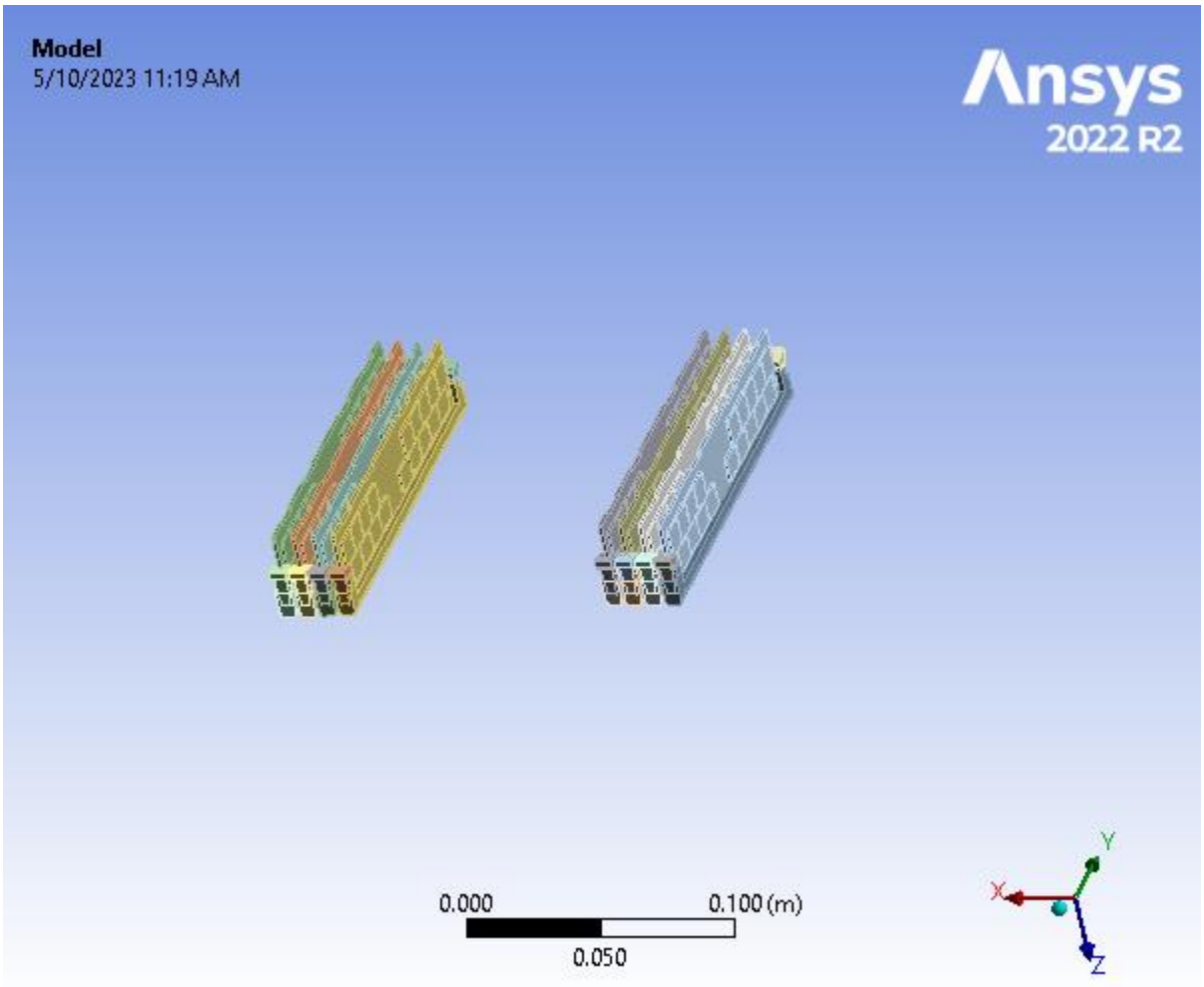
Project*

First Saved	Wednesday, May 10, 2023
Last Saved	Wednesday, May 10, 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)

Object Name	*Geometry Import (A3, B3)*
State	Solved
Definition	
Source	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\assembly_simplified_10.sc
Type	SpaceClaim
Basic Geometry Options	
ameters	Independent
rameter Key	
Advanced Geometry Options	
ompare Parts On Update	No
Analysis Type	3-D

Geometry

TABLE 4
Model (A4, B4) > Geometry

Object Name	*Geometry*
State	Fully Defined
Definition	
Source	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\assembly_simplified_10.sc
Type	SpaceClaim
ngth Unit	Meters
Element Control	Program Controlled
Display Style	Body Color
Bounding Box	
Length X	0.48082 m
Length Y	0.55504 m
Length Z	4.3696e-002 m

Properties	
Volume	2.1006e-003 m³
Mass	8.377 kg
Scale Factor Value	1.
Statistics	
Bodies	119
Active Bodies	119
Nodes	386311
Elements	193691
sh Metric	None
Update Options	
Assign Default Material	No
Basic Geometry Options	
Solid Bodies	Yes
Surface Bodies	Yes
e Bodies	Yes
rameters	Independent
arameter Key	
Attributes	Yes
Attribute Key	
Named elections	Yes
Named Selection Key	
Material roperties	Yes
Advanced Geometry Options	
Use ociativity	Yes
oordinate Systems	Yes
oordinate stem Key	
Reader Mode Saves Updated File	No
Use nstances	Yes

art CAD Update	Yes
Compare Parts On Update	No
Analysis Type	3-D
Mixed Import esolution	None
Import Facet Quality	Source
Clean odies On Import	No
Stitch Surfaces n Import	None
compose Disjoint Geometry	Yes
nclosure and ymmetry ocessing	Yes

Smallest

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

Object Name	*Screw-1\Screw-1*	*Screw-2\Screw-2*	*Screw-3\Screw-3*	*Screw-4\Screw-4*	*Left-Nut-1\Left-Nut-1*	*Left-Nut-2\Left-Nut-2*	*Left-Nut-3\Left-Nut-3*	*Left-Nut-4\Left-Nut-4*	*Left-Nut-5\Left-Nut-5*	*Left-Nut-6\Left-Nut-6*	*Left-Nut-7\Left-Nut-7*
State	Hidden										
Graphics Properties											
Visible	No										
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	Hidden										
Graphics Properties											
Visible	No										
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*
Hidden								
Graphics Properties								
No								
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	-1
	-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*
Hidden							

Graphics Properties
No
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

bject Name	*Screw23\Screw23*	*Screw24\Screw24*	*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*	*1*
State	Hidden										
Graphics Properties											
Visible	No										
ansparency	1										
Definition											
Suppressed	No										
s Behavior	Flexible										
Coordinate System	Default Coordinate System										
Reference emperature	By Environment										
Treatment	None										
Material											
Assignment	AISI 1020 Steel, cold rolled		Aluminum 6061-T6; 6061-T651								

ear Effects	Yes									
rmal Strain Effects	Yes									
Bounding Box										
Length X	9.525e-003 m		7.3324e-003 m	7.3323e-003 m				7.3324e-003 m	7.3323e-003 m	7
Length Y	7.9248e-003 m		6.35e-003 m							7
Length Z	7.9248e-003 m		4.7498e-003 m							9
Properties										
Volume	1.5136e-007 m³		8.8258e-008 m³							1
Mass	1.1912e-003 kg		2.383e-004 kg							1
Centroid X	-0.28628 m		-0.15686 m	6.1601e-004 m	0.12508 m		6.1601e-004 m	-0.15686 m	6.6656e-002 m	0
Centroid Y	0.20607 m	0.26163 m	4.6568e-002 m	0.22818 m		8.4788e-004 m	7.3238e-002 m	8.4788e-004 m	7.3238e-002 m	8
Centroid Z	-8.4578e-005 m		1.9415e-002 m							1
nt of Inertia Ip1	4.0912e-009 kg·m²		1.0709e-009 kg·m²							9
nt of Inertia Ip2	1.2206e-008 kg·m²		1.0709e-009 kg·m²							9
nt of Inertia Ip3	1.2206e-008 kg·m²		1.1596e-009 kg·m²							5
Statistics										
Nodes	490	510	491	466	529	503	479	451	483	478
Elements	233	246	227	208	250	229	212	199	215	
Mesh Metric	None									
CAD Attributes										
Tolerance:	0.00000001									
14.214.214										
43.143.175										
43.164.175										

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

Object Name	*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*	*Screw-9\Screw-9*	*Nut-1\Nut-1*	*Standoff-1\Standoff-1*
State	Hidden									
Graphics Properties										
Visible	No									
Transparency	1									

Definition										
Suppressed	No									
Stiffness Behavior	Flexible									
Coordinate System	Default Coordinate System									
Reference Temperature	By Environment									
Treatment	None									
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	6.1601e-004 m	-0.15686 m	6.6656e-002 m	-0.15686 m	0.12508 m		6.1601e-004 m	-0.15686 m		
Centroid Y	8.4788e-004 m	4.6568e-002 m	7.3238e-002 m	8.4788e-004 m	7.3238e-002 m	0.22818 m		0.20532 m		
Centroid Z	1.5731e-002 m	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	953	964	950	915	943	971	987	432	2206	397
Elements	477	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 11
Model (A4, B4) > Geometry > Small > Parts

Object Name	*DIMM-Slot-1\Clip-1a*	*DIMM-Slot-1\Clip-1b*	*DIMM-Slot-1\Slot-1*	*DIMM-Slot-2\Clip-2a*	*DIMM-Slot-2\Clip-2b*	*DIMM-Slot-2\Slot-2*	*DIMM-Slot-3\Clip-3a*	*DIMM-Slot-3\Clip-3b*	*DIMM-Slot-3\Slot-3*	*DIMM-Slot-4\Clip-4a*	*DIMM-Slot-4\Clip-4b*
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	6.3e-003 m										
Length Y	7.525e-003 m		0.14096 m	7.525e-003 m		0.14096 m	7.525e-003 m		0.14096 m	7.525e-003 m	
Length Z	2.005e-002 m		1.53e-002 m	2.005e-002 m		1.53e-002 m	2.005e-002 m		1.53e-002 m	2.005e-002 m	
Properties											
Volume	4.2684e-007 m³		4.761e-006 m³	4.2684e-007 m³		4.761e-006 m³	4.2684e-007 m³		4.761e-006 m³	4.2684e-007 m³	
Mass	7.5124e-004 kg		8.3794e-003 kg	7.5124e-004 kg		8.3794e-003 kg	7.5124e-004 kg		8.3794e-003 kg	7.5124e-004 kg	
Centroid X	-1.0023e-002 m		-1.0022e-002 m	-1.7897e-002 m		-1.7896e-002 m	-2.5771e-002 m		-2.577e-002 m	-3.3645e-002 m	
Centroid Y	5.0028e-002 m	0.18667 m	0.11834 m	5.0028e-002 m	0.18667 m	0.11834 m	5.0028e-002 m	0.18667 m	0.11834 m	5.0028e-002 m	0.18667 m
Centroid Z	2.1936e-003 m		1.1534e-002 m	2.1936e-003 m		1.1534e-002 m	2.1936e-003 m		1.1534e-002 m	2.1936e-003 m	
Moment of Inertia Ip1	2.3543e-008 kg·m²		1.6709e-005 kg·m²	2.3543e-008 kg·m²		1.6709e-005 kg·m²	2.3543e-008 kg·m²		1.6709e-005 kg·m²	2.3543e-008 kg·m²	
Moment of Inertia Ip2	2.3293e-008 kg·m²		9.6647e-008 kg·m²	2.3293e-008 kg·m²		9.6647e-008 kg·m²	2.3293e-008 kg·m²		9.6647e-008 kg·m²	2.3293e-008 kg·m²	

Moment of Inertia Ip3	3.6451e-009 kg·m²		1.6672e-005 kg·m²	3.6451e-009 kg·m²		1.6672e-005 kg·m²	3.6451e-009 kg·m²		1.6672e-005 kg·m²	3.6451e-009 kg·m²	
Statistics											
Nodes	2200	2256	3328	2221	2263	3328	2190	2187	3328	2178	2173
Elements	1144	1183	1618	1144	1174	1618	1129	1127	1618	1116	1112
Mesh Metric	None										
CAD Attributes											
PartTolerance:	0.00000001										
Color:143.143.175											
Color:143.145.175											

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

Object Name	*DIMM-Slot-4\Slot-4*	*DIMM-Slot-5\Clip-5a*	*DIMM-Slot-5\Clip-5b*	*DIMM-Slot-5\Slot-5*	*DIMM-Slot-6\Clip-6a*	*DIMM-Slot-6\Clip-6b*	*DIMM-Slot-6\Slot-6*	*DIMM-Slot-7\Clip-7a*	*DIMM-Slot-7\Clip-7b*	*DIMM-Slot-7\Slot-7*	*DIMM-Slot-8\Clip-8a*
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	6.3e-003 m										
Length Y	0.14096 m	7.525e-003 m		0.14096 m	7.525e-003 m		0.14096 m	7.525e-003 m		0.14096 m	7.525e-003 m
Length Z	1.53e-002 m	2.005e-002 m		1.53e-002 m	2.005e-002 m		1.53e-002 m	2.005e-002 m		1.53e-002 m	2.005e-002 m
Properties											
Volume	4.761e-006 m³	4.2684e-007 m³		4.761e-006 m³	4.2684e-007 m³		4.761e-006 m³	4.2684e-007 m³		4.761e-006 m³	4.2684e-007 m³
Mass	8.3794e-003 kg	7.5124e-004 kg		8.3794e-003 kg	7.5124e-004 kg		8.3794e-003 kg	7.5124e-004 kg		8.3794e-003 kg	7.5124e-004 kg
Centroid X	-3.3644e-002 m	-0.13786 m			-0.14573 m			-0.15361 m			-0.16148 m

Centroid Y	0.11834 m	5.638e-002 m	0.19302 m	0.12469 m	5.638e-002 m	0.19302 m	0.12469 m	5.638e-002 m	0.19302 m	0.12469 m	0.19302 m
Centroid Z	1.1534e-002 m	2.1936e-003 m		1.1534e-002 m	2.1936e-003 m		1.1534e-002 m	2.1936e-003 m		1.1534e-002 m	2.1936e-003 m
Moment of Inertia Ip1	1.6709e-005 kg·m²	2.3543e-008 kg·m²		1.6709e-005 kg·m²	2.3543e-008 kg·m²		1.6709e-005 kg·m²	2.3543e-008 kg·m²		1.6709e-005 kg·m²	2.3543e-008 kg·m²
Moment of Inertia Ip2	9.6647e-008 kg·m²	2.3293e-008 kg·m²		9.6647e-008 kg·m²	2.3293e-008 kg·m²		9.6647e-008 kg·m²	2.3293e-008 kg·m²		9.6647e-008 kg·m²	2.3293e-008 kg·m²
Moment of Inertia Ip3	1.6672e-005 kg·m²	3.6451e-009 kg·m²		1.6672e-005 kg·m²	3.6451e-009 kg·m²		1.6672e-005 kg·m²	3.6451e-009 kg·m²		1.6672e-005 kg·m²	3.6451e-009 kg·m²
Statistics											
Nodes	3328	2197	2202	3333	2237	2226	3332	2209	2243	3332	2213
Elements	1618	1122	1131	1620	1156	1149	1619	1140	1160	1619	1150
Mesh Metric	None										
CAD Attributes											
PartTolerance:	0.00000001										
Color:143.145.175											
Color:143.143.175											

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

Object Name	*DIMM-Slot-8\Clip-8b*	*DIMM-Slot-8\Slot-8*	*DIMM-Stick-1\Stick-1*	*DIMM-Stick-2\Stick-2*	*DIMM-Stick-3\Stick-3*	*DIMM-Stick-4\Stick-4*	*DIMM-Stick-5\Stick-5*	*DIMM-Stick-6\Stick-6*	*DIMM-Stick-7\Stick-7*	*DIMM-Stick-8\Stick-8*
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		Glass Epoxy Composite							
Nonlinear Effects	Yes									
Thermal Strain Effects	Yes									
Bounding Box										
Length X	6.3e-003 m		3.3782e-003 m							
Length Y	7.525e-003 m	0.14096 m	0.13322 m							
Length Z	2.005e-002 m	1.53e-002 m	3.1179e-002 m							

Properties										
Volume	4.2684e-007 m³	4.761e-006 m³	9.4439e-006 m³							
Mass	7.5124e-004 kg	8.3794e-003 kg	6.894e-002 kg							
Centroid X	-0.16148 m		-1.0162e-002 m	-1.8036e-002 m	-2.591e-002 m	-3.3784e-002 m	-0.13818 m	-0.14605 m	-0.15392 m	-0.1618 m
Centroid Y	5.638e-002 m	0.12469 m	0.11759 m				0.12394 m			
Centroid Z	2.1936e-003 m	1.1534e-002 m	-2.7043e-003 m							
Moment of Inertia Ip1	2.3543e-008 kg·m²	1.6709e-005 kg·m²	1.0662e-004 kg·m²							
Moment of Inertia Ip2	2.3293e-008 kg·m²	9.6647e-008 kg·m²	4.1638e-006 kg·m²							
Moment of Inertia Ip3	3.6451e-009 kg·m²	1.6672e-005 kg·m²	1.0255e-004 kg·m²							
Statistics										
Nodes	2272	3332	24427	24486	24220	24251	24247	24423	24274	24354
Elements	1181	1619	12610	12684	12455	12473	12476	12624	12492	12554
Mesh Metric	None									
CAD Attributes										
PartTolerance:	0.00000001									
Color:143.143.175										
Color:143.145.175										
Color:161.161.161										

Medium

TABLE 14
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 Guidebar*
tate	Hidden									
Graphics Properties										
ible	No									
ncy	1									
Definition										
sed	No									
vior	Flexible									
ate tem	Default Coordinate System									
nce ture	By Environment									

nent	None									
Material										
nent	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 15
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*	*Base\Base*
State	Hidden						
Graphics Properties							

Visible	No					
Transparency	1					
Definition						
Suppressed	No					
Stiffness Behavior	Flexible					
Coordinate System	Default Coordinate System					
Reference Temperature	By Environment					
Treatment	None					
Material						
Assignment	LCP					Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod
Nonlinear Effects	Yes					
Thermal Strain Effects	Yes					
Bounding Box						
Length X	7.5e-003 m		7.4e-003 m			7.9e-002 m
Length Y	5.5999e-002 m		8.9e-002 m	5.5999e-002 m	8.9e-002 m	5.5999e-002 m	0.10214 m
Length Z	1.108e-002 m					9.185e-003 m
Properties						
Volume	4.6535e-006 m³		7.2973e-006 m³	4.5915e-006 m³	7.2973e-006 m³	4.5915e-006 m³	7.4113e-005 m³
Mass	8.1902e-003 kg		1.2843e-002 kg	8.081e-003 kg	1.2843e-002 kg	8.081e-003 kg	0.12255 kg
Centroid X	0.10065 m	8.0327e-002 m	6.0006e-002 m	3.9681e-002 m	1.9366e-002 m	-9.5399e-004 m	-8.5753e-002 m
Centroid Y	0.16789 m		0.15139 m	0.16789 m	0.15139 m	0.16789 m	0.10549 m
Centroid Z	9.7451e-003 m						1.0693e-002 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	1.074e-004 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	6.4595e-005 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	1.7027e-004 kg·m²
Statistics						
Nodes	127		184	127	184	127	714
Elements	12		18	12	18	12	88
Mesh Metric	None					
CAD Attributes						
PartTolerance:	0.00000001					
Color:143.175.143						

