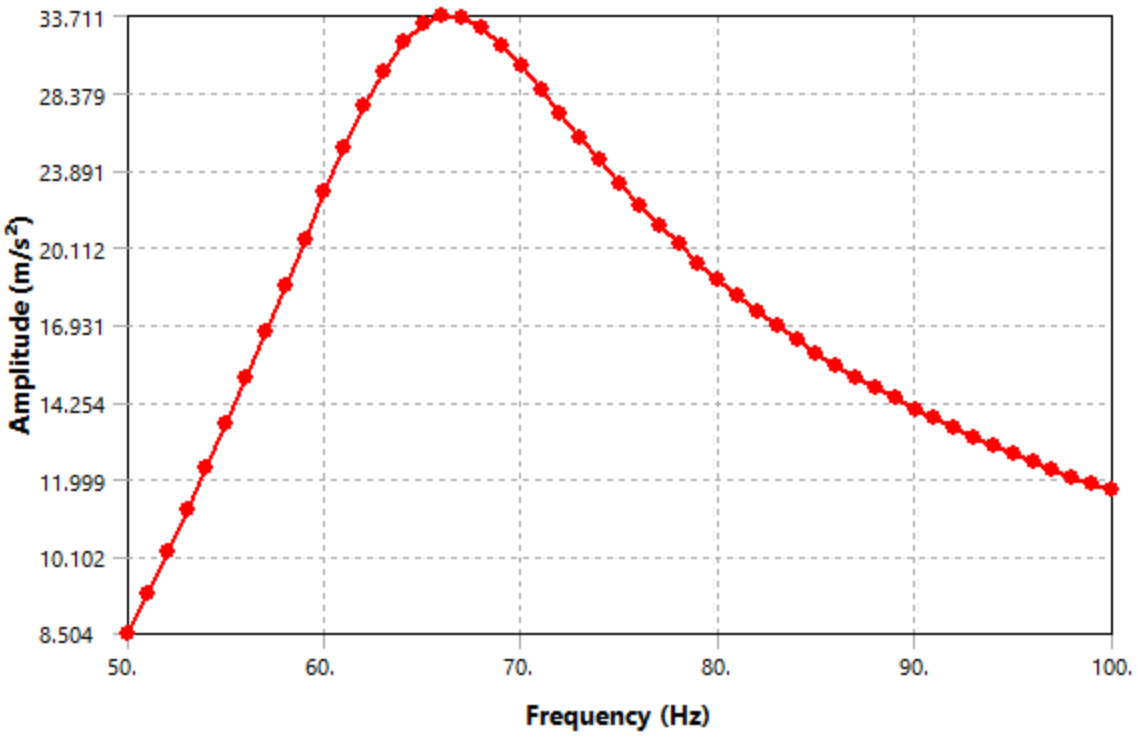


FIGURE 63
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7z

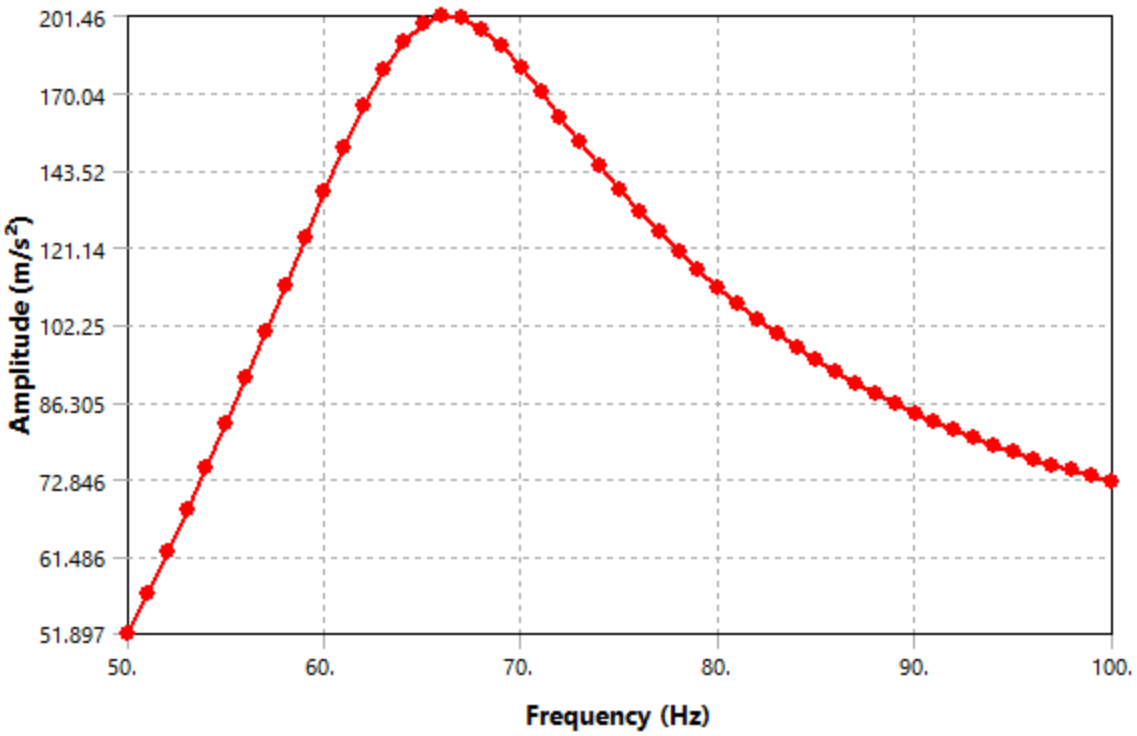


FIGURE 64
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM7x

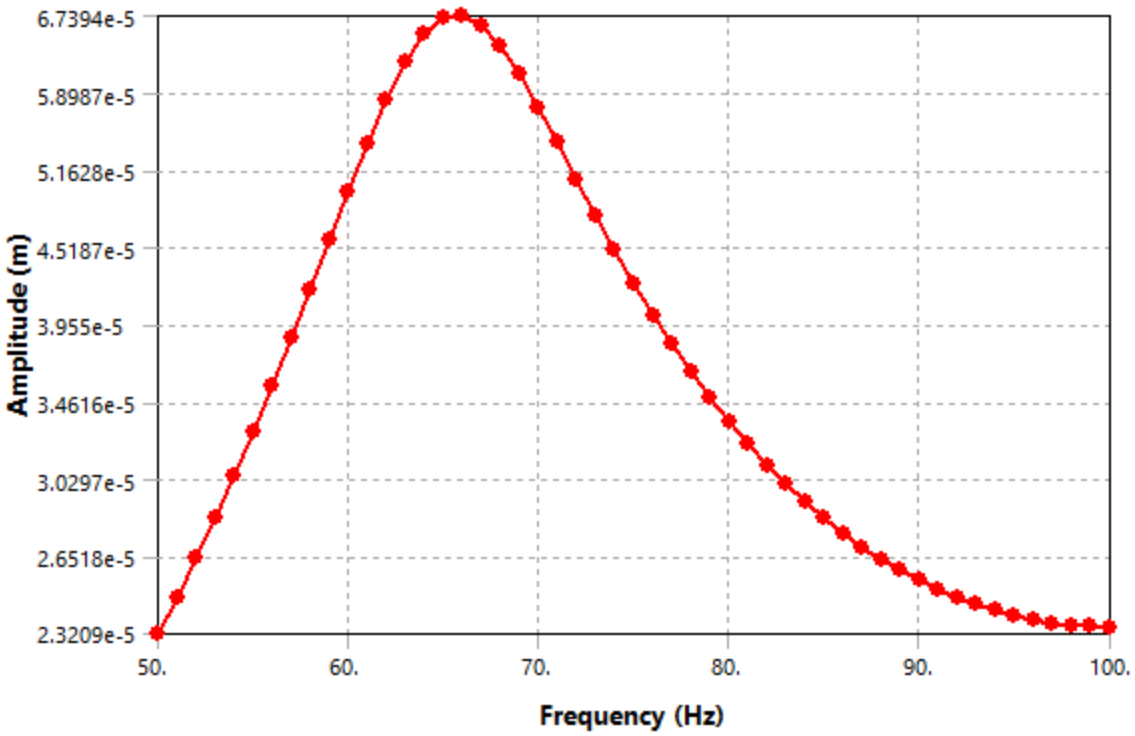


FIGURE 65
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM7y

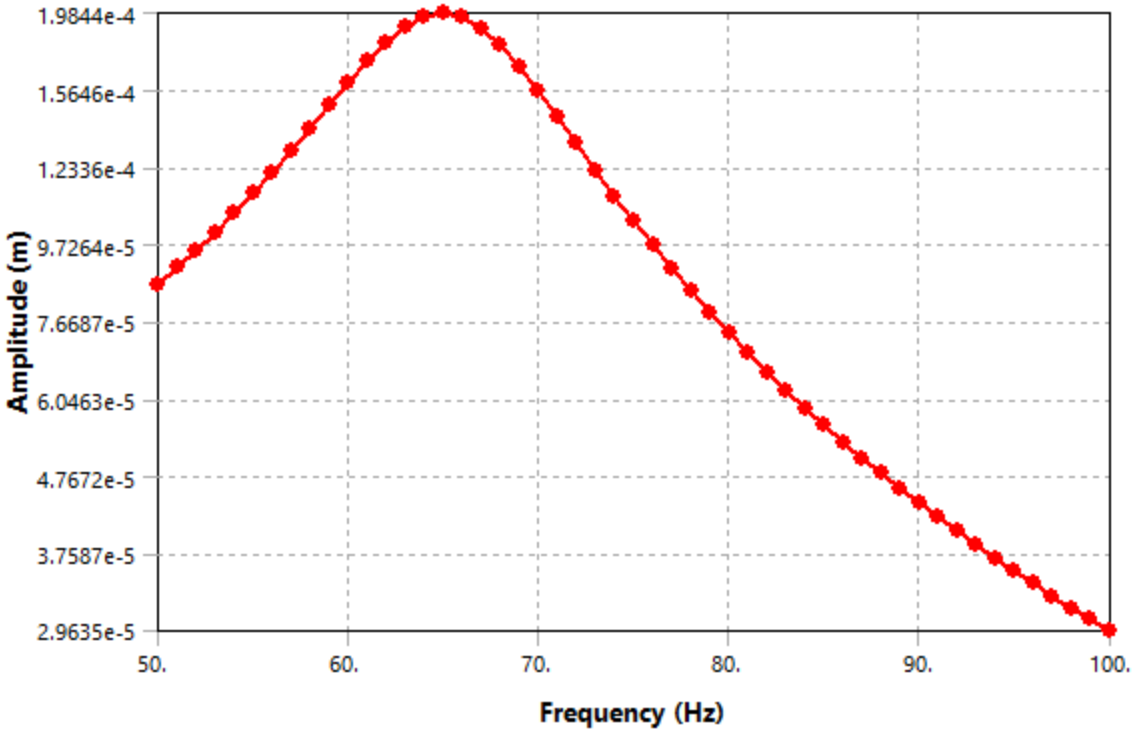