Big

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

Object Name	*Board\Board*	*Sink\Sink*	*PSK\Solid1*
State	Hidden		
Graphics Properties			
Visible	No		
Transparency	1		
Definition			
Suppressed	No		
Stiffness Behavior	Flexible		
Coordinate System	Default Coordinate System		
Reference Temperature	By Environment		
Treatment	None		
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	3.847e-002 m
Properties			
Volume	1.2466e-004 m^3	1.678e-004 m^3	5.2225e-004 m^3
Mass	0.91003 kg	0.27745 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	1.2126e-004 m
Moment of Inertia Ip1	4.8752e-003 $kg \cdot m^2$	2.0414e-004 $kg \cdot m^2$	2.4675e-003 $kg \cdot m^2$
Moment of Inertia Ip2	7.1721e-003 $kg \cdot m^2$	1.3733e-004 $kg \cdot m^2$	4.7089e-004 $kg \cdot m^2$
Moment of Inertia Ip3	1.2047e-002 $kg \cdot m^2$	3.1326e-004 $kg \cdot m^2$	2.8016e-003 $kg \cdot m^2$
Statistics			
Nodes	2807	379	3149
Elements	1307	52	1550
Mesh Metric	None		
CAD Attributes			
PartTolerance:	0.00000001		
Color:143.143.175			
Color:143.175.143			

Biggest

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

Object Name	*Plate\Plate*
State	Hidden
Graphics Properties	
Visible	No
Transparency	1
Definition	
Suppressed	No
Stiffness Behavior	Flexible
Coordinate System	Default Coordinate System
Reference Temperature	By Environment
Treatment	None
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 18
Model (A4, B4) > Materials

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

Coordinate Systems

TABLE 19
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 20
Model (A4, B4) > Connections

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

TABLE 21
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	289
Active Connections	289

TABLE 22
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 eometry orrection	None
Target eometry orrection	None

TABLE 23
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-ounting-ar\Right-ounting-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 24
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 25
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 26
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										
pping 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		
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 Mode	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 27
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	Screw
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 28
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	

w10\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 29
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 30
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 N 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 31
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-8\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 32
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 Regio 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 33
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 34
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 35
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 36
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*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*	*Contact Region 165*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	1 Face										
Target	1 Face					2 Faces		5 Faces	2 Faces		5 Faces
Contact Bodies	Board\Board										
Target Bodies	PCI-Slots\PCI-4	PCI-Slots\PCI-5	PCI-Slots\PCI-6	PCI-Slots\PCI-7	Base\Base	DIMM-Slot-1\Clip-1a	DIMM-Slot-1\Clip-1b	DIMM-Slot-1\Slot-1	DIMM-Slot-2\Clip-2a	DIMM-Slot-2\Clip-2b	DIMM-Slot-2\Slot-2
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 37
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 166*	*Contact Region 167*	*Contact Region 168*	*Contact Region 169*	*Contact Region 170*	*Contact Region 171*	*Contact Region 172*	*Contact Region 173*	*Contact Region 174*	*Contact Region 175*	*Contact Region 176*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	1 Face										
Target	2 Faces		5 Faces	2 Faces		5 Faces	2 Faces		5 Faces	2 Faces	
Contact Bodies	Board\Board										
Target Bodies	DIMM-Slot-3\Clip-3a	DIMM-Slot-3\Clip-3b	DIMM-Slot-3\Slot-3	DIMM-Slot-4\Clip-4a	DIMM-Slot-4\Clip-4b	DIMM-Slot-4\Slot-4	DIMM-Slot-5\Clip-5a	DIMM-Slot-5\Clip-5b	DIMM-Slot-5\Slot-5	DIMM-Slot-6\Clip-6a	DIMM-Slot-6\Clip-6b
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 38
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	5 Faces	2 Faces		5 Faces	2 Faces		5 Faces	1 Face			
Contact Bodies	Board\Board										
Target Bodies	DIMM-Slot-6\Slot-6	DIMM-Slot-7\Clip-7a	DIMM-Slot-7\Clip-7b	DIMM-Slot-7\Slot-7	DIMM-Slot-8\Clip-8a	DIMM-Slot-8\Clip-8b	DIMM-Slot-8\Slot-8	PEM-Fastener-1\PEM-Fastener-1	PEM-Fastener-2\PEM-Fastener-2	PEM-Fastener-3\PEM-Fastener-3	PEM-Fastener-4\PEM-Fastener-4
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 39
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	1 Face										
Contact Bodies	Board\Board										
Target Bodies	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	Screw-4\Screw-4	Screw-5\Screw-5	Screw-6\Screw-6	Screw-7\Screw-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 40
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				16 Faces	1 Face	24 Faces	16 Faces	1 Face	14 Faces	1 Face
Target	1 Face	2 Faces	1 Face		5 Faces	1 Face	14 Faces	5 Faces	1 Face	10 Faces	1 Face

Contact Bodies	Board\Board			Sink\Sink	DIMM-Slot-1\Clip-1a			DIMM-Slot-1\Clip-1b			DIMM-Slot-1\Slot-1
Target Bodies	Screw-8\Screw-8	Nut-1\Nut-1	Standoff-1\Standoff-1	Base\Base	DIMM-Slot-1\Slot-1	DIMM-Slot-2\Clip-2a	DIMM-Stick-1\Stick-1	DIMM-Slot-1\Slot-1	DIMM-Slot-2\Clip-2b	DIMM-Stick-1\Stick-1	DIMM-Slot-2\Slot-2
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 41
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 210*	*Contact Region 211*	*Contact Region 212*	*Contact Region 213*	*Contact Region 214*	*Contact Region 215*	*Contact Region 216*	*Contact Region 217*	*Contact Region 218*	*Contact Region 219*	*Contact Region 220*
State	Fully Defined										

Scope											
Scoping Method	Geometry Selection										
Contact	16 Faces		1 Face	24 Faces	16 Faces	1 Face	14 Faces	1 Face	16 Faces		1 Face
Target	342 Faces	5 Faces	1 Face	14 Faces	5 Faces	1 Face	10 Faces	1 Face	342 Faces	5 Faces	1 Face
Contact Bodies	DIMM-Slot-1\Slot-1	DIMM-Slot-2\Clip-2a			DIMM-Slot-2\Clip-2b			DIMM-Slot-2\Slot-2		DIMM-Slot-3\Clip-3a	
Target Bodies	DIMM-Stick-1\Stick-1	DIMM-Slot-2\Slot-2	DIMM-Slot-3\Clip-3a	DIMM-Stick-2\Stick-2	DIMM-Slot-2\Slot-2	DIMM-Slot-3\Clip-3b	DIMM-Stick-2\Stick-2	DIMM-Slot-3\Slot-3	DIMM-Stick-2\Stick-2	DIMM-Slot-3\Slot-3	DIMM-Slot-4\Clip-4a
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 42
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 221*	*Contact Region 222*	*Contact Region 223*	*Contact Region 224*	*Contact Region 225*	*Contact Region 226*	*Contact Region 227*	*Contact Region 228*	*Contact Region 229*	*Contact Region 230*	*Contact Region 231*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	24 Faces	16 Faces	1 Face	14 Faces	1 Face	16 Faces		24 Faces	16 Faces	14 Faces	16 Faces
Target	14 Faces	5 Faces	1 Face	10 Faces	1 Face	342 Faces	5 Faces	14 Faces	5 Faces	10 Faces	342 Faces
Contact Bodies	DIMM-Slot-3\Clip-3a	DIMM-Slot-3\Clip-3b			DIMM-Slot-3\Slot-3		DIMM-Slot-4\Clip-4a		DIMM-Slot-4\Clip-4b		DIMM-Slot-4\Slot-4
Target Bodies	DIMM-Stick-3\Stick-3	DIMM-Slot-3\Slot-3	DIMM-Slot-4\Clip-4b	DIMM-Stick-3\Stick-3	DIMM-Slot-4\Slot-4	DIMM-Stick-3\Stick-3	DIMM-Slot-4\Slot-4	DIMM-Stick-4\Stick-4	DIMM-Slot-4\Slot-4	DIMM-Stick-4\Stick-4	
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 43
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 232*	*Contact Region 233*	*Contact Region 234*	*Contact Region 235*	*Contact Region 236*	*Contact Region 237*	*Contact Region 238*	*Contact Region 239*	*Contact Region 240*	*Contact Region 241*	*Contact Region 242*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	16 Faces	1 Face	24 Faces	16 Faces	1 Face	17 Faces	1 Face	17 Faces	16 Faces	1 Face	24 Faces
Target	5 Faces	1 Face	14 Faces	5 Faces	1 Face	11 Faces	1 Face	345 Faces	5 Faces	1 Face	14 Faces
Contact Bodies	DIMM-Slot-5\Clip-5a			DIMM-Slot-5\Clip-5b			DIMM-Slot-5\Slot-5		DIMM-Slot-6\Clip-6a		
Target Bodies	DIMM-Slot-5\Slot-5	DIMM-Slot-6\Clip-6a	DIMM-Stick-5\Stick-5	DIMM-Slot-5\Slot-5	DIMM-Slot-6\Clip-6b	DIMM-Stick-5\Stick-5	DIMM-Slot-6\Slot-6	DIMM-Stick-5\Stick-5	DIMM-Slot-6\Slot-6	DIMM-Slot-7\Clip-7a	DIMM-Stick-6\Stick-6
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 243*	*Contact Region 244*	*Contact Region 245*	*Contact Region 246*	*Contact Region 247*	*Contact Region 248*	*Contact Region 249*	*Contact Region 250*	*Contact Region 251*	*Contact Region 252*	*Contact Region 253*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	16 Faces	1 Face	17 Faces	1 Face	17 Faces	16 Faces	1 Face	24 Faces	16 Faces	1 Face	17 Faces
Target	5 Faces	1 Face	11 Faces	1 Face	345 Faces	5 Faces	1 Face	14 Faces	5 Faces	1 Face	11 Faces
Contact Bodies	DIMM-Slot-6\Clip-6b			DIMM-Slot-6\Slot-6		DIMM-Slot-7\Clip-7a			DIMM-Slot-7\Clip-7b		
Target Bodies	DIMM-Slot-6\Slot-6	DIMM-Slot-7\Clip-7b	DIMM-Stick-6\Stick-6	DIMM-Slot-7\Slot-7	DIMM-Stick-6\Stick-6	DIMM-Slot-7\Slot-7	DIMM-Slot-8\Clip-8b	DIMM-Stick-7\Stick-7	DIMM-Slot-7\Slot-7	DIMM-Slot-8\Clip-8a	DIMM-Stick-7\Stick-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 254*	*Contact Region 255*	*Contact Region 256*	*Contact Region 257*	*Contact Region 258*	*Contact Region 259*	*Contact Region 260*	*Contact Region 261*	*Contact Region 262*	*Contact Region 263*	*Contact Region 264*
State	Fully Defined										
Scope											
Scoping Method	Geometry Selection										
Contact	1 Face	17 Faces	16 Faces	17 Faces	16 Faces	24 Faces	17 Faces	1 Face	2 Faces		
Target	1 Face	345 Faces	5 Faces	11 Faces	5 Faces	14 Faces	345 Faces	1 Face	9 Faces		
Contact Bodies	DIMM-Slot-7\Slot-7		DIMM-Slot-8\Clip-8a		DIMM-Slot-8\Clip-8b		DIMM-Slot-8\Slot-8	PSK\Solid1	Plate\Plate		
Target Bodies	DIMM-Slot-8\Slot-8	DIMM-Stick-7\Stick-7	DIMM-Slot-8\Slot-8	DIMM-Stick-8\Stick-8	DIMM-Slot-8\Slot-8	DIMM-Stick-8\Stick-8		Plate\Plate	PEM-Fastener-1\PEM-Fastener-1	PEM-Fastener-2\PEM-Fastener-2	PEM-Fastener-3\PEM-Fastener-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 46
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 265*	*Contact Region 266*	*Contact Region 267*	*Contact Region 268*	*Contact Region 269*	*Contact Region 270*	*Contact Region 271*	*Contact Region 272*	*Contact Region 273*	*Contact Region 274*	*Contact Region 275*
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-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	Screw-4\Screw-4	Screw-5\Screw-5	Screw-6\Screw-6
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 47
Model (A4, B4) > Connections > Contacts > Contact Regions

Object Name	*Contact Region 276*	*Contact Region 277*	*Contact Region 278*	*Contact Region 279*	*Contact Region 280*	*Contact Region 281*	*Contact Region 282*	*Contact Region 283*	*Contact Region 284*	*Contact Region 285*	*Contact Region 286*
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	PEM-Fastener-5\PEM-Fastener-5	PEM-Fastener-6\PEM-Fastener-6	PEM-Fastener-7\PEM-Fastener-7
Target Bodies	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	Screw-6\Screw-6	Screw-2\Screw-2	Screw-5\Screw-5

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

Object Name	*Contact Region 287*	*Contact Region 288*	*Contact Region 289*
State	Fully Defined		
Scope			
Scoping Method	Geometry Selection		
Contact	2 Faces		1 Face
Target	2 Faces	4 Faces	1 Face
Contact Bodies	PEM-Fastener-8\PEM-Fastener-8	Screw-9\Screw-9	
Target Bodies	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 49
Model (A4, B4) > Mesh

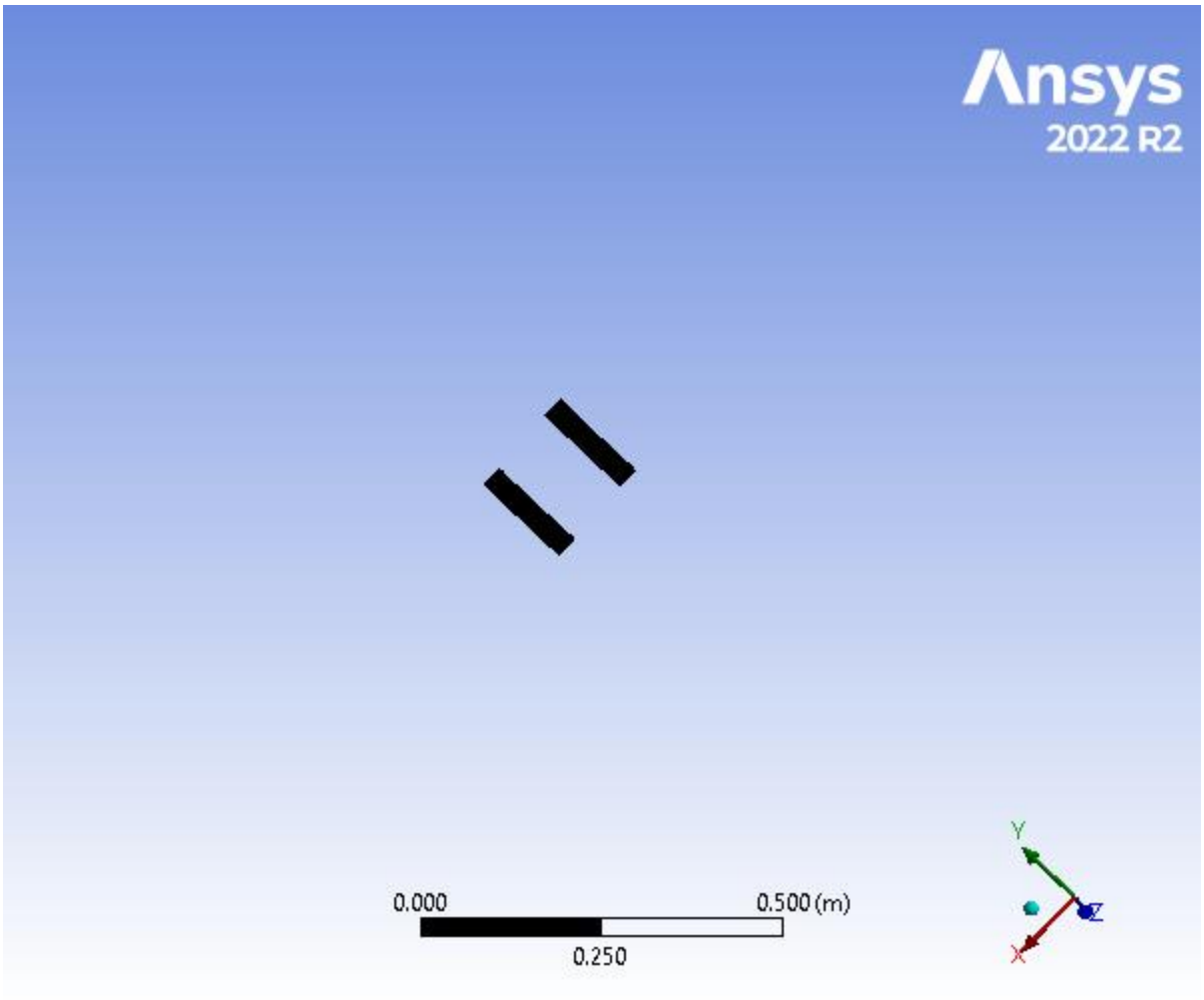
Object Name	*Mesh*
State	Solved
Display	
Display Style	Use Geometry Setting
Defaults	
Physics Preference	Mechanical
Element Order	Program Controlled
Element Size	Default
Sizing	
Use Adaptive Sizing	Yes
Resolution	Default (2)
Mesh Defeaturing	Yes
Defeature Size	Default
Transition	Fast
Span Angle Center	Coarse
Initial Size Seed	Assembly
Bounding Box Diagonal	0.73564 m
Average Surface Area	1.6021e-004 m²
Minimum Edge Length	1.2136e-005 m
Quality	

Check Mesh Quality	Yes, Errors
Error Limits	Aggressive Mechanical
Target Element Quality	Default (5.e-002)
Smoothing	Medium
Mesh Metric	None
Inflation	
Use Automatic Inflation	None
Inflation Option	Smooth Transition
Transition Ratio	0.272
Maximum Layers	5
Growth Rate	1.2
Inflation Algorithm	Pre
View Advanced Options	No
Advanced	
Number of CPUs for Parallel Part Meshing	Program Controlled
Straight Sided Elements	No
Rigid Body Behavior	Dimensionally Reduced
Triangle Surface Mesher	Program Controlled
Topology Checking	Yes
Pinch Tolerance	Please Define
Generate Pinch on Refresh	No
Statistics	
Nodes	386311
Elements	193691

TABLE 50
Model (A4, B4) > Mesh > Mesh Controls

Object Name	*Smallest*	*Small*	*Medium*	*Big*	*Biggest*
State	Fully Defined				
Scope					
Scoping Method	Geometry Selection				
Geometry	1387 Faces	6256 Faces	634 Faces	66 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				

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



Named Selections

TABLE 51
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 52
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 53
Model (A4, B4) > Modal (A5) > Initial Condition

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

TABLE 54
Model (A4, B4) > Modal (A5) > Analysis Settings

e	*Analysis Settings*
e	Fully Defined
Options	
o d	15
h e	No
d n	No
Solver Controls	
d	No
e	Program Controlled
Rotordynamics Controls	
ct	Off
ll n	Off
Advanced	
it ?)	Off
Output Controls	
s	Yes
e s	No
s	No
n	Yes
a	No

s	Constrained Nodes
d y	No
s	No
e s	Yes
al s	Program Controlled
al s	No
e n	Program Controlled
Analysis Data Management	
s y	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\assembly_simplified_10_project_fi 1\MECH\
e s	MSUP Analyses
h s y	
L b	Yes
ct y	Program Controlled
e d s	Yes
s	Active System
it n	mks

TABLE 55
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 56
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	6 m 51 s
MAPDL Memory Used	5.7803 GB
MAPDL Result File Size	1017.1 MB
Post Processing	
Beam Section Results	No

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

FIGURE 2
Model (A4, B4) > Modal (A5) > Solution (A6)

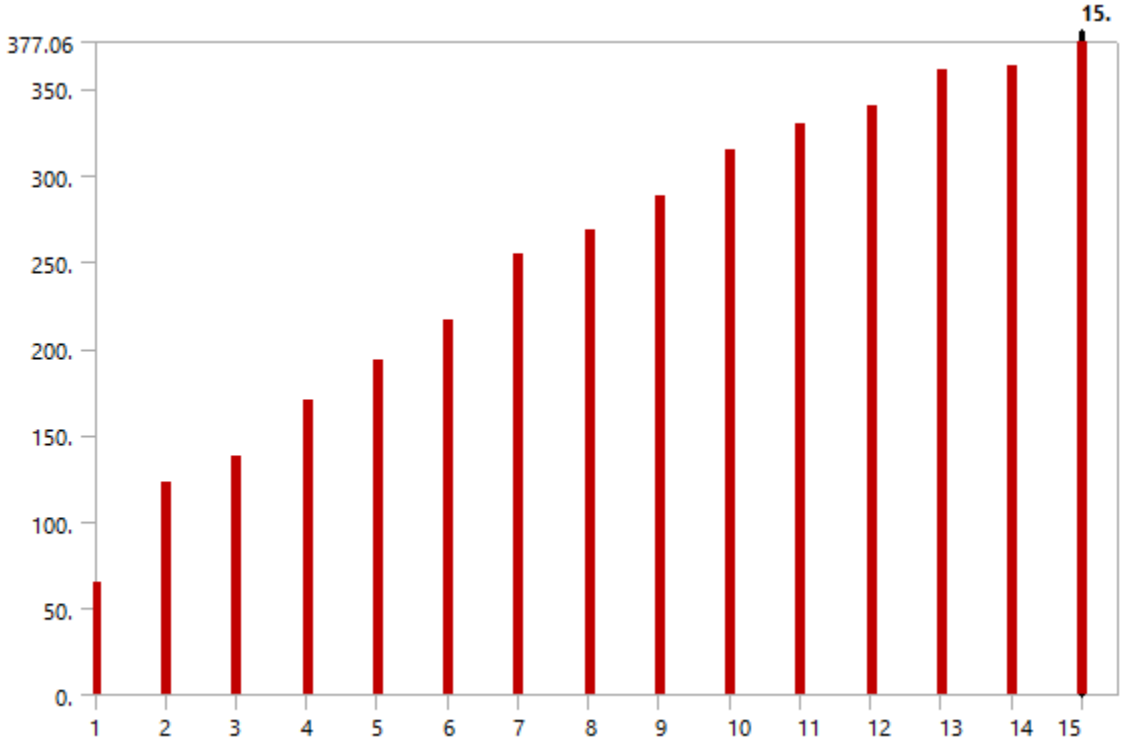


TABLE 57
Model (A4, B4) > Modal (A5) > Solution (A6)

Mode	Frequency [Hz]
1.	65.062
2.	122.1
3.	137.37
4.	170.56
5.	192.99
6.	215.95
7.	254.77
8.	267.84
9.	287.61

10.	314.53
11.	329.52
12.	340.6
13.	361.12
14.	363.44
15.	377.06

TABLE 58
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

Harmonic Response (B5)

TABLE 59
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 60
Model (A4, B4) > Harmonic Response (B5) > Initial Condition

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

TABLE 61
Model (A4, B4) > Harmonic Response (B5) > Analysis Settings

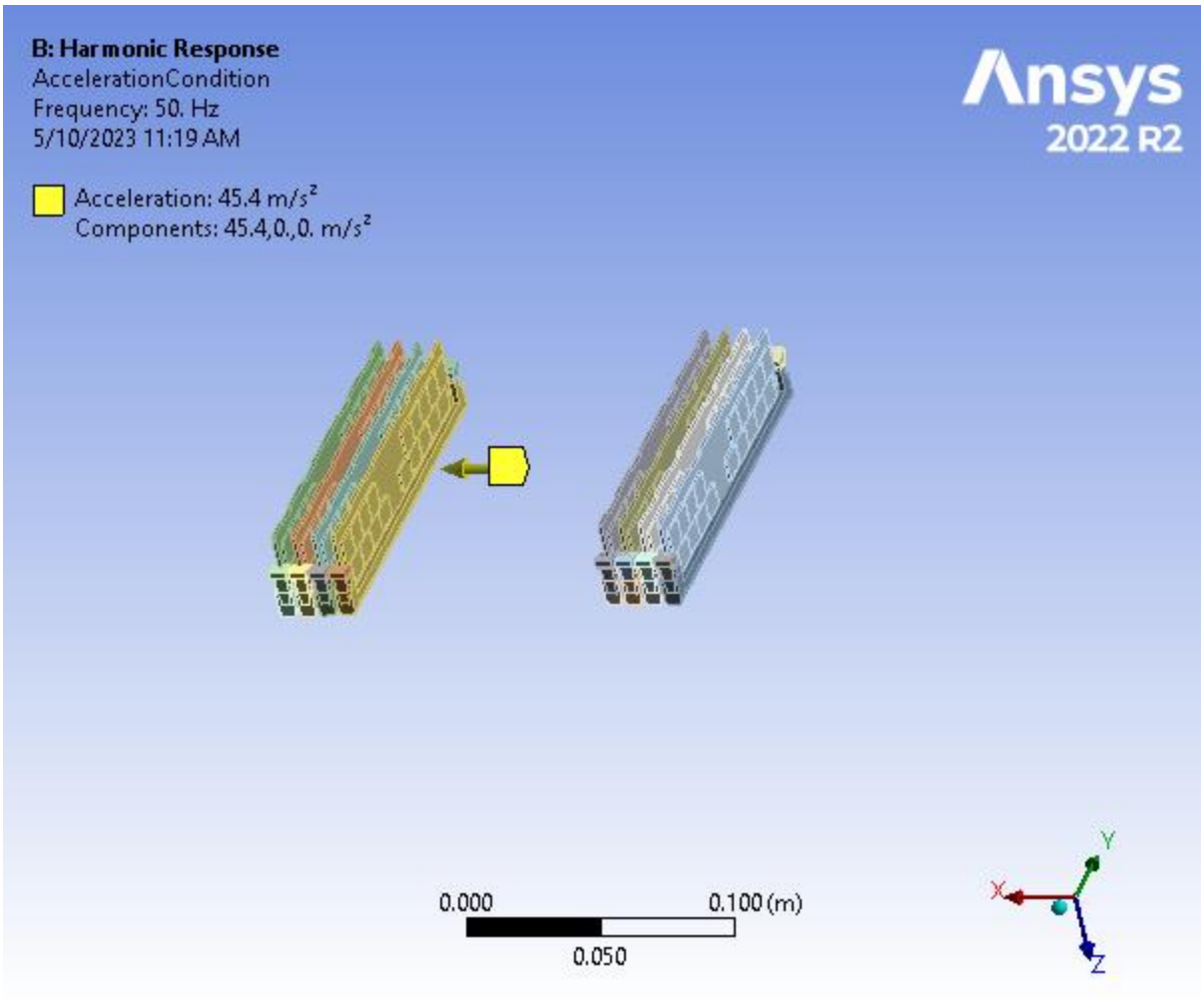
e	*Analysis Settings*
e	Fully Defined
	Step Controls
s	No
	Options
y g	Linear
e n	50. Hz
e n	100. Hz
n s	50
d s	Off
n d	Mode Superposition
e al r	No
r s	No
d n	No
s ll s	Yes
	Rotordynamics Controls
t	Off
	Output Controls
s	Yes
e s	No
s	No
n	Yes
a	Yes
s	No
d y	Yes
s	Yes
e s	Yes
al s	No
d n	Program Controlled
n	Modal Solution
e n	Program Controlled

Damping Controls	
g n al	No
g y	Damping Ratio
g o	2.e-002
s nt y	Direct Input
s nt	0.
s nt	0.
Analysis Data Management	
s y	\\iowa.uiowa.edu\shared\Engineering\Home\makaufman\windowsdata\Desktop\ASSEMBLIES_FINAL\assembly_simplified_10_project_fi 2\MECH\
e s	None
h s y	
L b	No
ct y	Program Controlled
e d s	Yes
s	Active System
it n	mks

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

Object Name	*Acceleration*
State	Fully Defined
Scope	
Geometry	All Bodies
Definition	
Base Excitation	No
Define By	Components
Coordinate System	Global Coordinate System
X Component	45.4 m/s²
Y Component	0. m/s²
Z Component	0. m/s²
Suppressed	No

FIGURE 3
Model (A4, B4) > Harmonic Response (B5) > Acceleration > AccelerationCondition



Solution (B6)

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

Object Name	*Solution (B6)*
State	Solved
Information	
Status	Done
MAPDL Elapsed Time	11 m 25 s
MAPDL Memory Used	4.0957 GB
MAPDL Result File Size	10.588 GB
Post Processing	
Beam Section Results	No

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

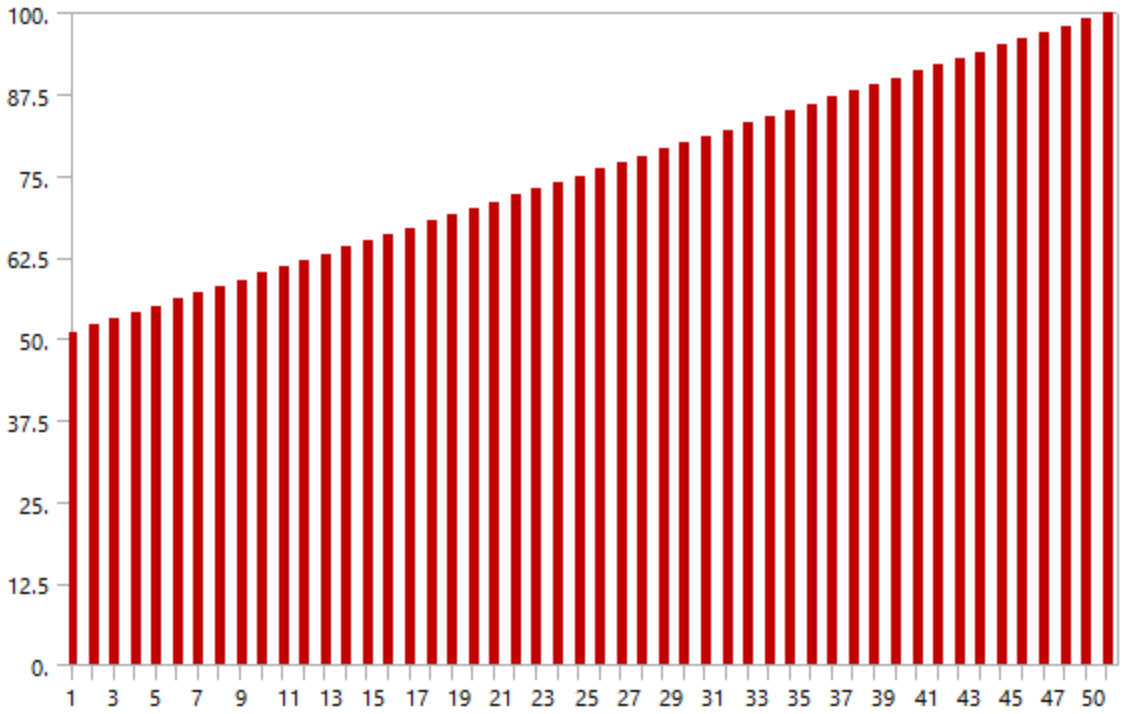


TABLE 64
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Solution Information

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 65
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				
50. Hz				
100. Hz				
Bode				
Log Y				
Results				
0.97153 m/s²	0.98632 m/s²	18.485 m/s²	4.712e-006 m	5.9133
100. Hz	65. Hz		66. Hz	
-2.1886 °	89.292 °	-82.66 °	-143.82 °	-90.
0.97082 m/s²	1.218e-002 m/s²	2.3617 m/s²	-3.8033e-006 m	-7.3025
7101e-002 m/s²	0.98624 m/s²	-18.333 m/s²	-2.7817e-006 m	-5.9129