FIGURE 66
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM7z

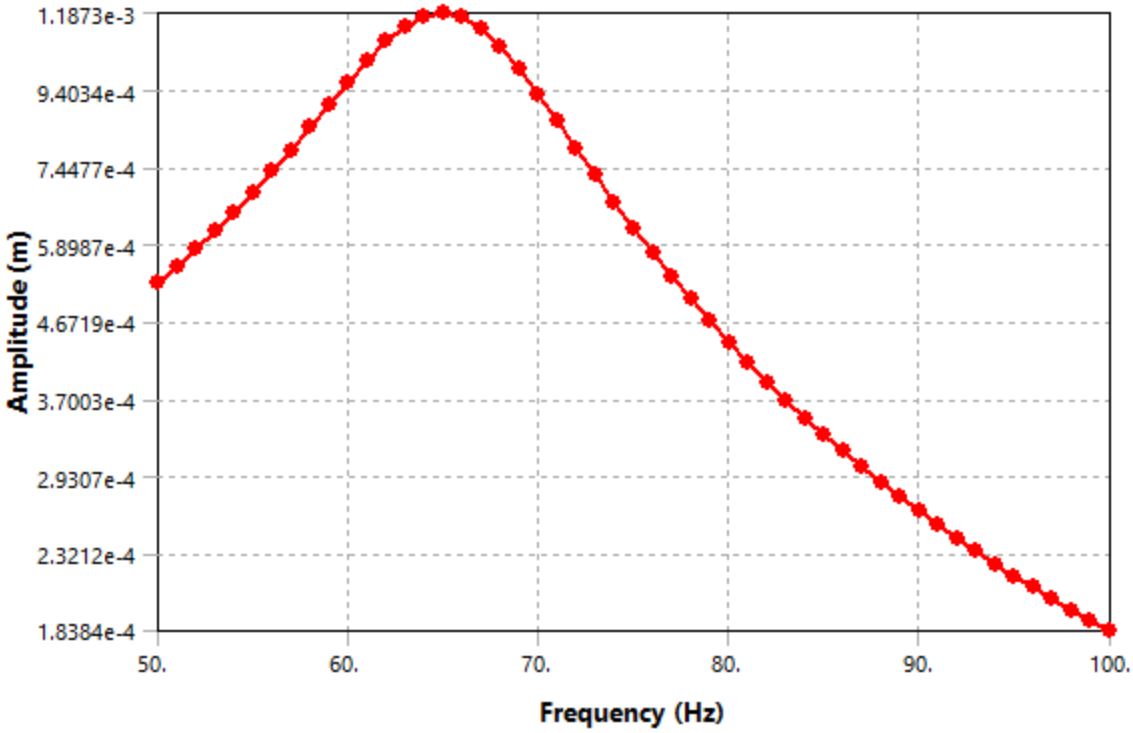


FIGURE 67
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8x

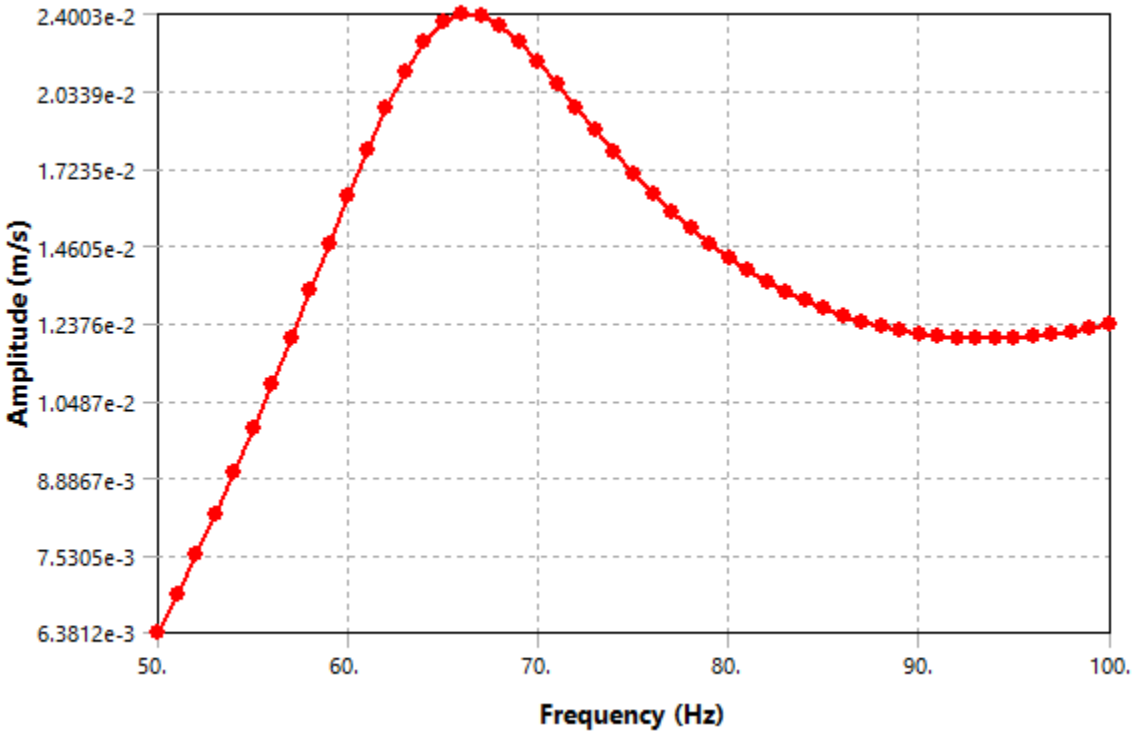


FIGURE 68
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8y

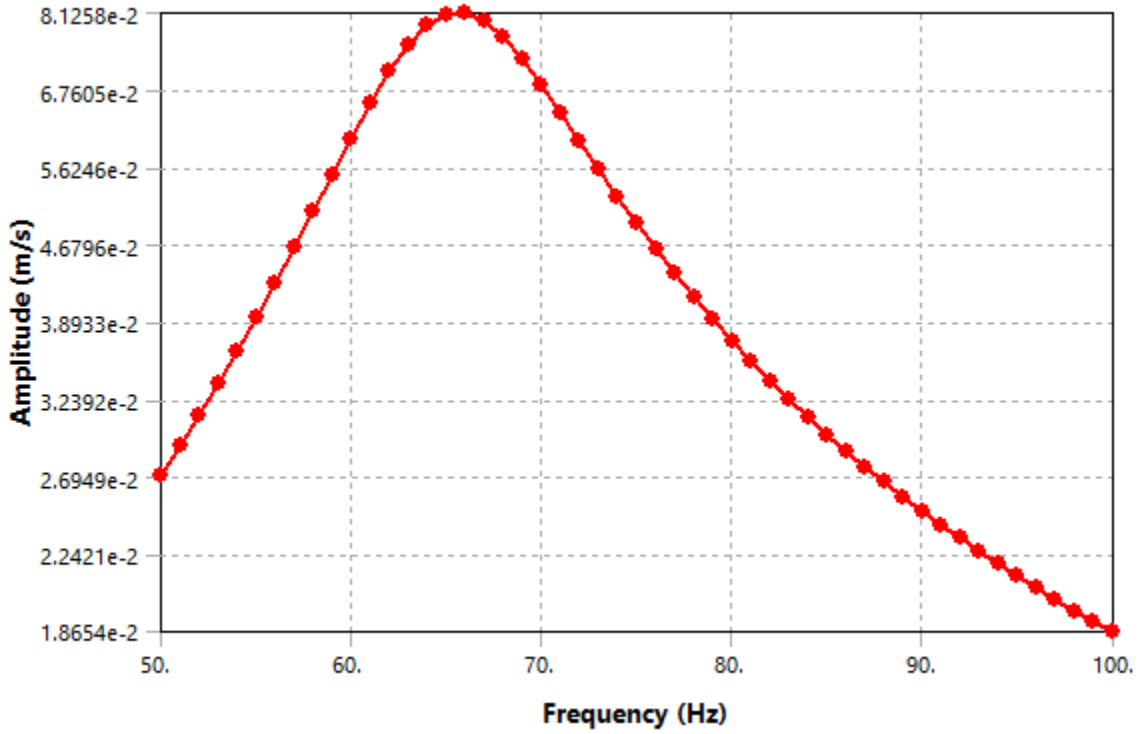


FIGURE 69