FIGURE 5
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1x

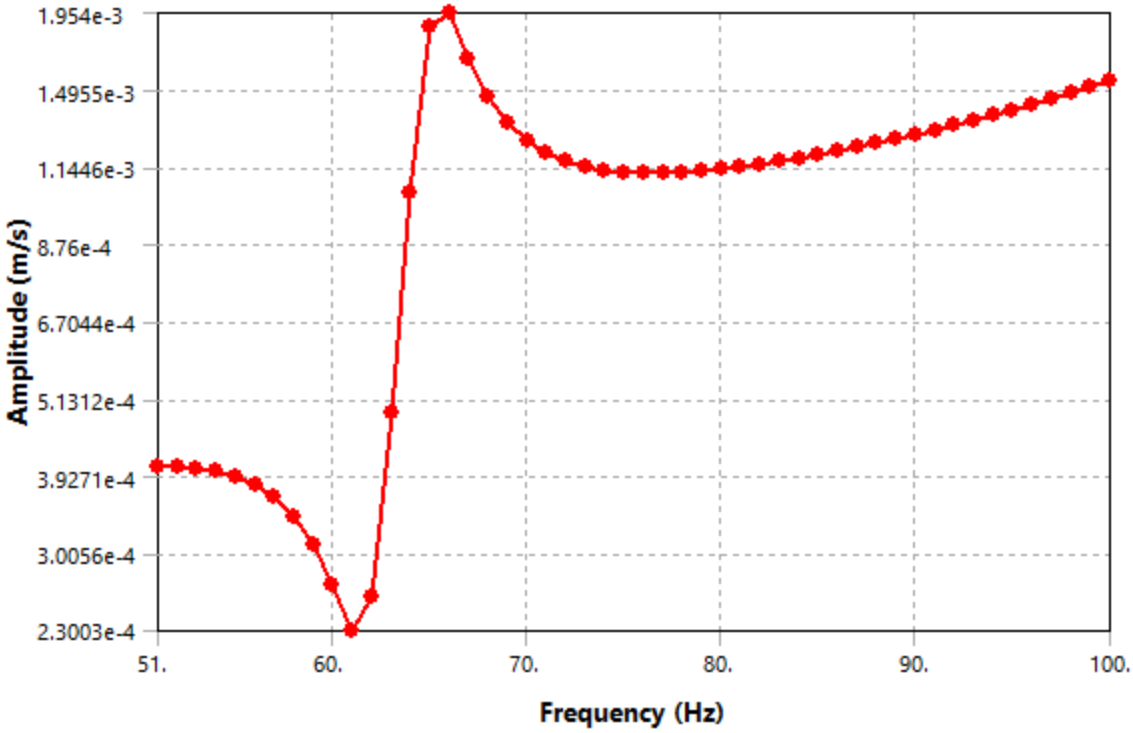


FIGURE 6
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1y

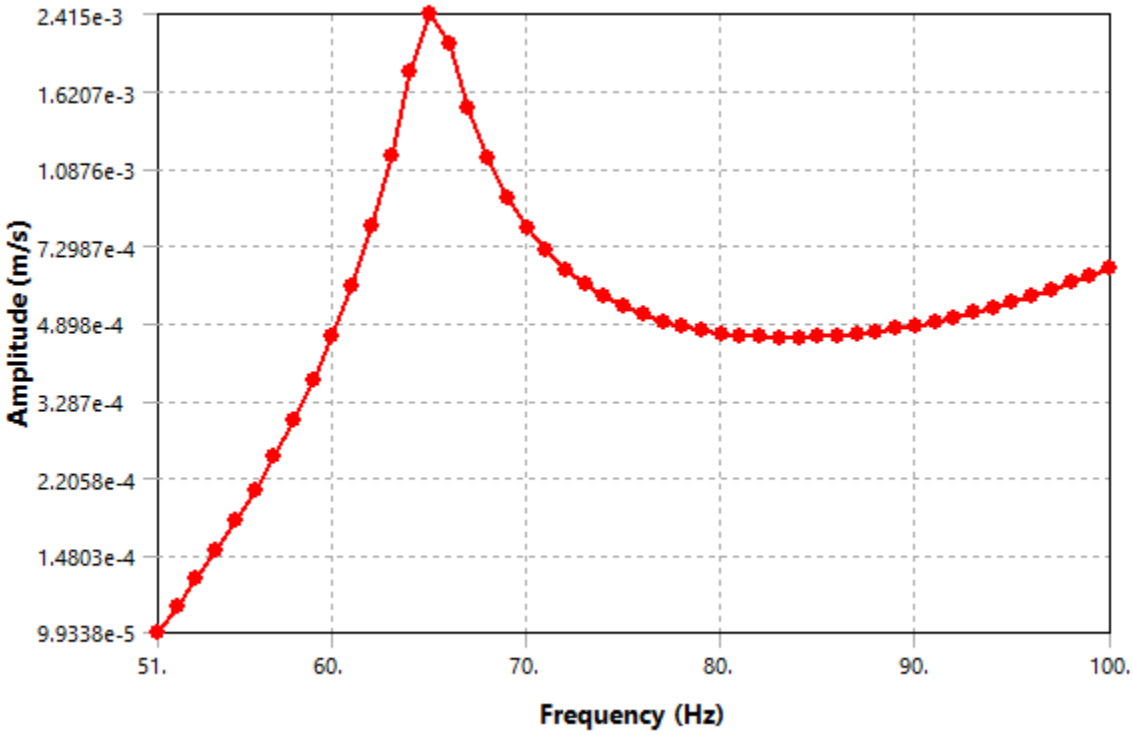


FIGURE 7
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM1z

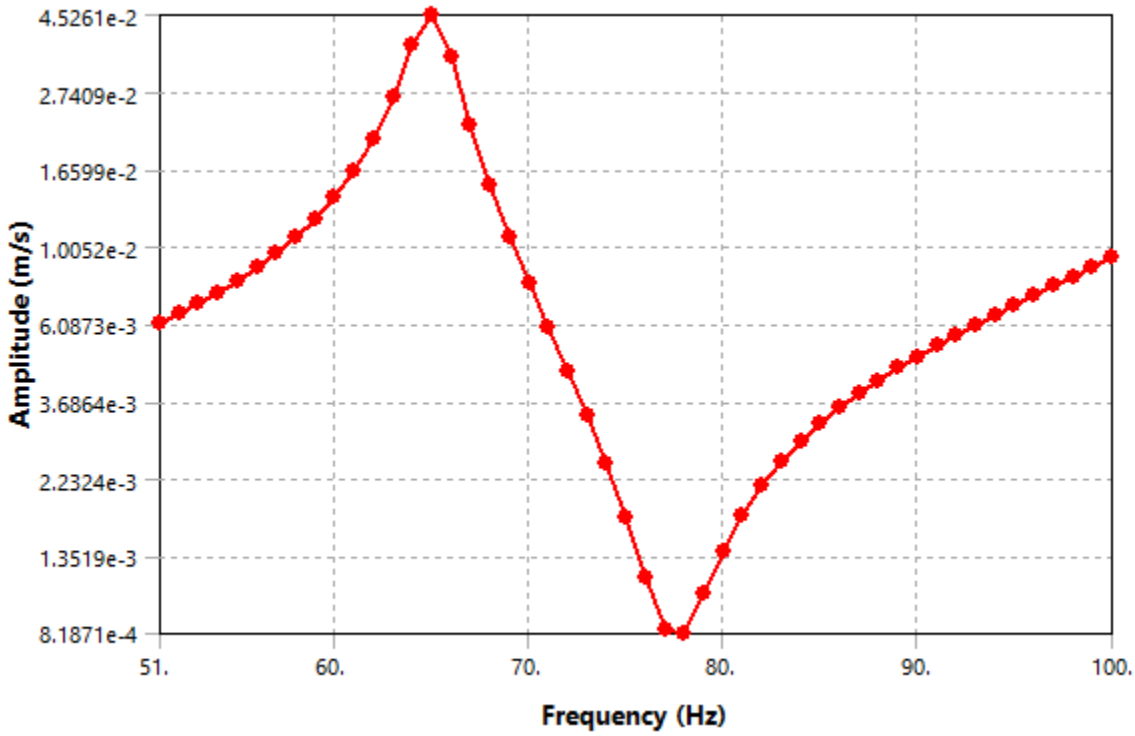


FIGURE 8
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1x

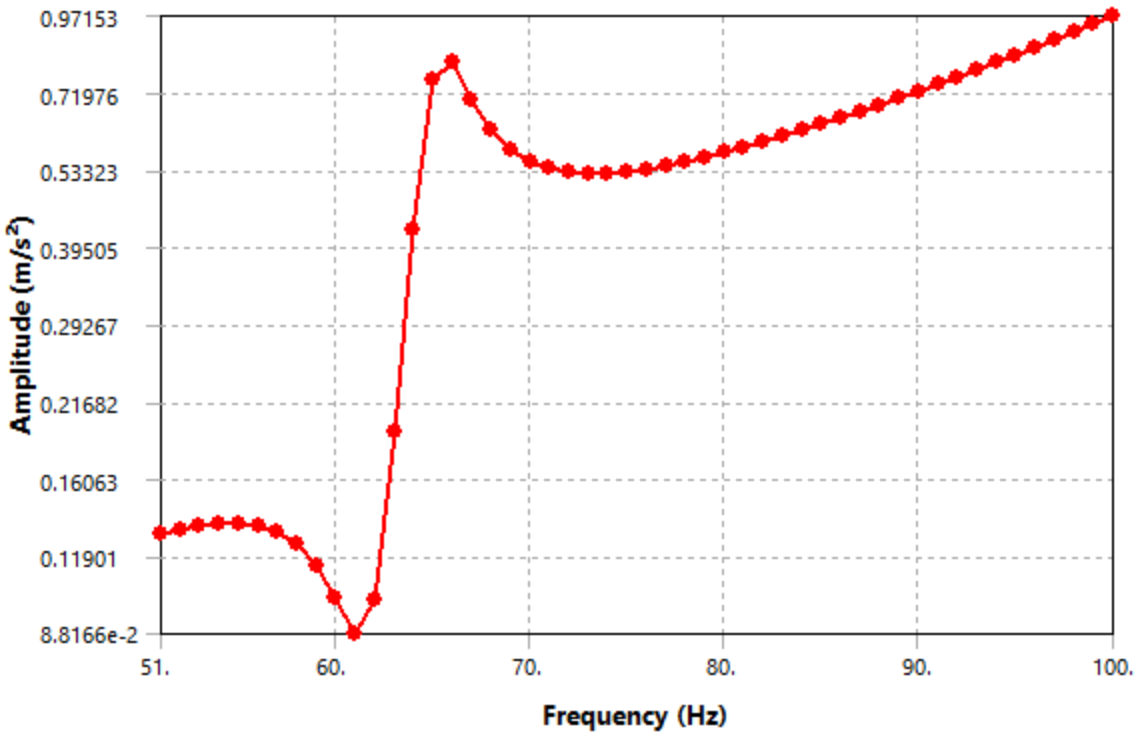


FIGURE 9
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1y

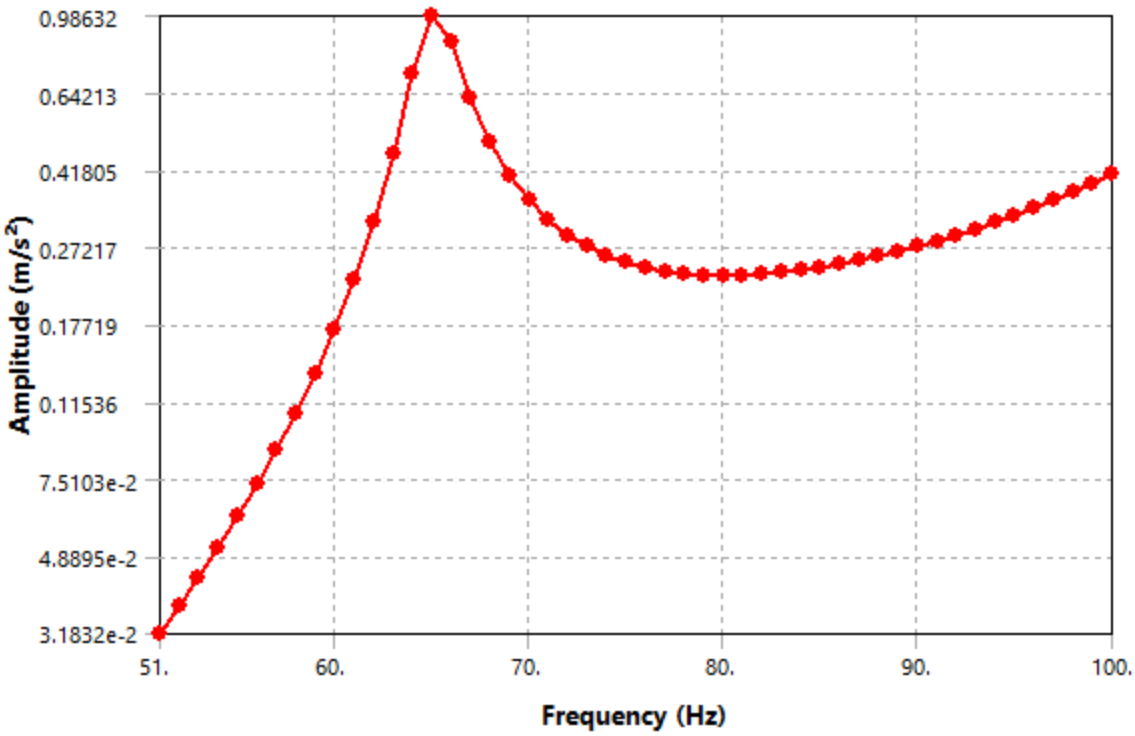


FIGURE 10
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM1z

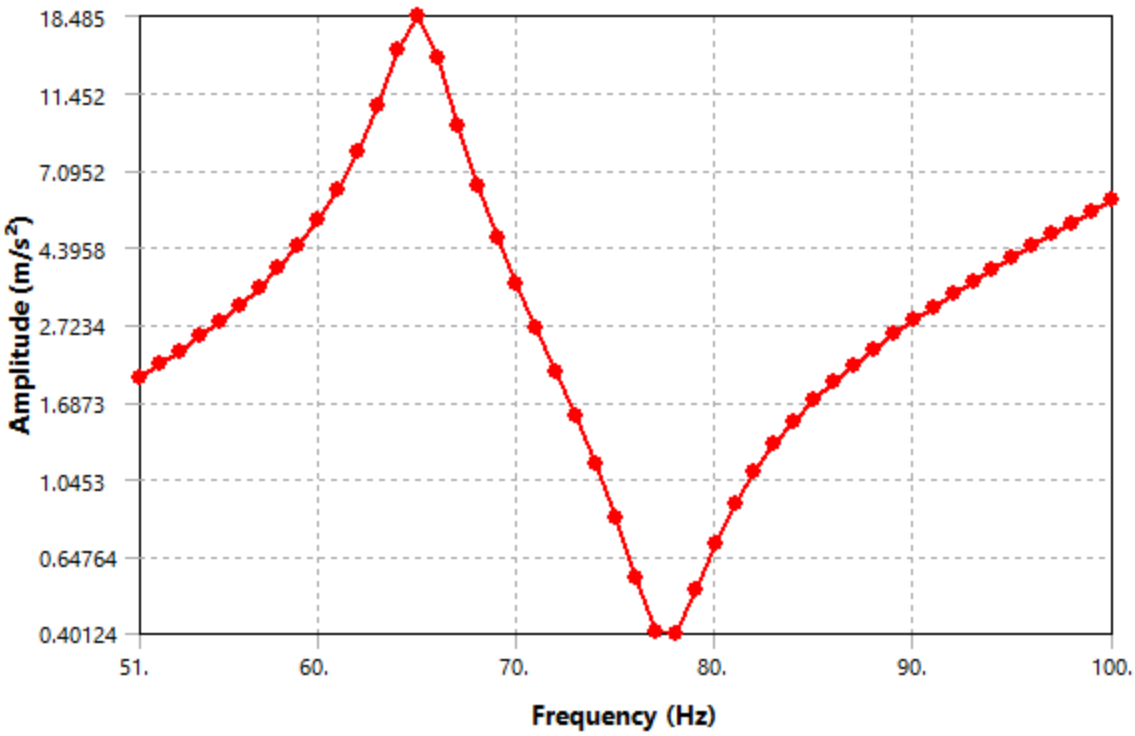


FIGURE 11
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM1x

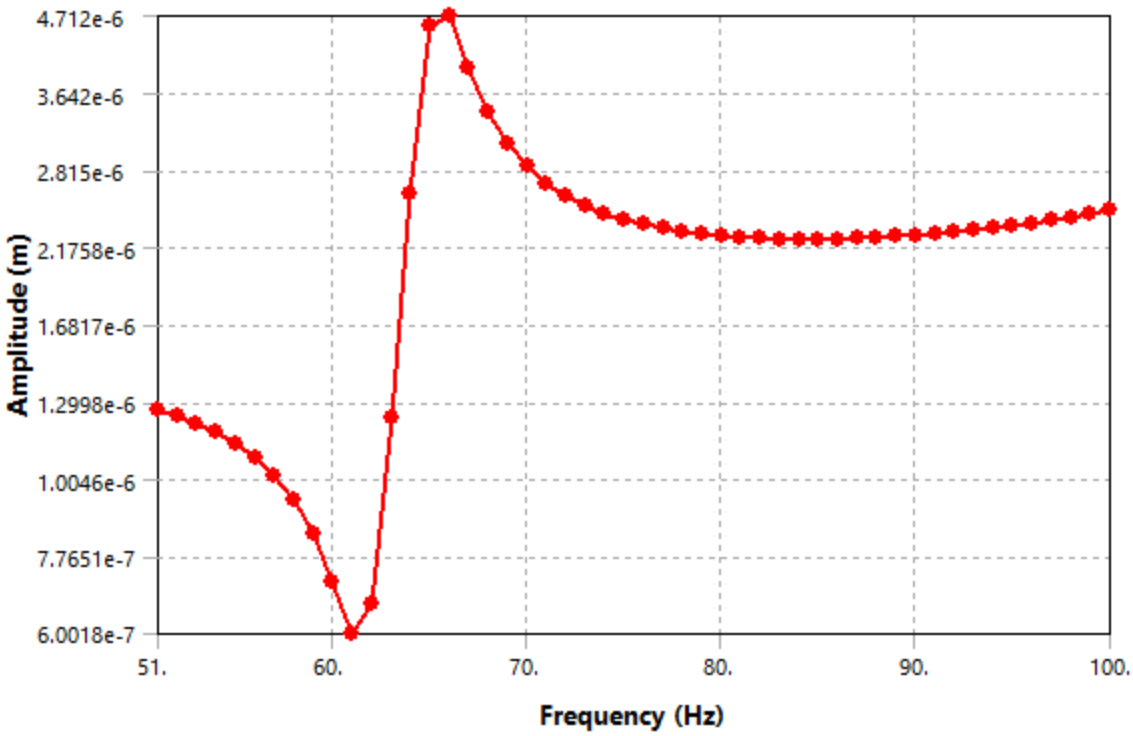


FIGURE 12
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM1y

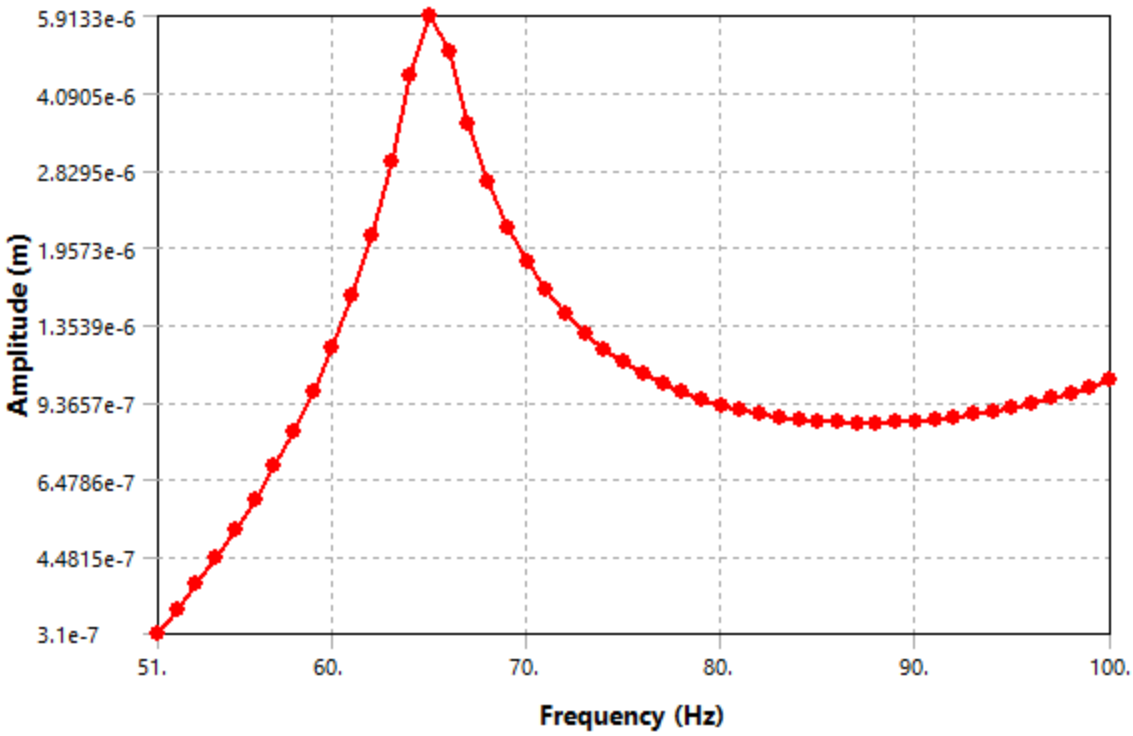


FIGURE 13
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM1z

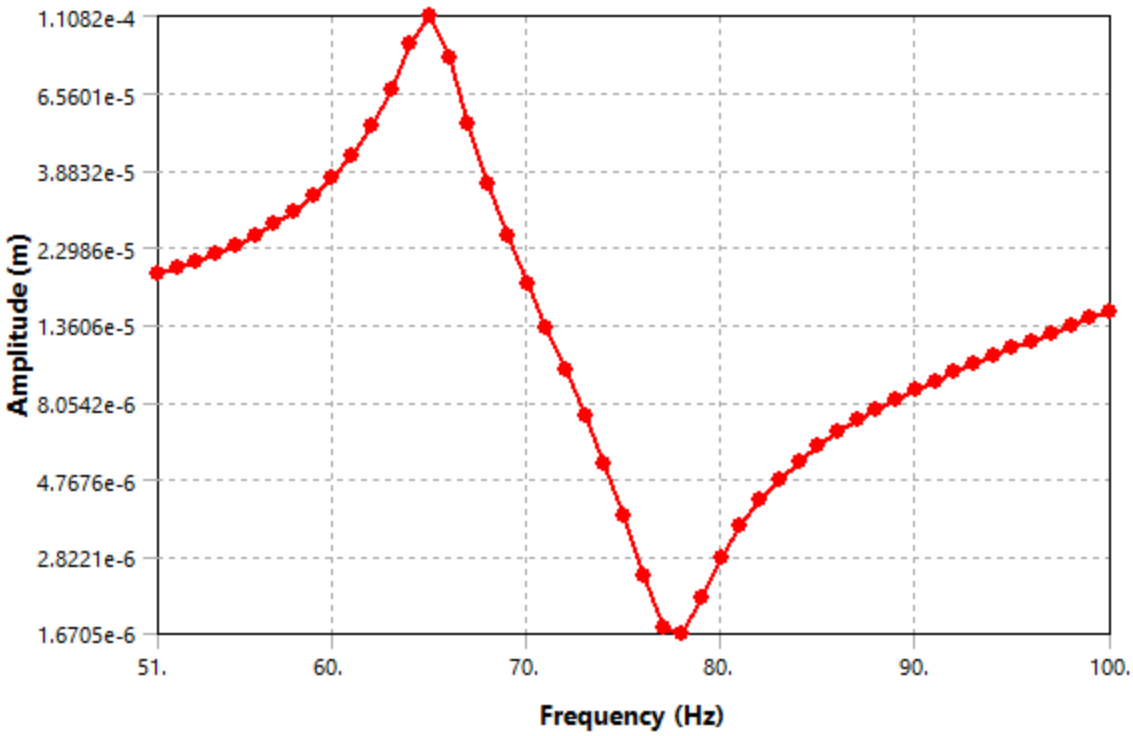


FIGURE 14
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2x

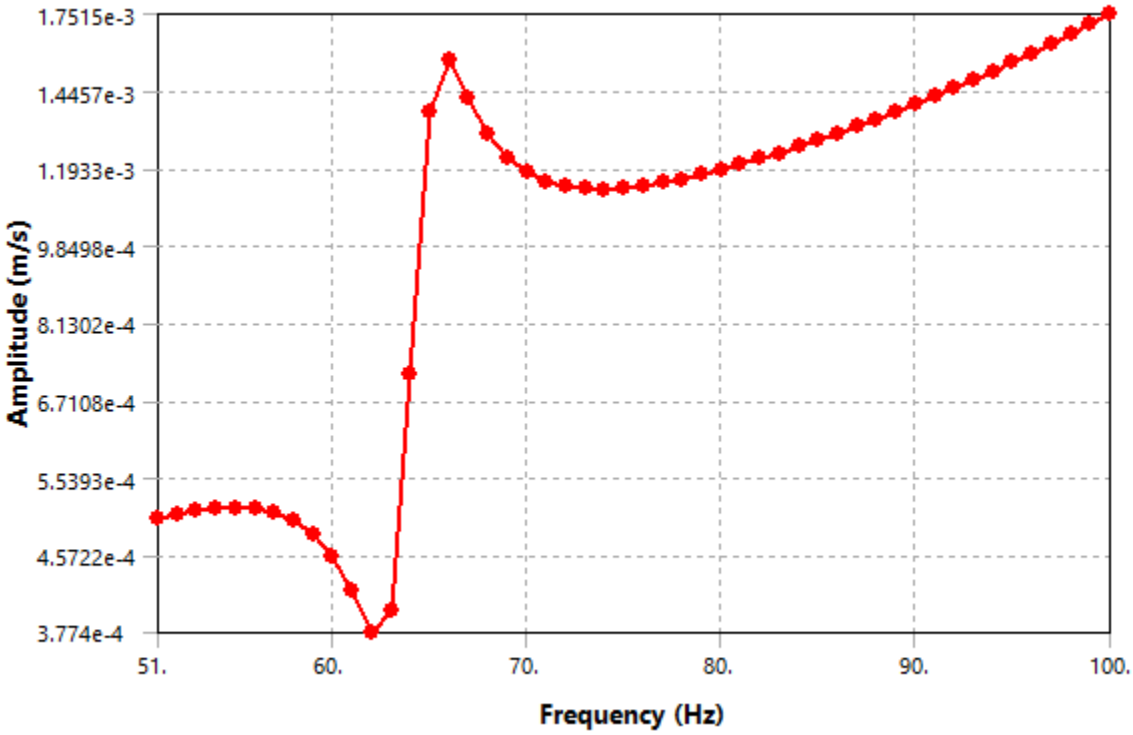


FIGURE 15
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2y

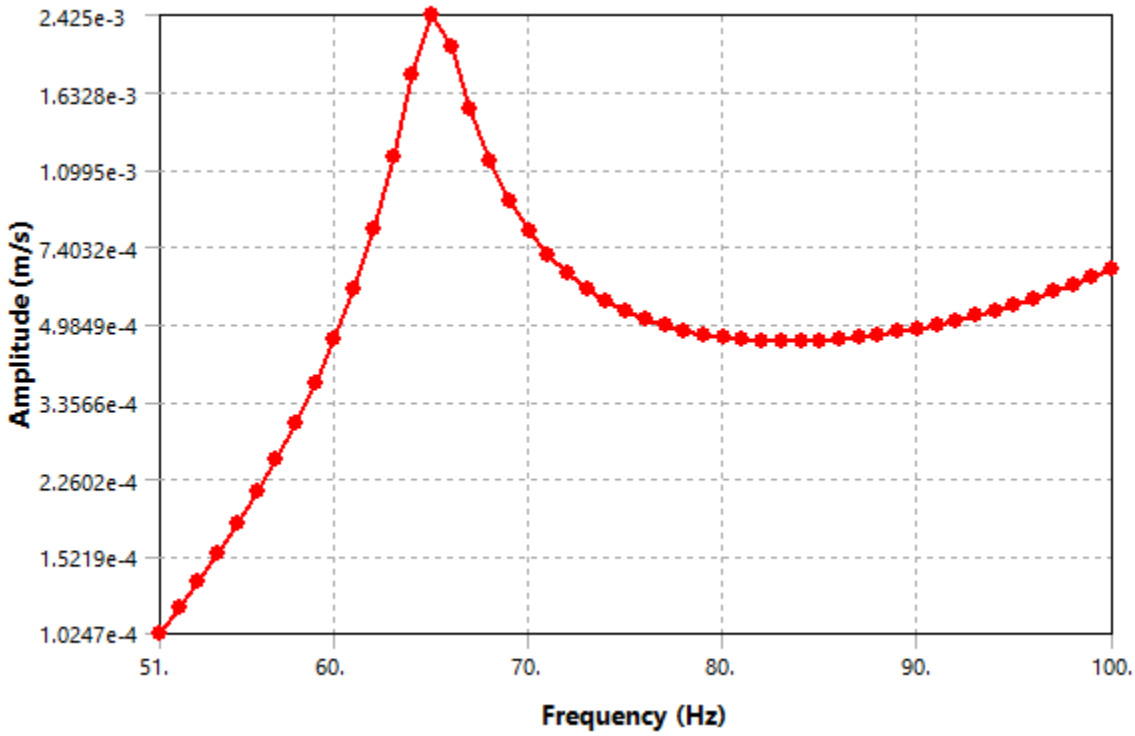


TABLE 66
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

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
50. Hz
100. Hz
Bode
Log Y

Results				
18.791 m/s²	3.772e-006 m	5.9376e-006 m	1.1266e-004 m	1.891
	66. Hz	65. Hz		1
-83.139 °	-151.02 °	-90.644 °	96.861 °	-9
2.2448 m/s²	-3.2998e-006 m	-6.6769e-008 m	-1.3459e-005 m	-1.040
-18.656 m/s²	-1.8275e-006 m	-5.9372e-006 m	1.1185e-004 m	-1.888

FIGURE 16
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM2z

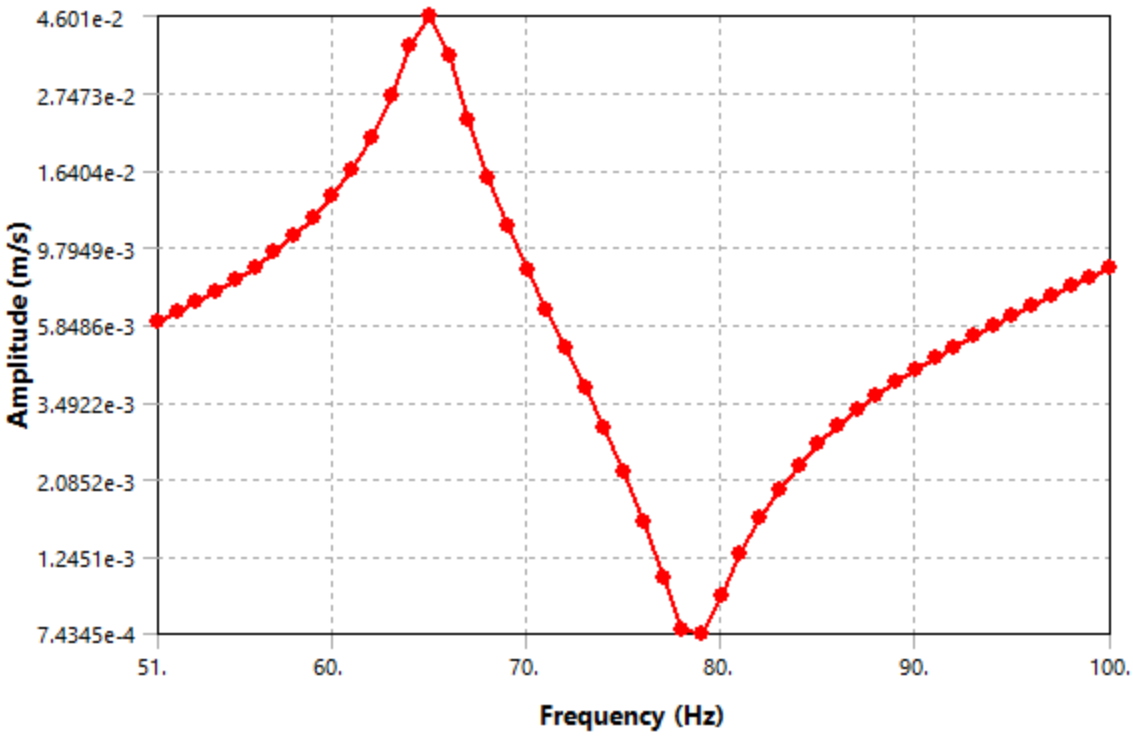


FIGURE 17
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2x

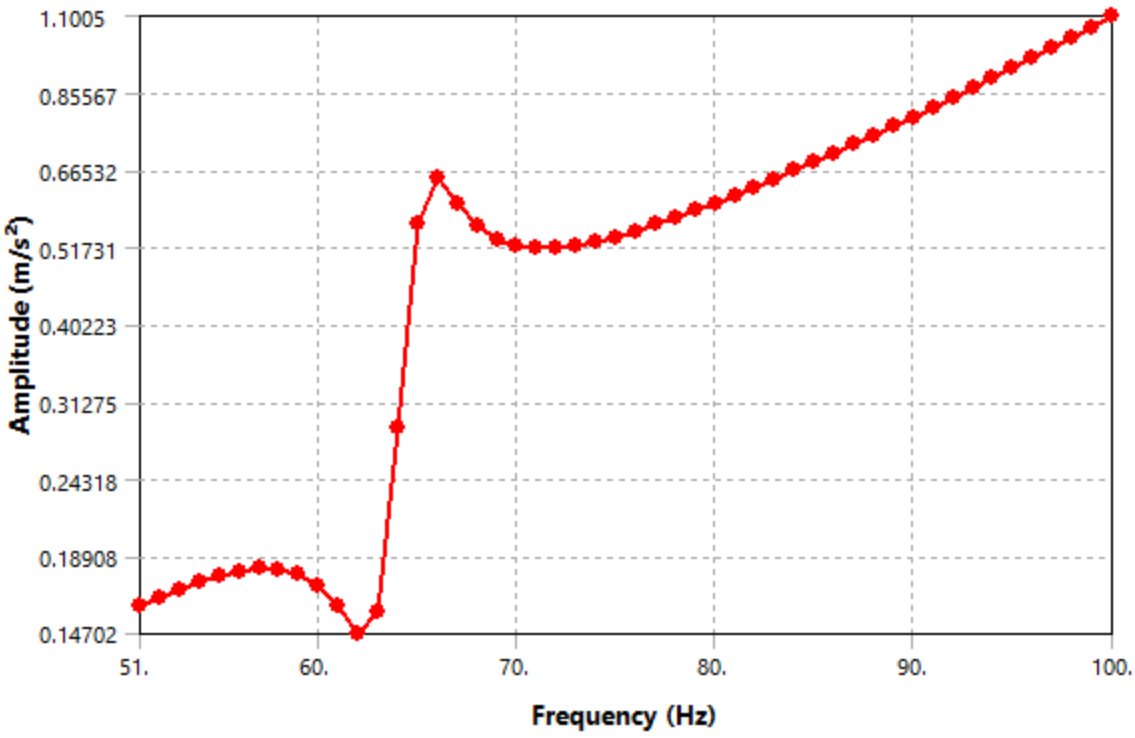


FIGURE 18
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2y

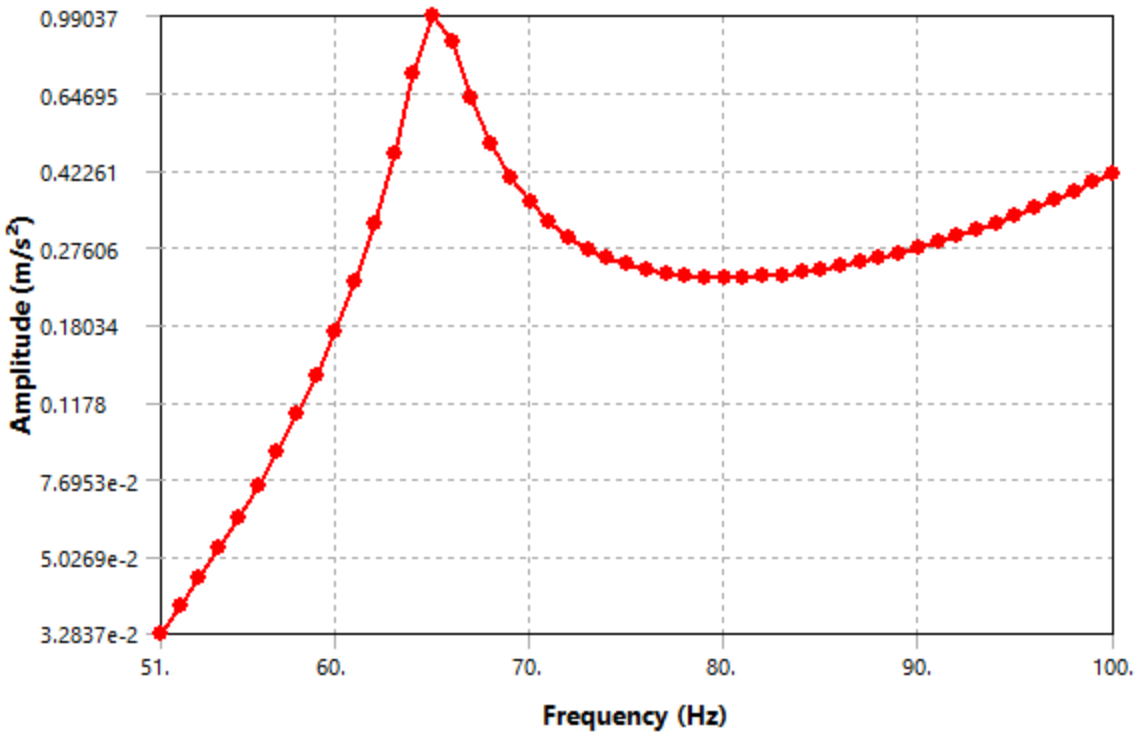


FIGURE 19
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM2z

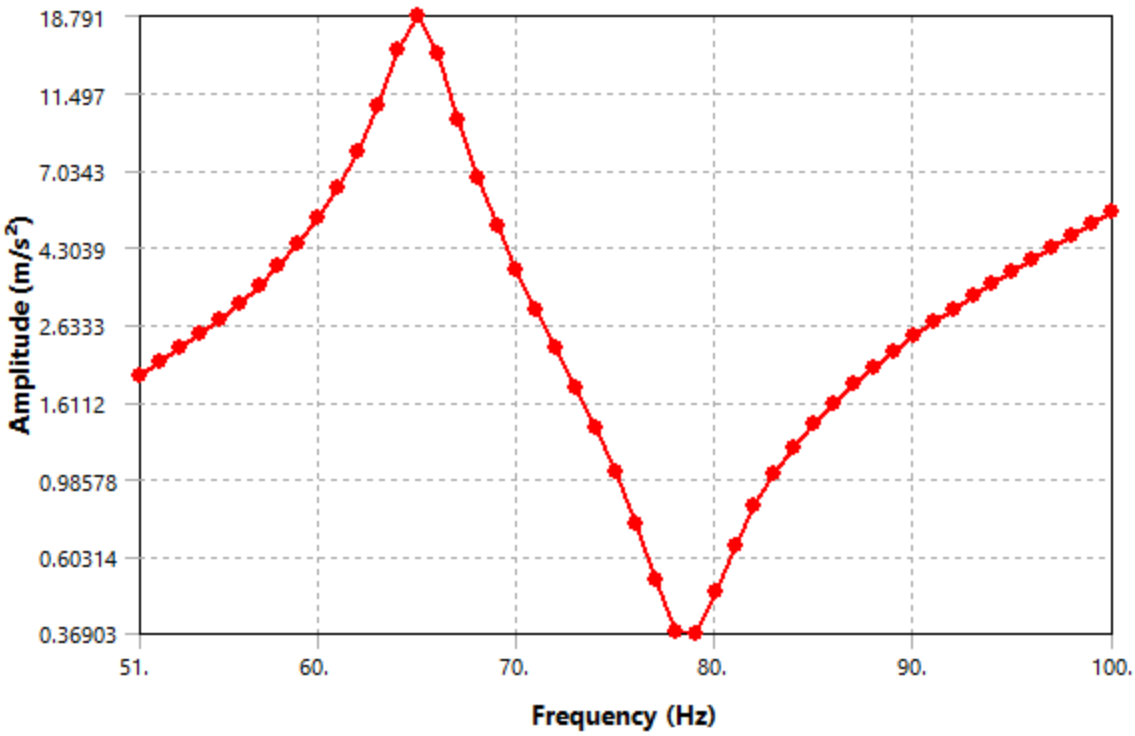


FIGURE 20
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2x

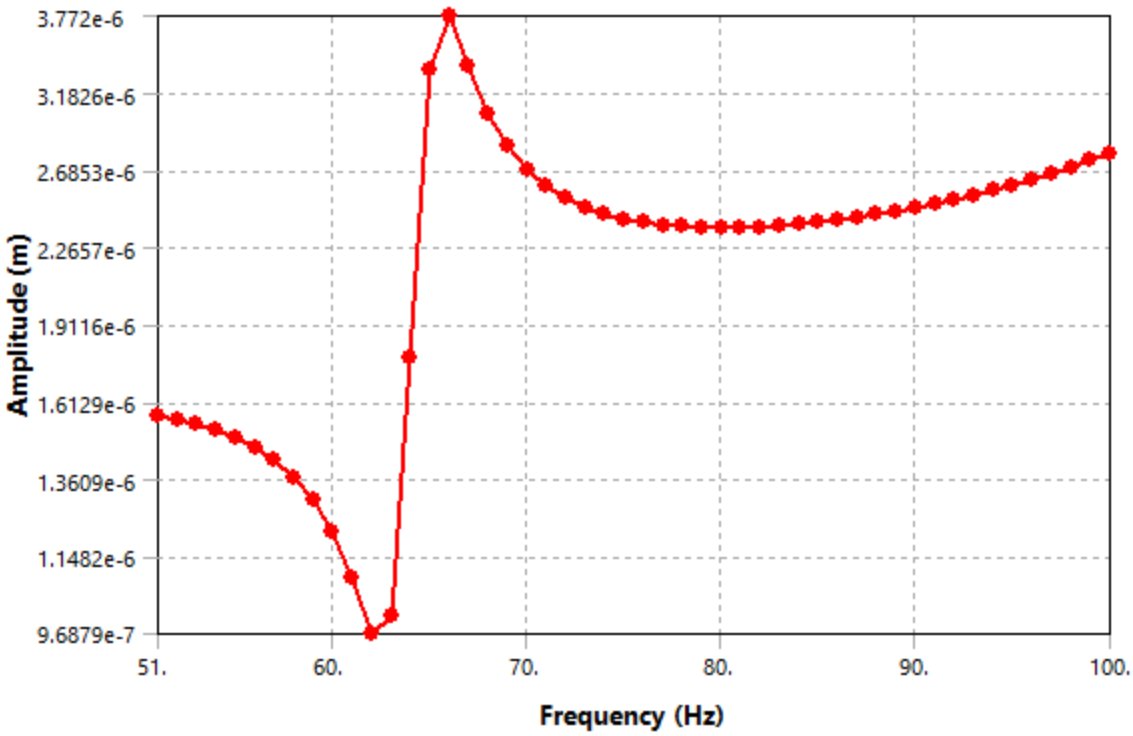


FIGURE 21
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2y

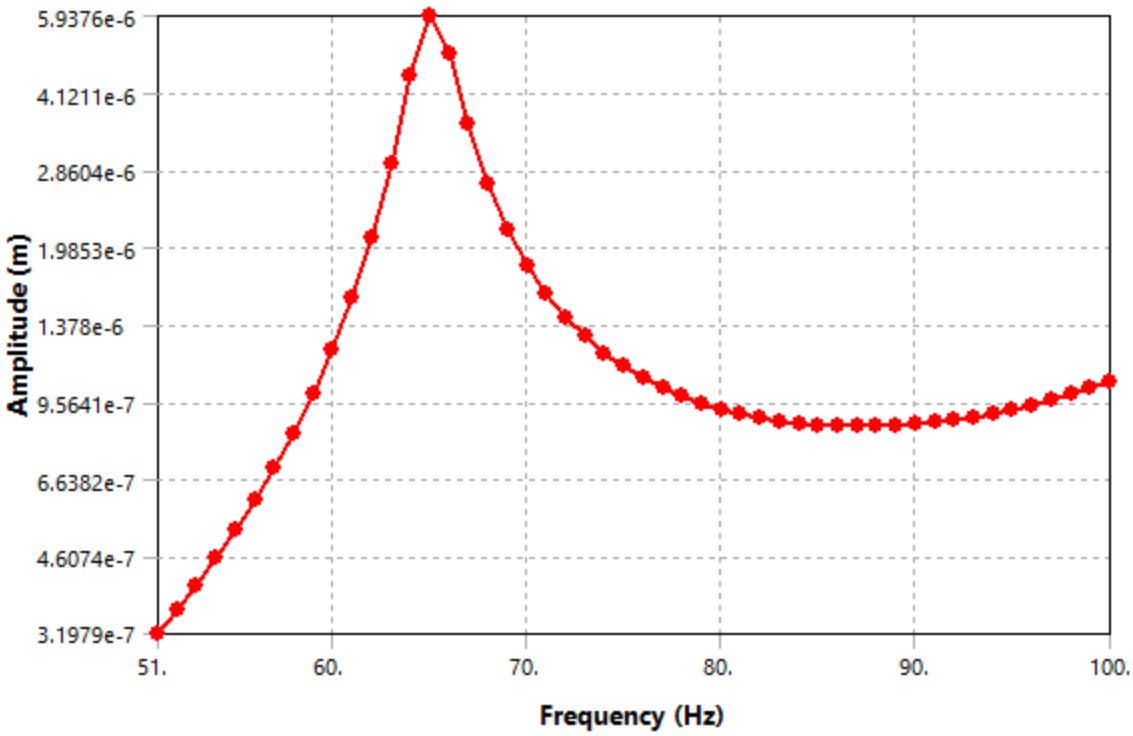


FIGURE 22
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM2z

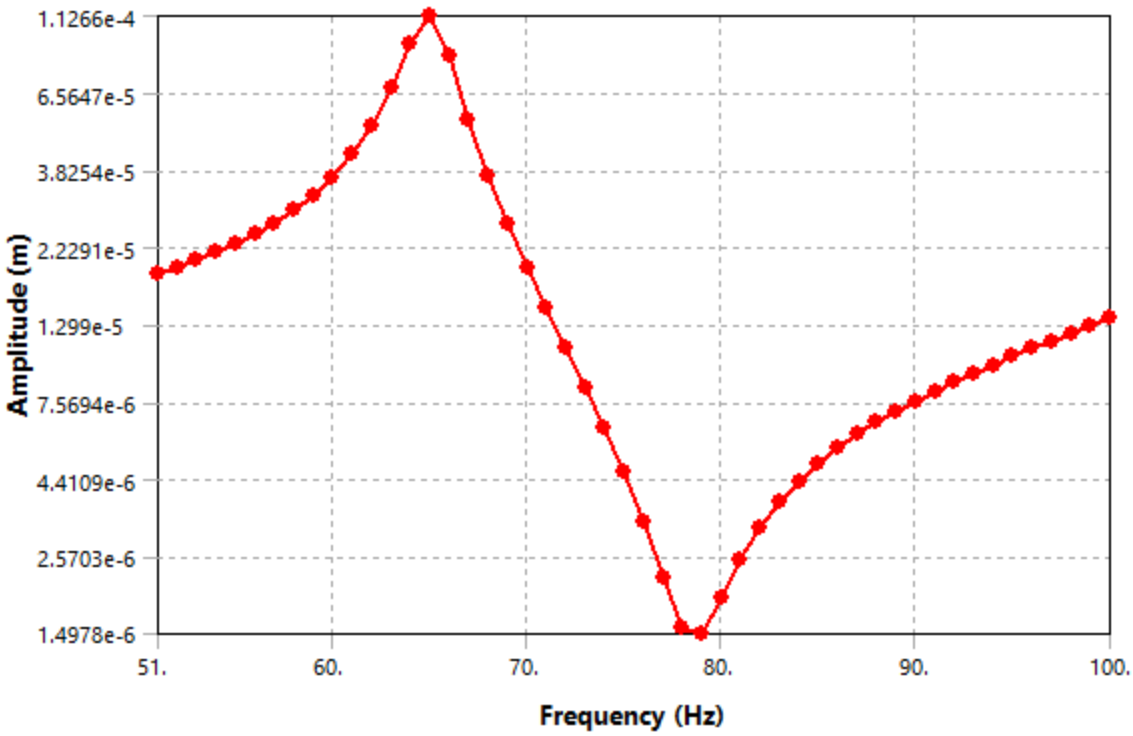


FIGURE 23
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3x