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8z

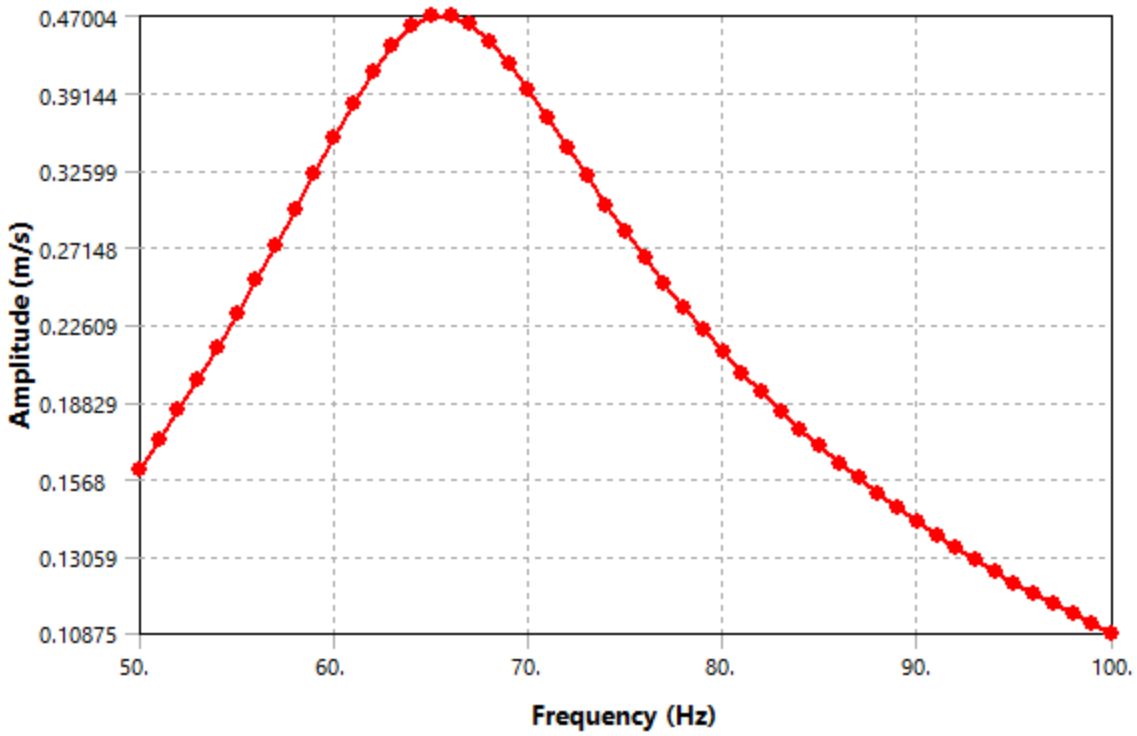


TABLE 99
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

tionFrequencyResponseDIMM8y	*AccelerationFrequencyResponseDIMM8z*	*DeformationFrequencyResponseDIMM8x*	*DeformationFreque*
Solved			
Scope			
Geometry Selection			
1 Body			
Use Average			
Definition			
Directional Acceleration		Directiona	
Y Axis	Z Axis	X Axis	Y
Global Coordinate System			
No			
Options			
Use Parent			
49. Hz			
100. Hz			
Bode			

Log Y

Results			
33.697 m/s²	194.92 m/s²	5.7881e-005 m	1.983
66. Hz			
85.338 °	-94.139 °	79.069 °	-8
2.7386 m/s²	-14.069 m/s²	1.0976e-005 m	1.404
33.585 m/s²	-194.41 m/s²	5.6831e-005 m	-1.978

FIGURE 70
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8x

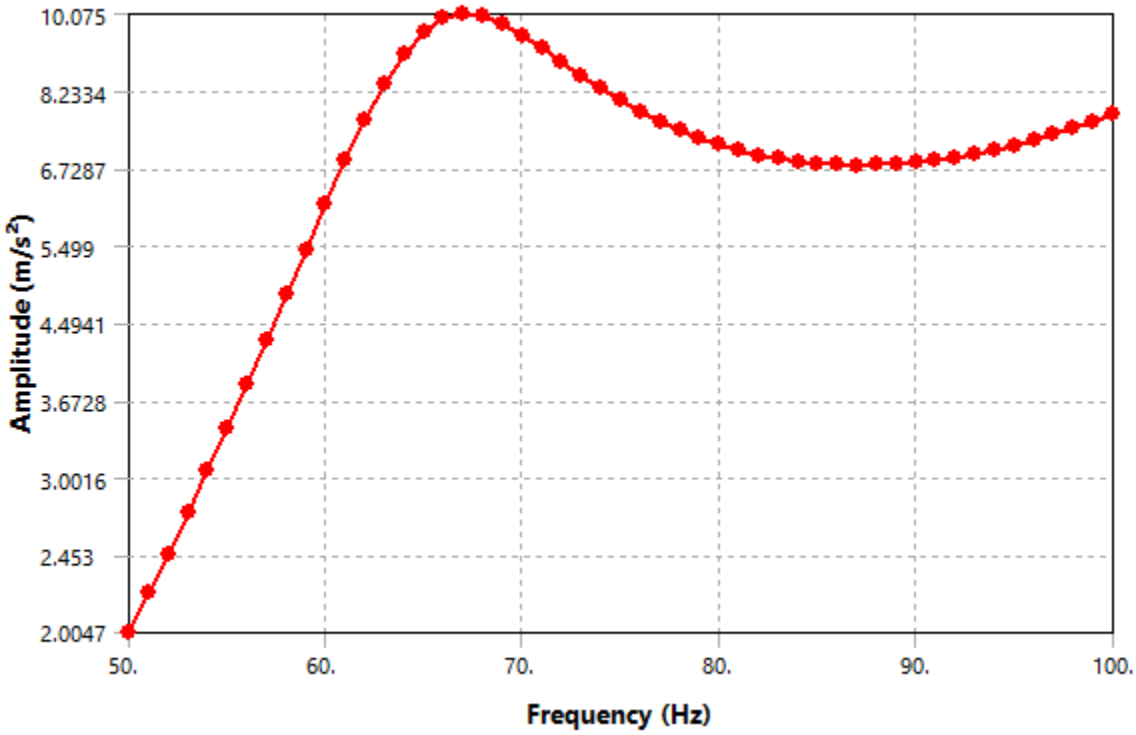


FIGURE 71
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8y