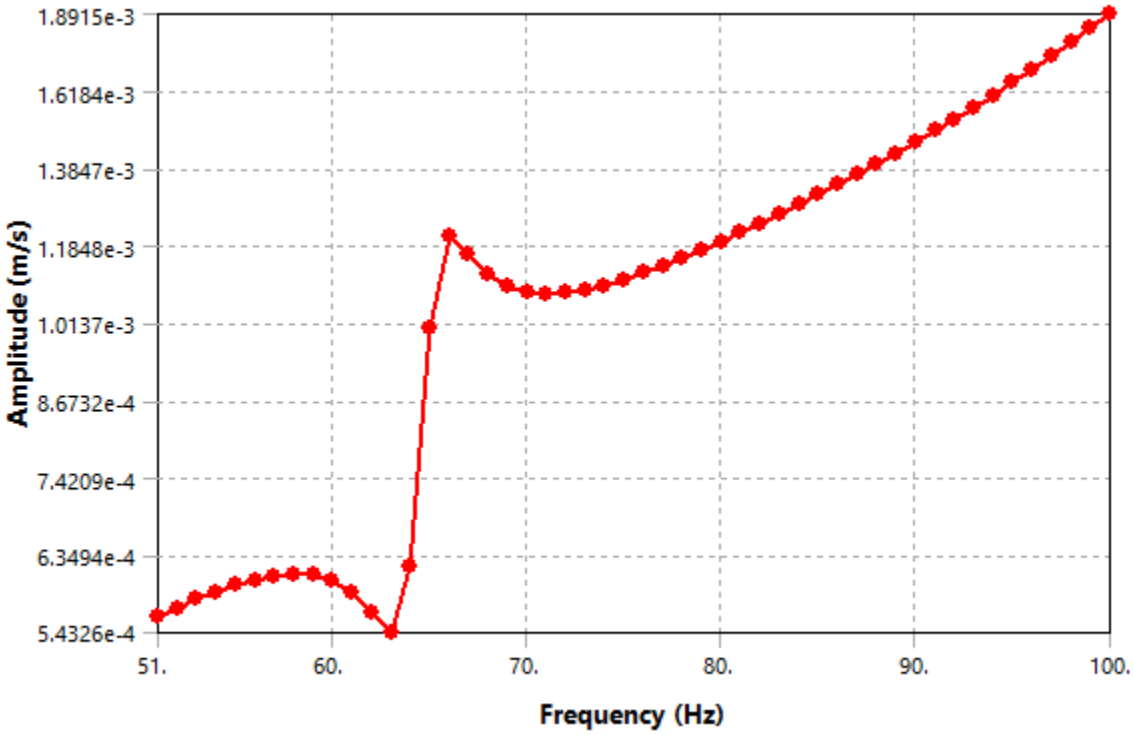


FIGURE 24
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3y

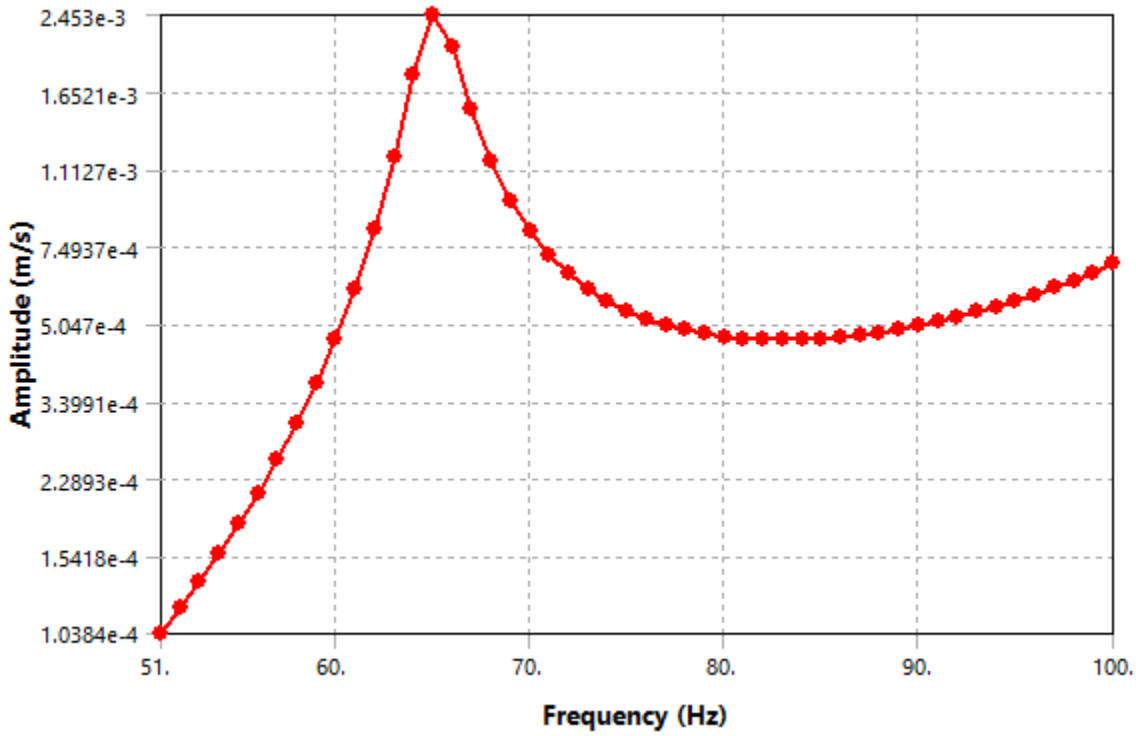


FIGURE 25
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM3z

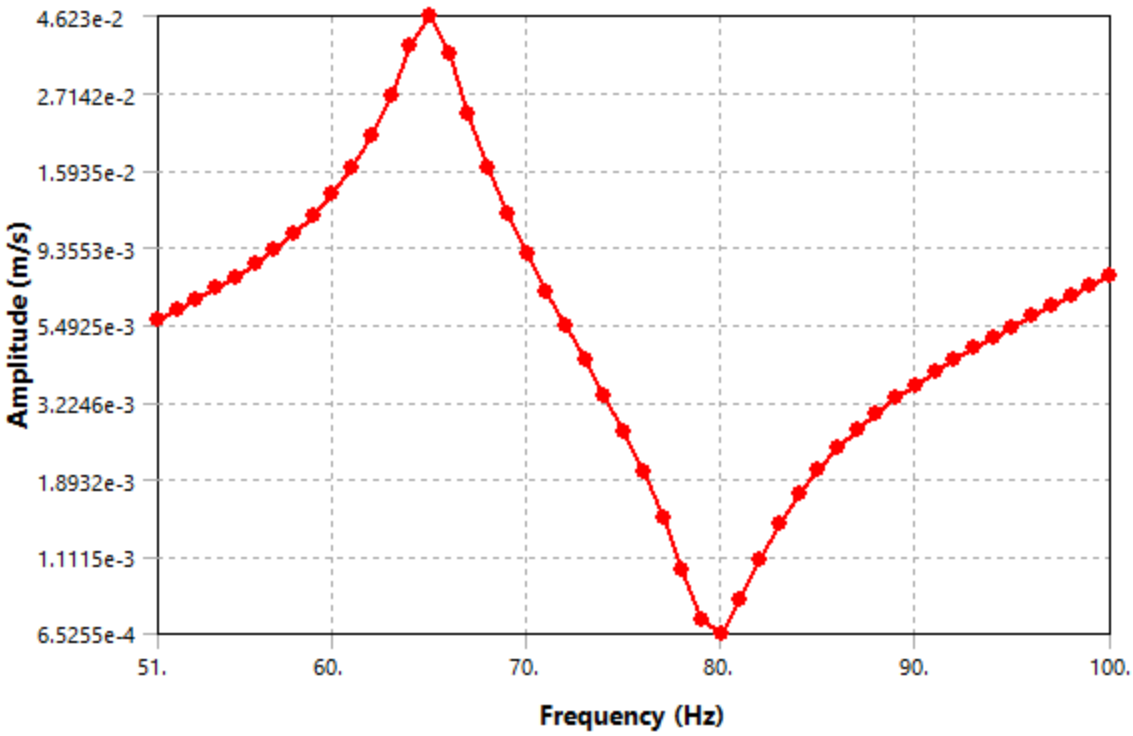


FIGURE 26
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3x

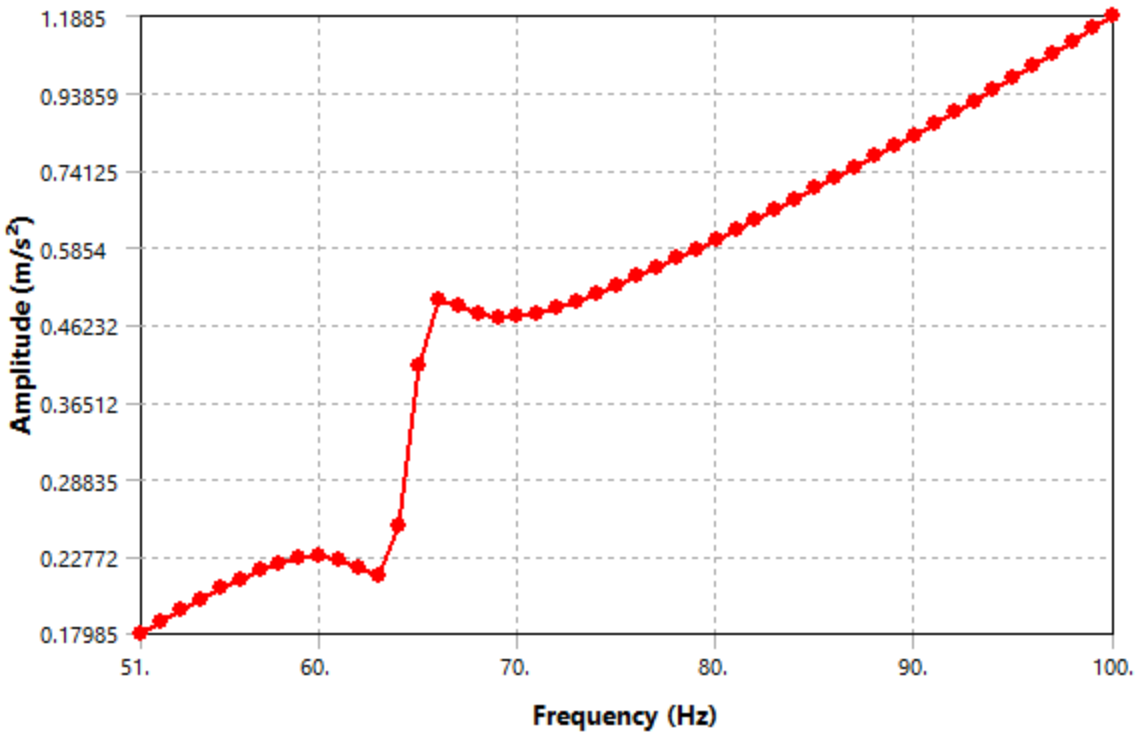


TABLE 67
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

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				

50. Hz
100. Hz
Bode
Log Y

Results				
6.0062e-006 m	1.132e-004 m	1.9476e-003 m/s	2.4488e-003 m/s	4.6173e-00
65. Hz		100. Hz	65. Hz	
-90.666 °	96.389 °	-93.63 °	-0.6494 °	-174.1
-6.9806e-008 m	-1.2596e-005 m	-1.233e-004 m/s	2.4486e-003 m/s	-4.5928e-0
-6.0058e-006 m	1.1249e-004 m	-1.9437e-003 m/s	-2.7754e-005 m/s	-4.7463e-0