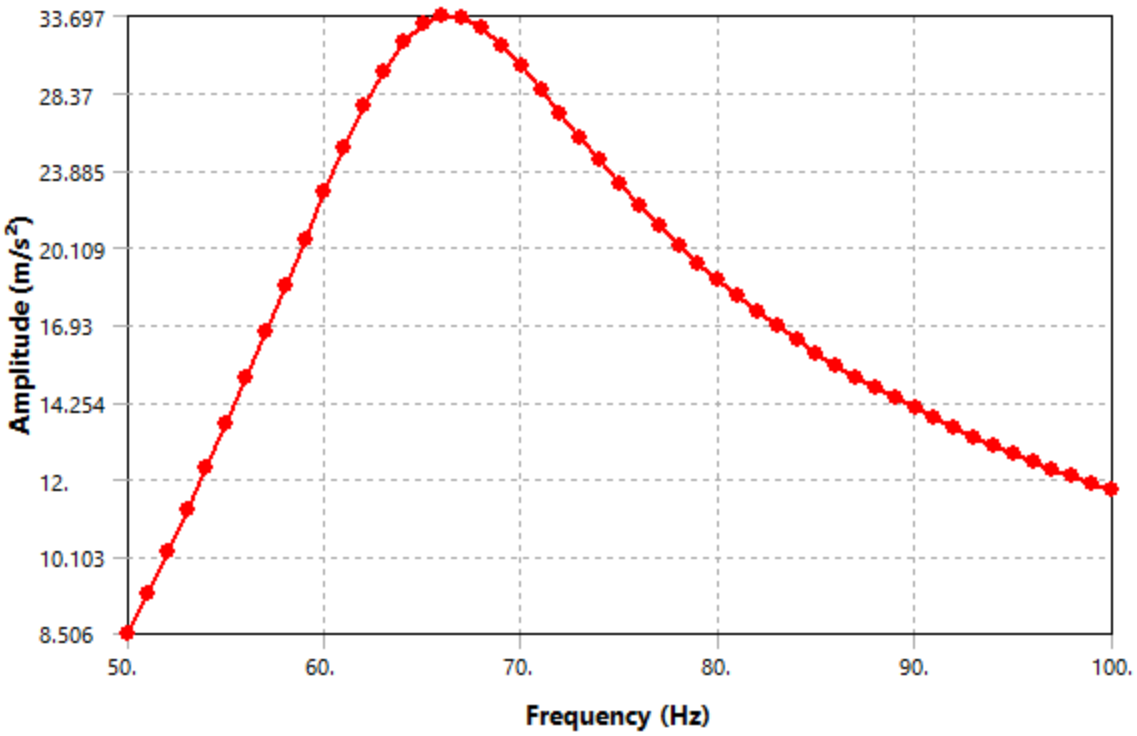


FIGURE 72
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8z

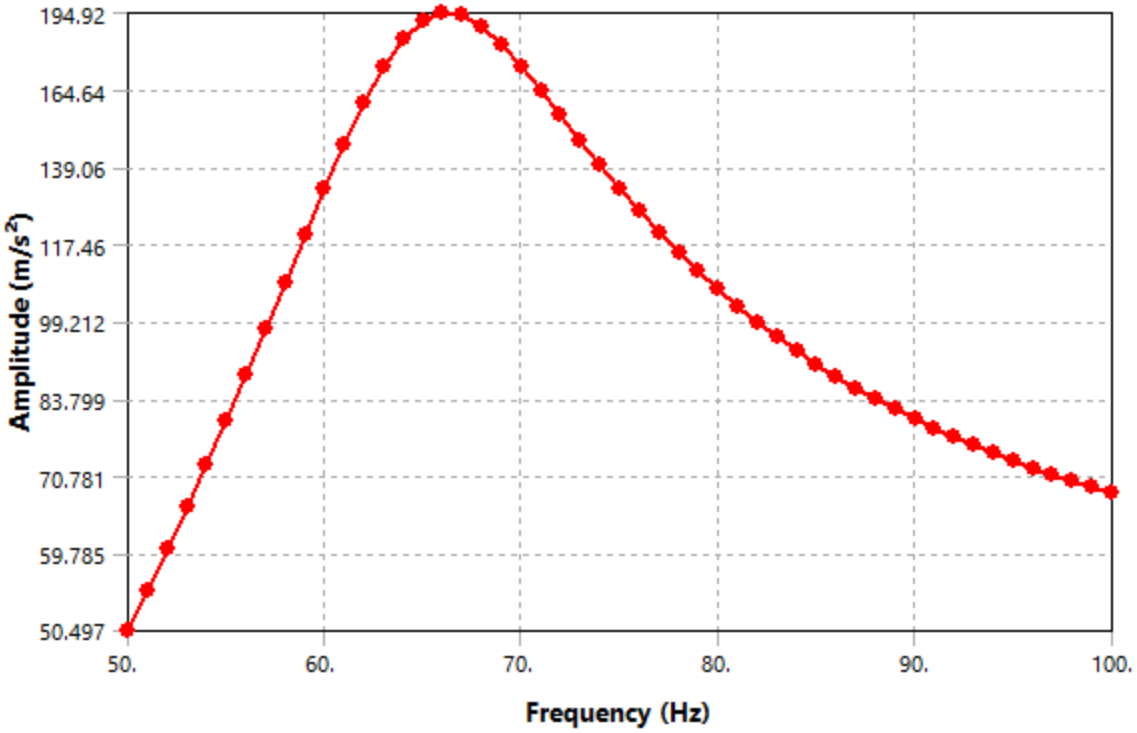


FIGURE 73
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8x

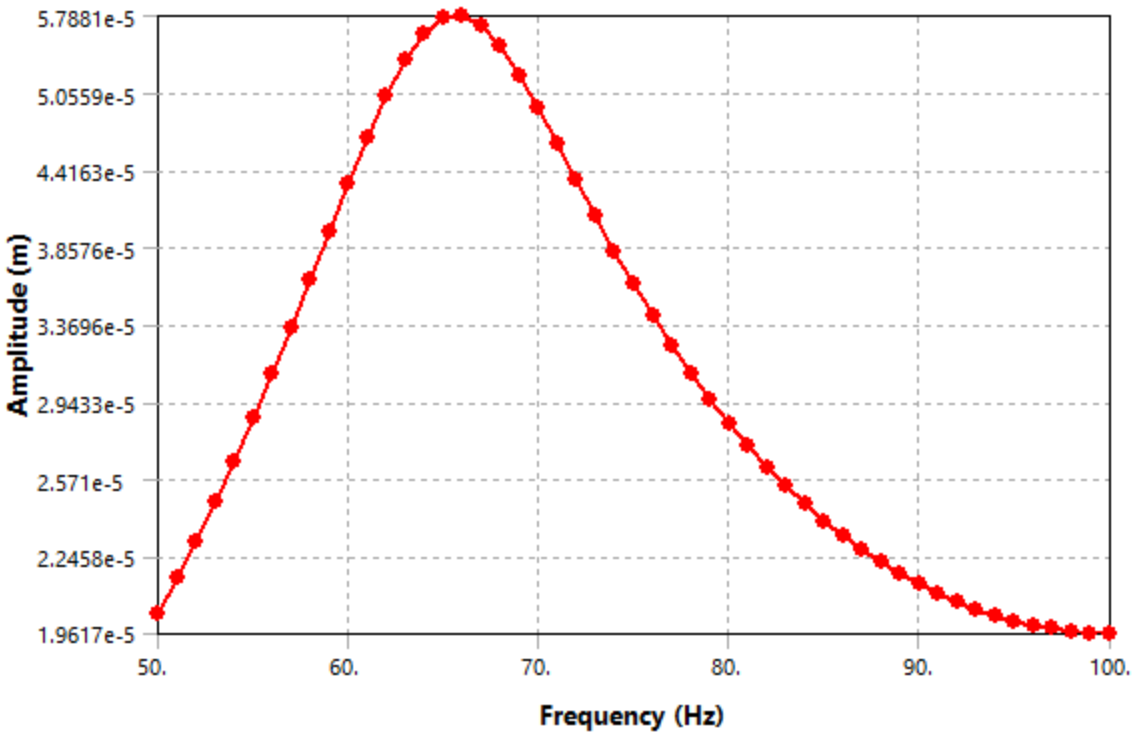


FIGURE 74
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8y

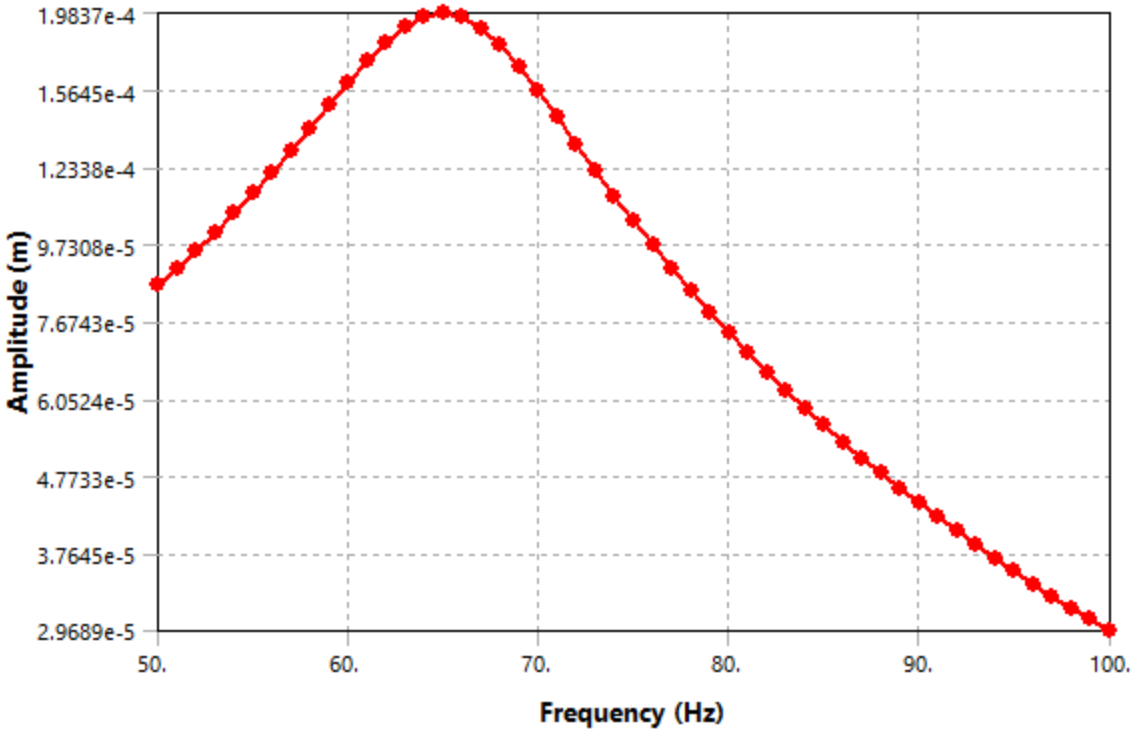
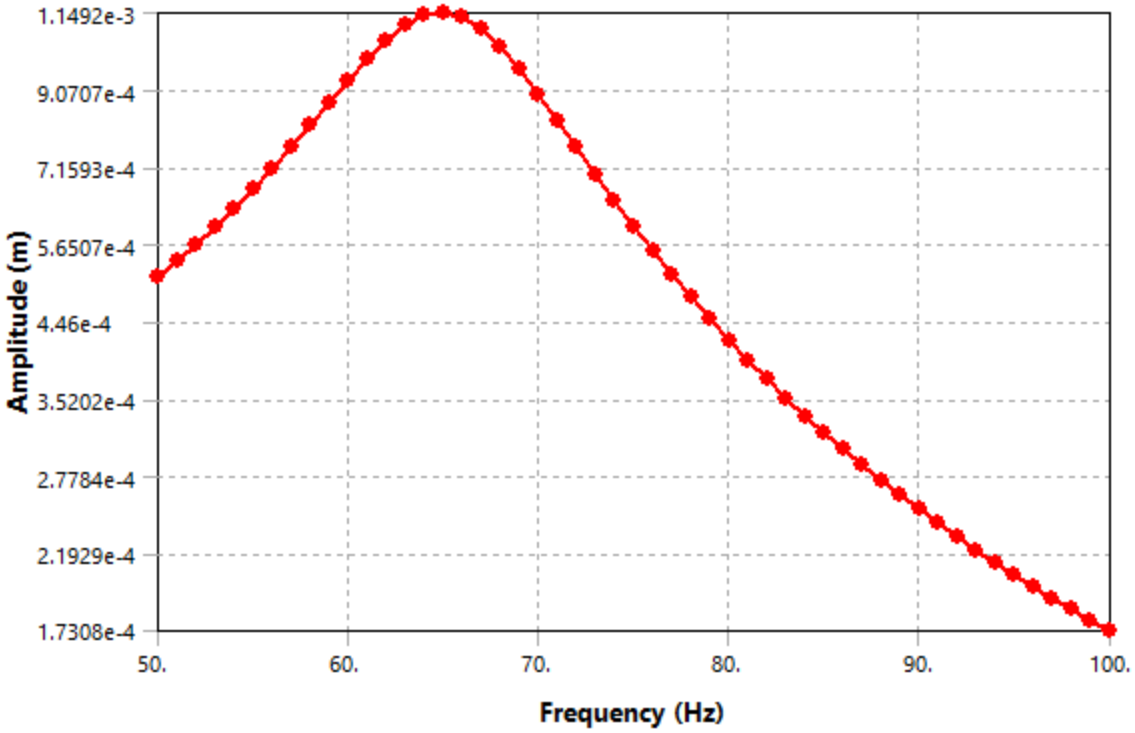