FIGURE 27
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3y

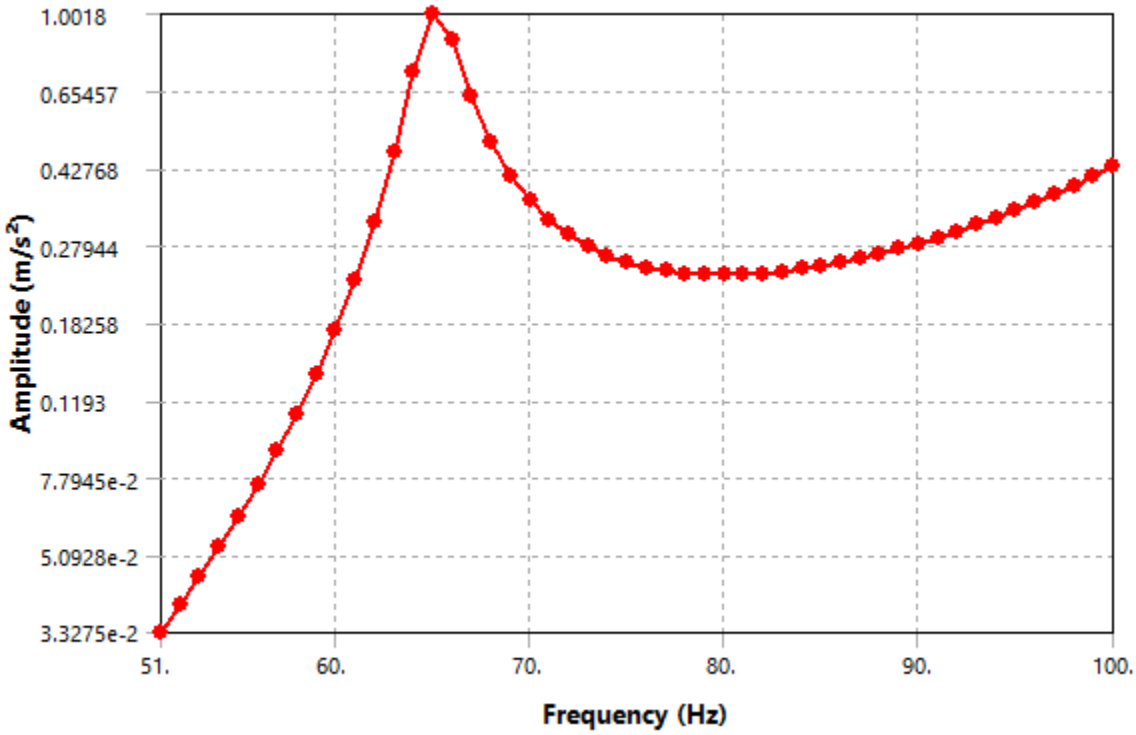


FIGURE 28
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM3z

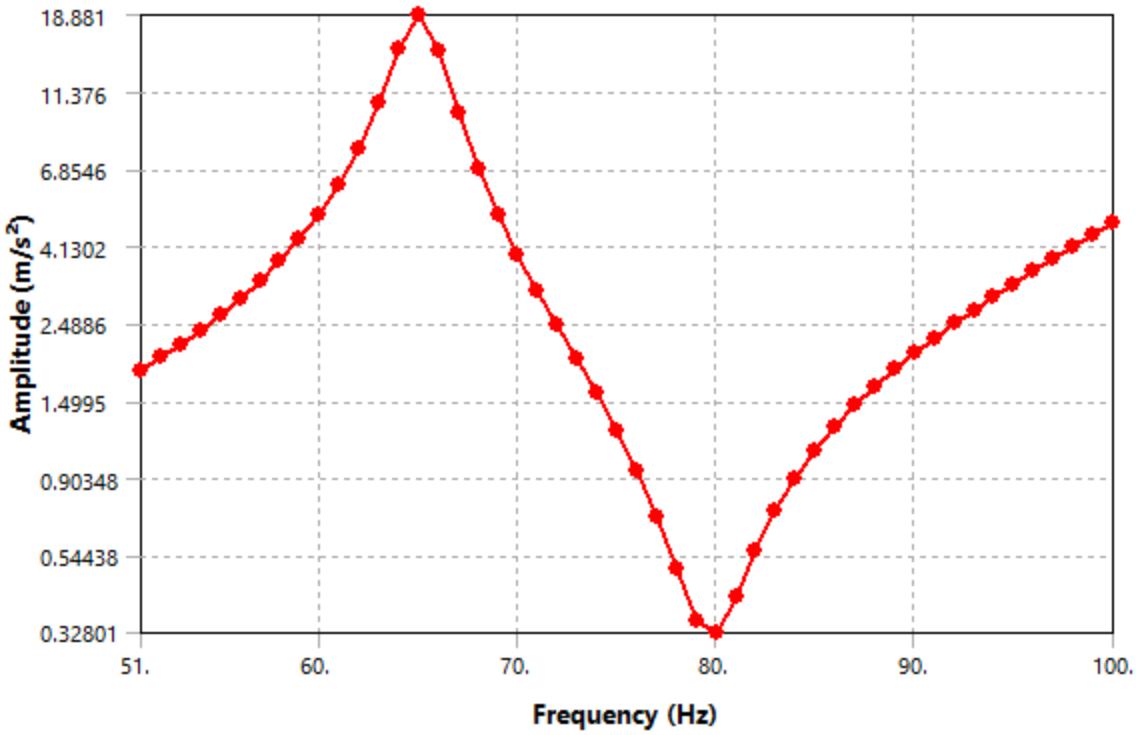


FIGURE 29
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3x

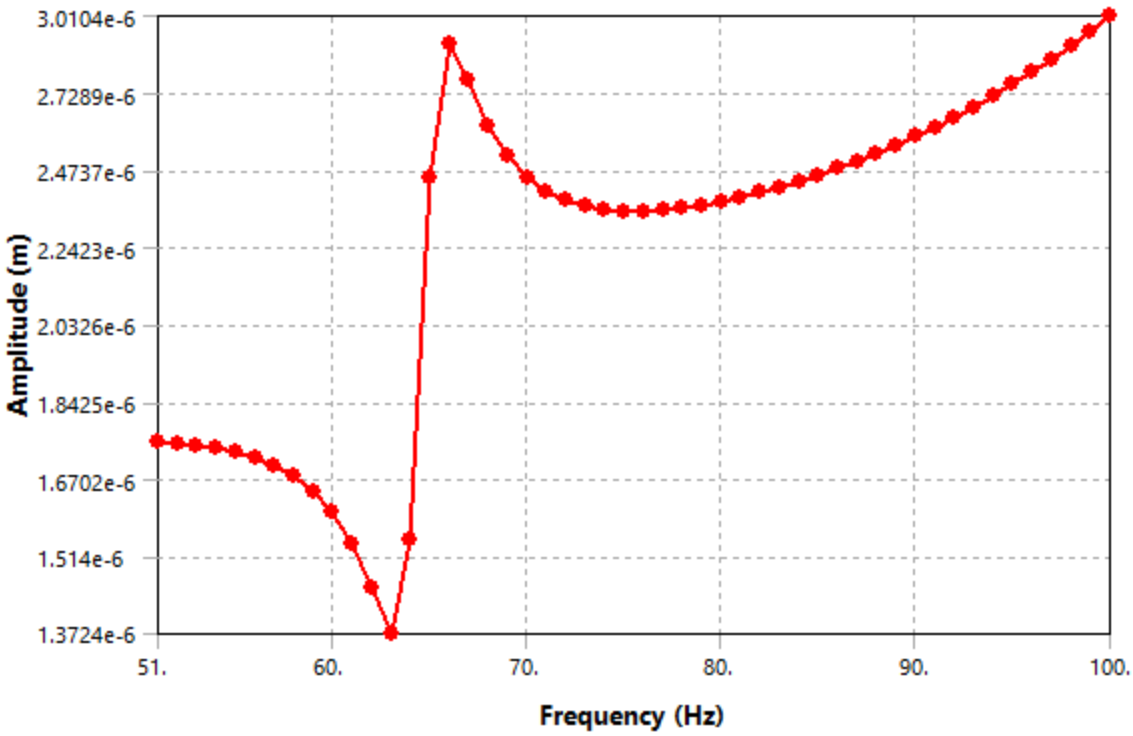


FIGURE 30
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3y

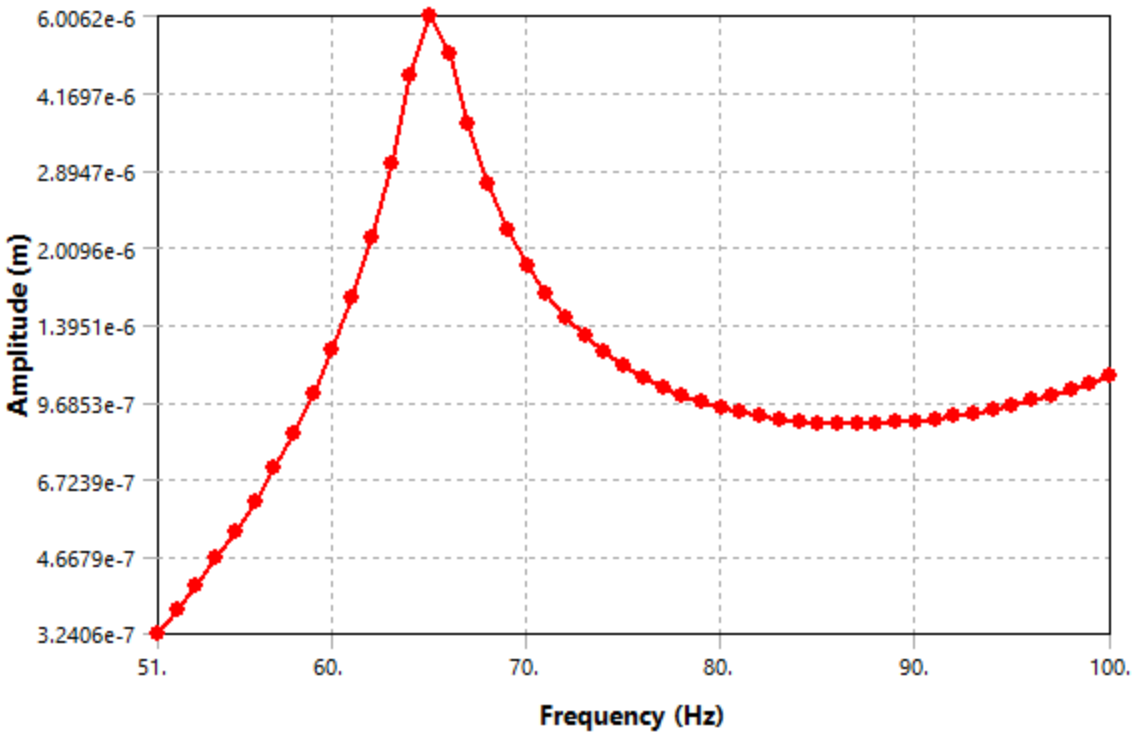


FIGURE 31
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM3z

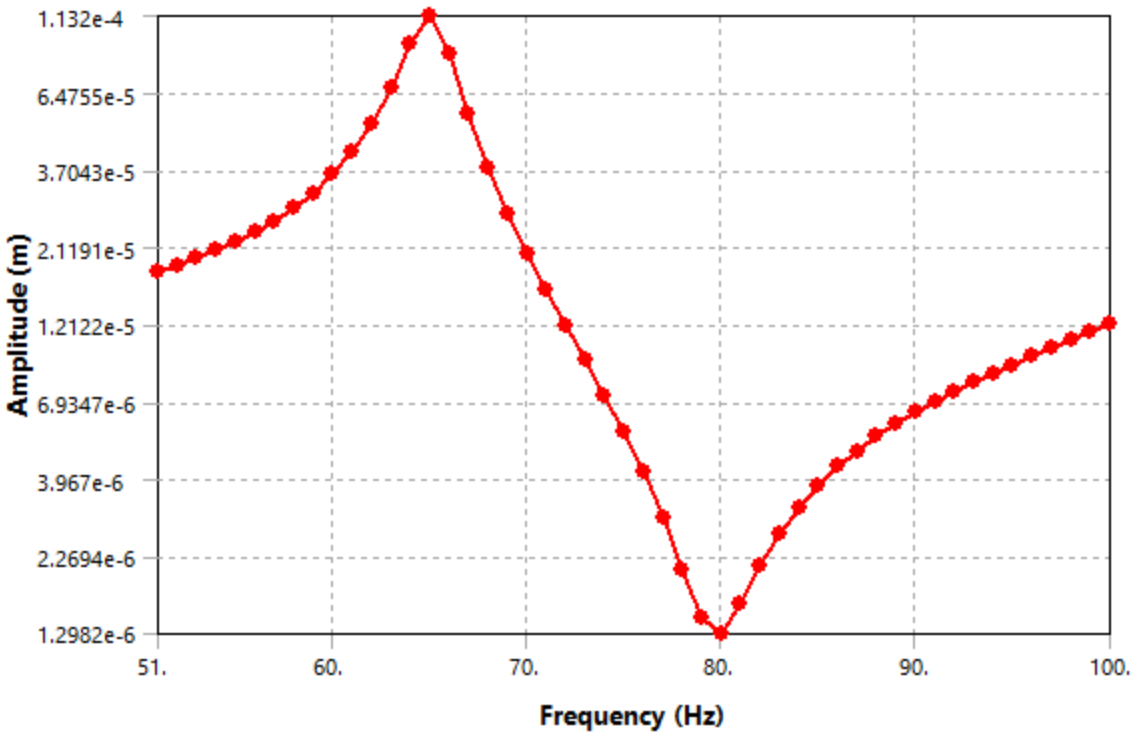


FIGURE 32
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4x

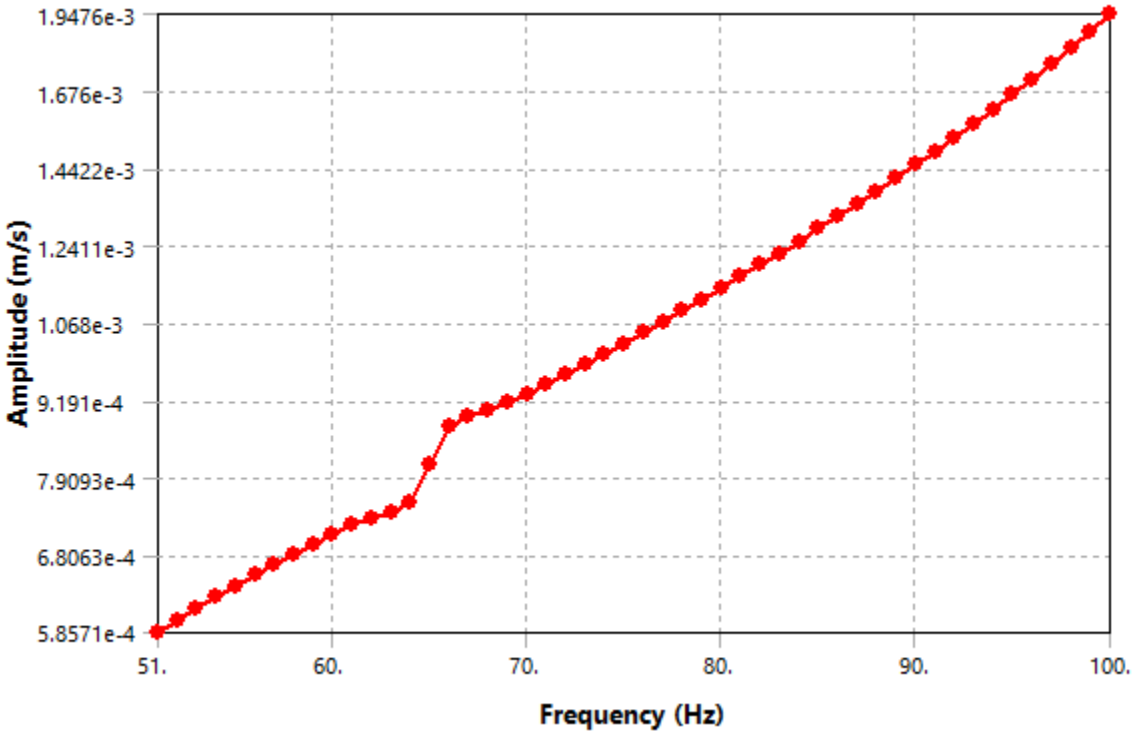


FIGURE 33
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4y

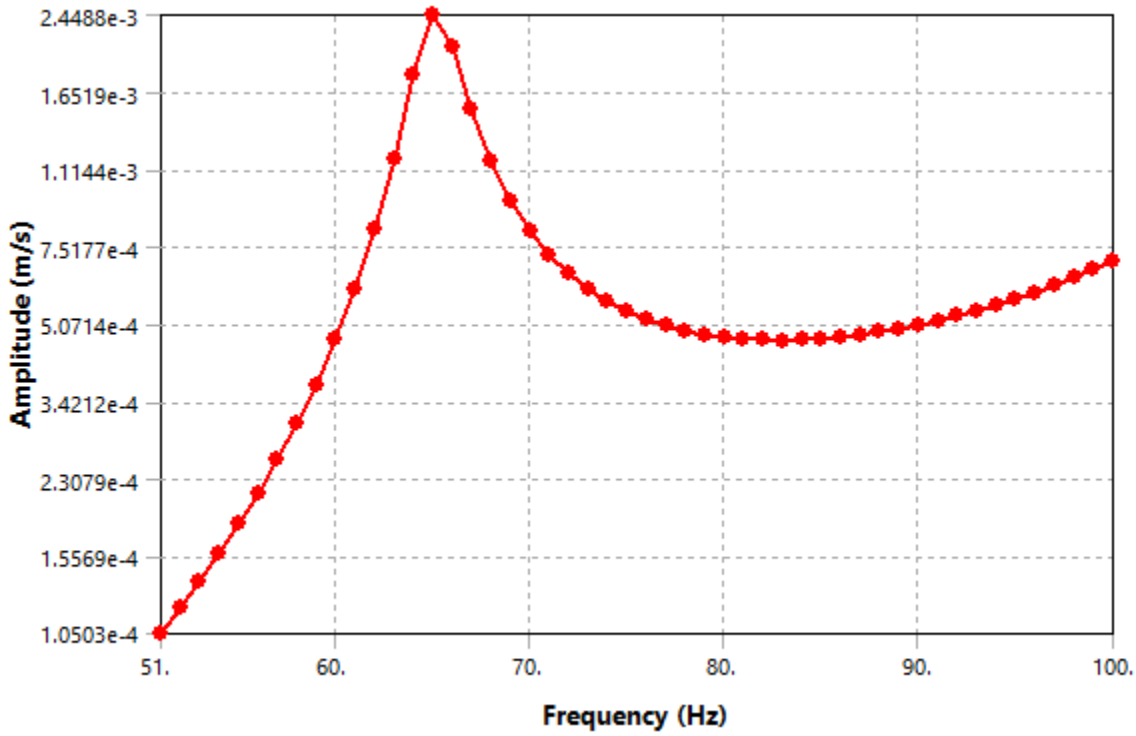


FIGURE 34
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM4z

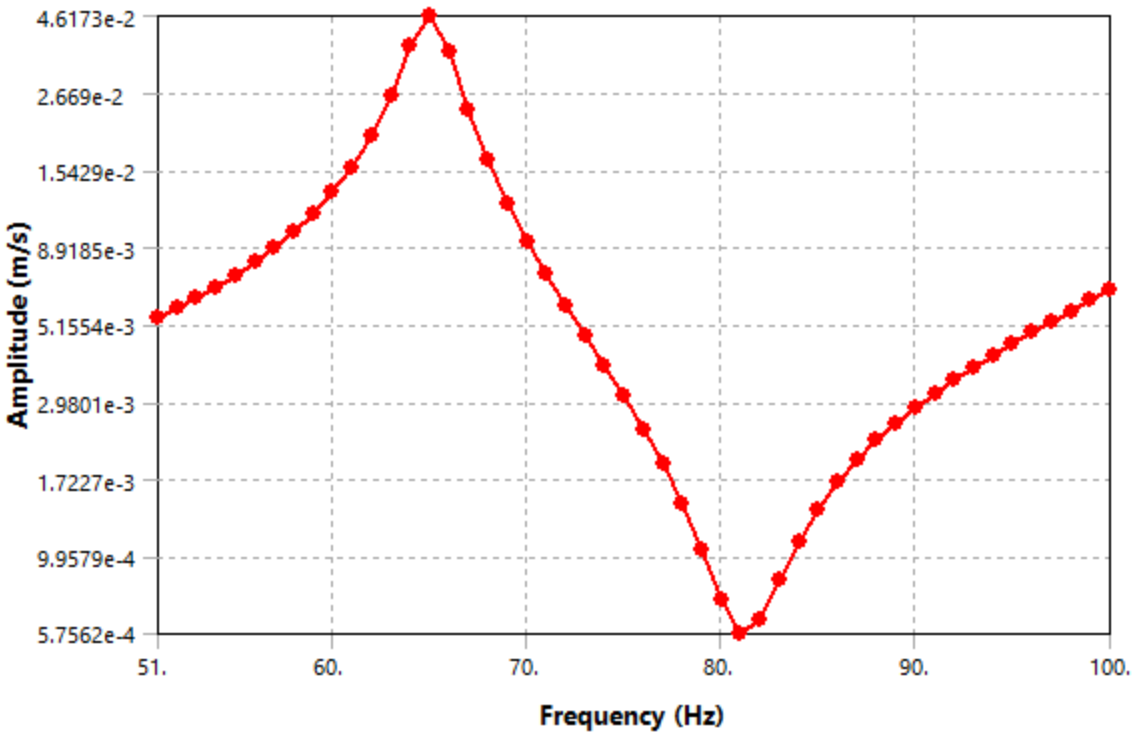


FIGURE 35
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4x

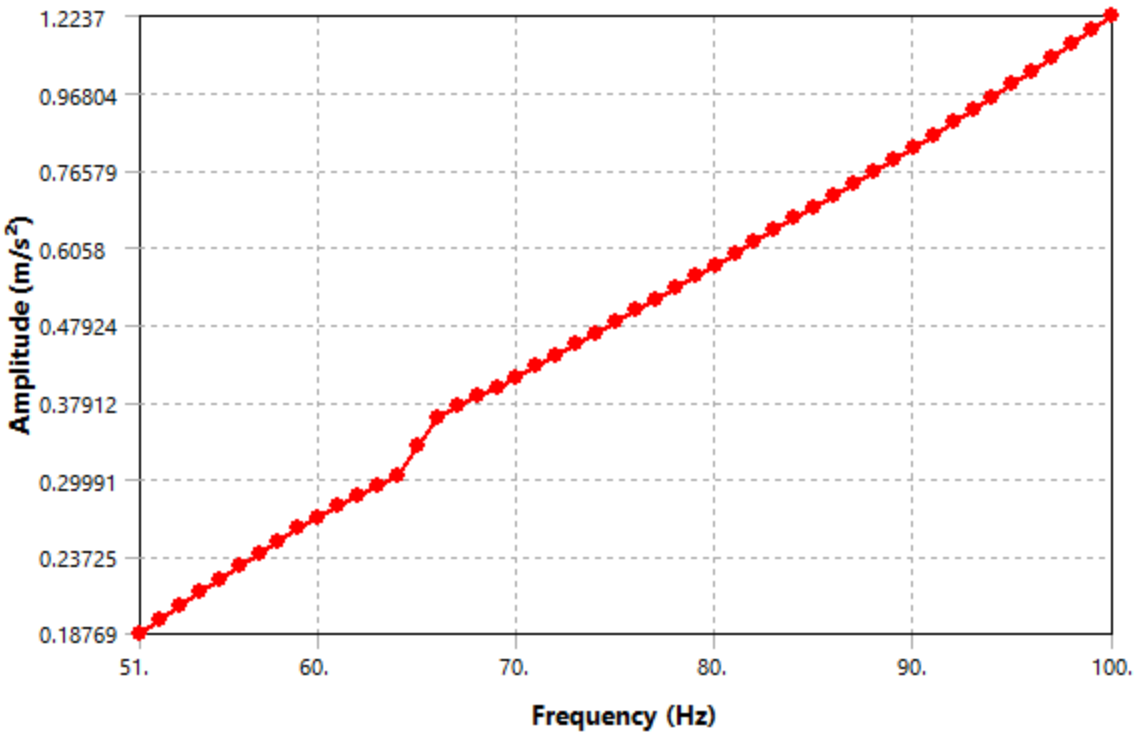


FIGURE 36
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4y

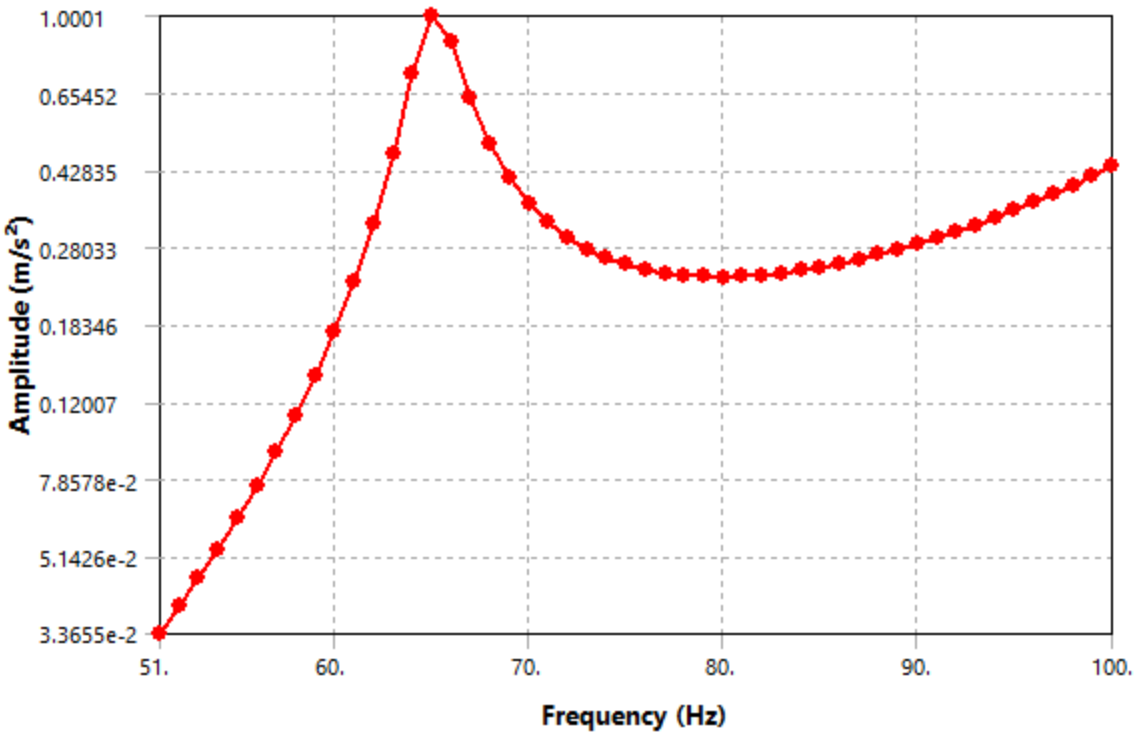