FIGURE 75
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8z



Material Data

AISI 1020 Steel, cold rolled

TABLE 100
AISI 1020 Steel, cold rolled > 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 101
AISI 1020 Steel, cold rolled > Density

Density kg m^-3
7870

TABLE 102
AISI 1020 Steel, cold rolled > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 103
AISI 1020 Steel, cold rolled > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 104
AISI 1020 Steel, cold rolled > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
4.2e+008

TABLE 105
AISI 1020 Steel, cold rolled > Specific Heat Constant Pressure

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

TABLE 106
AISI 1020 Steel, cold rolled > Isotropic Thermal Conductivity

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

Aluminum 6061-T6; 6061-T651

TABLE 107
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 108
Aluminum 6061-T6; 6061-T651 > Density

Density kg m^-3
2700

TABLE 109
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 110
Aluminum 6061-T6; 6061-T651 > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 111
Aluminum 6061-T6; 6061-T651 > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
3.103e+008

TABLE 112
Aluminum 6061-T6; 6061-T651 > Specific Heat Constant Pressure

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

TABLE 113
Aluminum 6061-T6; 6061-T651 > Isotropic Thermal Conductivity

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

Nylon

TABLE 114
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 115
Nylon > Density

Density kg m^-3
1160

TABLE 116
Nylon > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 117
Nylon > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 118
Nylon > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
7.e+007

TABLE 119
Nylon > Specific Heat Constant Pressure

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

TABLE 120
Nylon > Isotropic Thermal Conductivity

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

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

LCP

TABLE 128
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 129
LCP > Density

Density kg m^-3
1760

TABLE 130
LCP > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 131
LCP > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 132
LCP > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
1.17e+008

TABLE 133
LCP > Specific Heat Constant Pressure

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

TABLE 134
LCP > Isotropic Thermal Conductivity

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

Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod

TABLE 135
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Isotropic Elasticity

Young's Modulus Pa	Poisson's Ratio	Bulk Modulus Pa	Shear Modulus Pa
1.15e+011	0.31	1.0088e+011	4.3893e+010

TABLE 136
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Density

Density kg m^-3
1653.5

TABLE 137
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 138
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 139
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
2.5e+008

TABLE 140
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Specific Heat Constant Pressure

Specific Heat J kg^-1 C^-1
385

TABLE 141
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Isotropic Thermal Conductivity

Thermal Conductivity W m^-1 C^-1
391

ABS

TABLE 142
ABS > 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 143
ABS > Density

Density kg m^-3
1300

TABLE 144
ABS > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 145
ABS > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 146
ABS > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
4.e+007

TABLE 147
ABS > Specific Heat Constant Pressure

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

TABLE 148
ABS > Isotropic Thermal Conductivity

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