FIGURE 37
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM4z

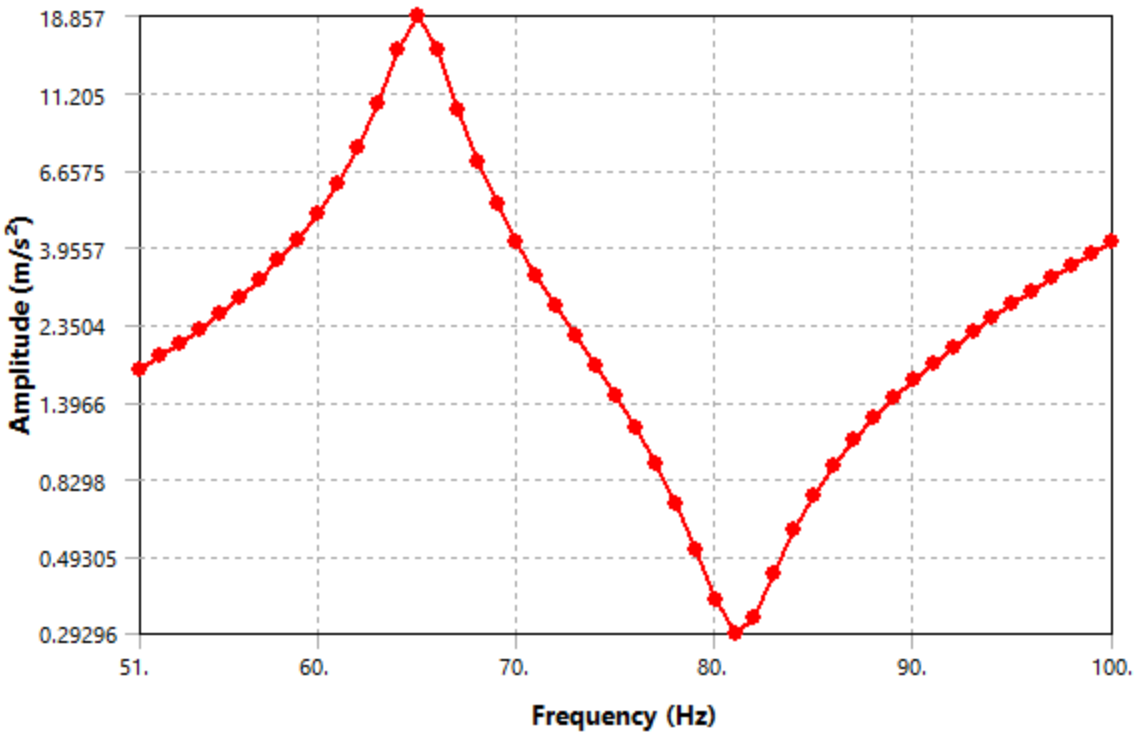


TABLE 68
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

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				

50. Hz
100. Hz
Bode
Log Y

Results				
2.3428e-003 m/s	2.6024e-003 m/s	3.0906e-002 m/s	1.472 m/s²	1.0628 m/
100. Hz	65. Hz		100. Hz	
-93.45 °	-0.97987 °	177.87 °	-3.4496 °	89.02 °
-1.4097e-004 m/s	2.602e-003 m/s	-3.0884e-002 m/s	1.4693 m/s²	1.8176e-002
-2.3385e-003 m/s	-4.4505e-005 m/s	1.1484e-003 m/s	-8.8571e-002 m/s²	1.0627 m/

FIGURE 38
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4x

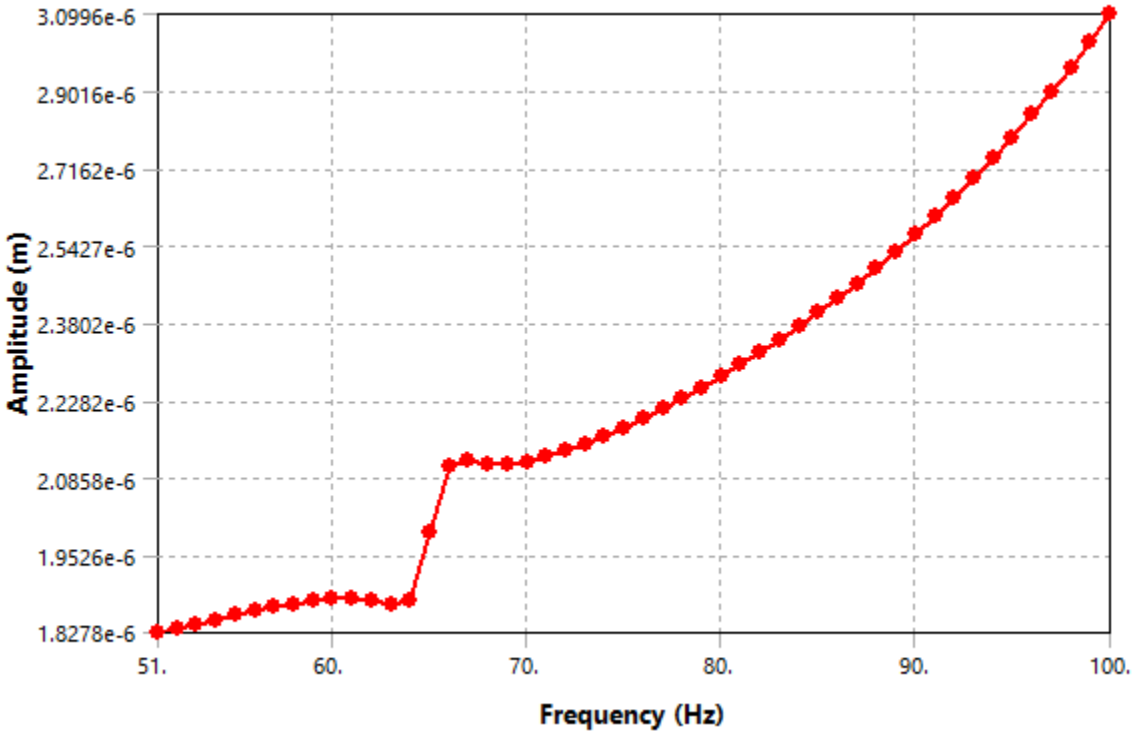


FIGURE 39
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4y

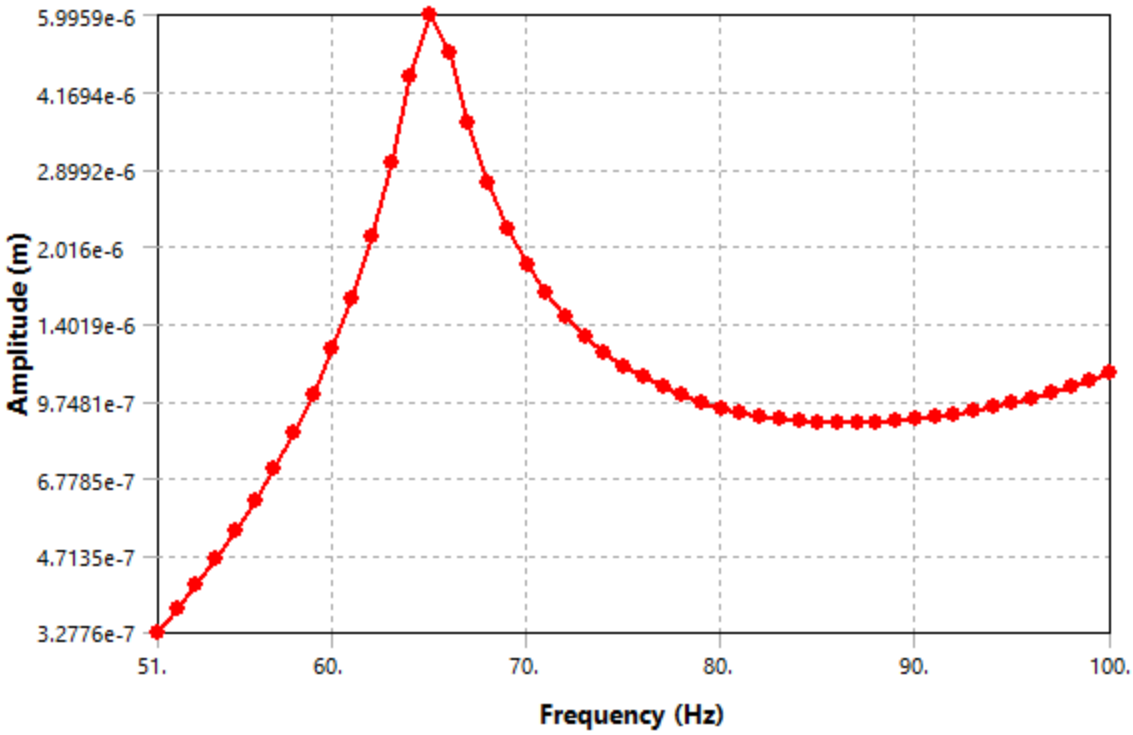


FIGURE 40
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM4z

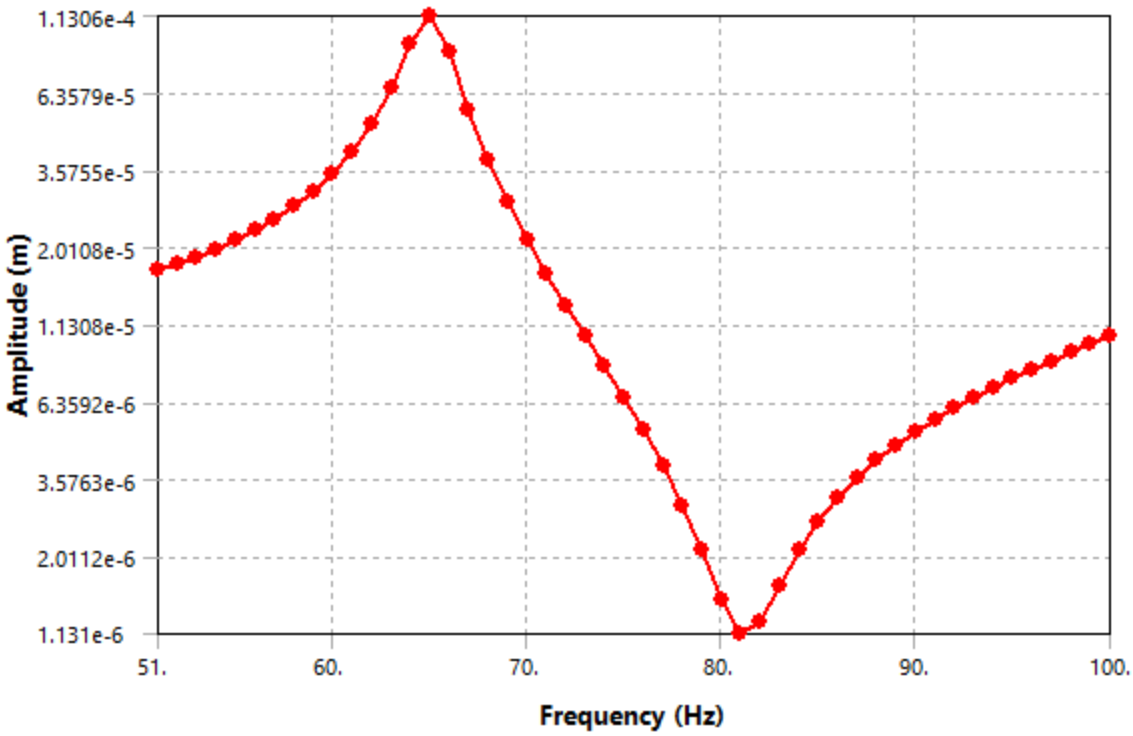


FIGURE 41
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5x

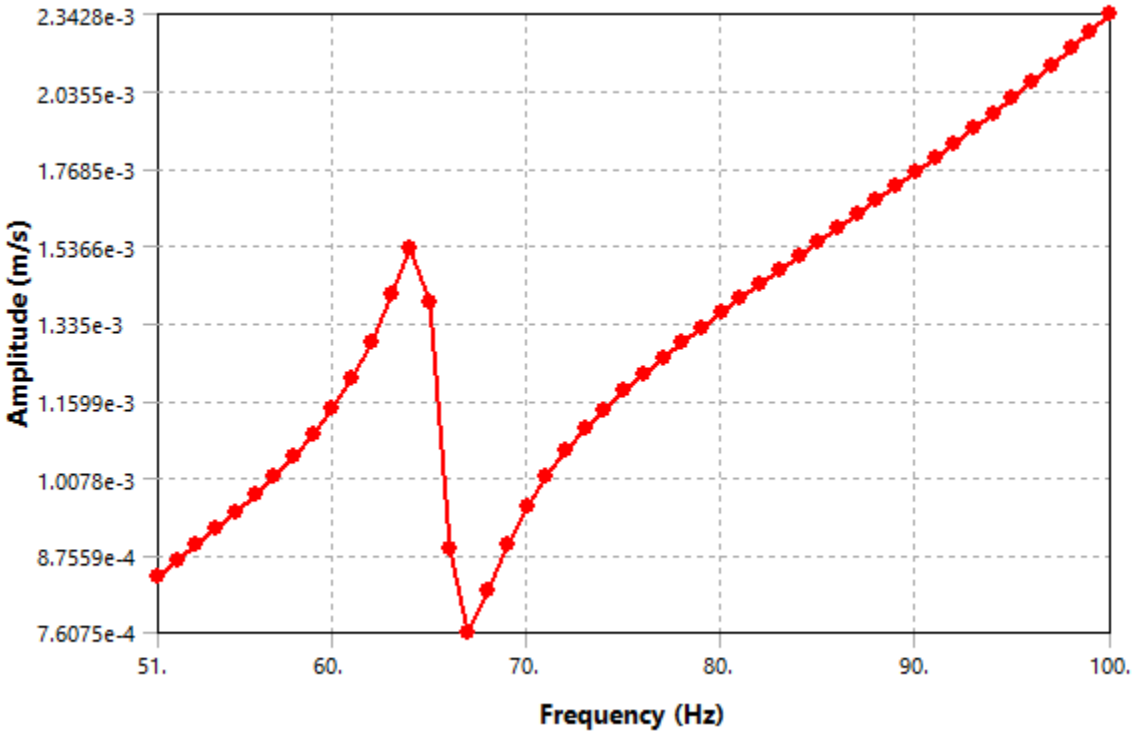


FIGURE 42
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5y

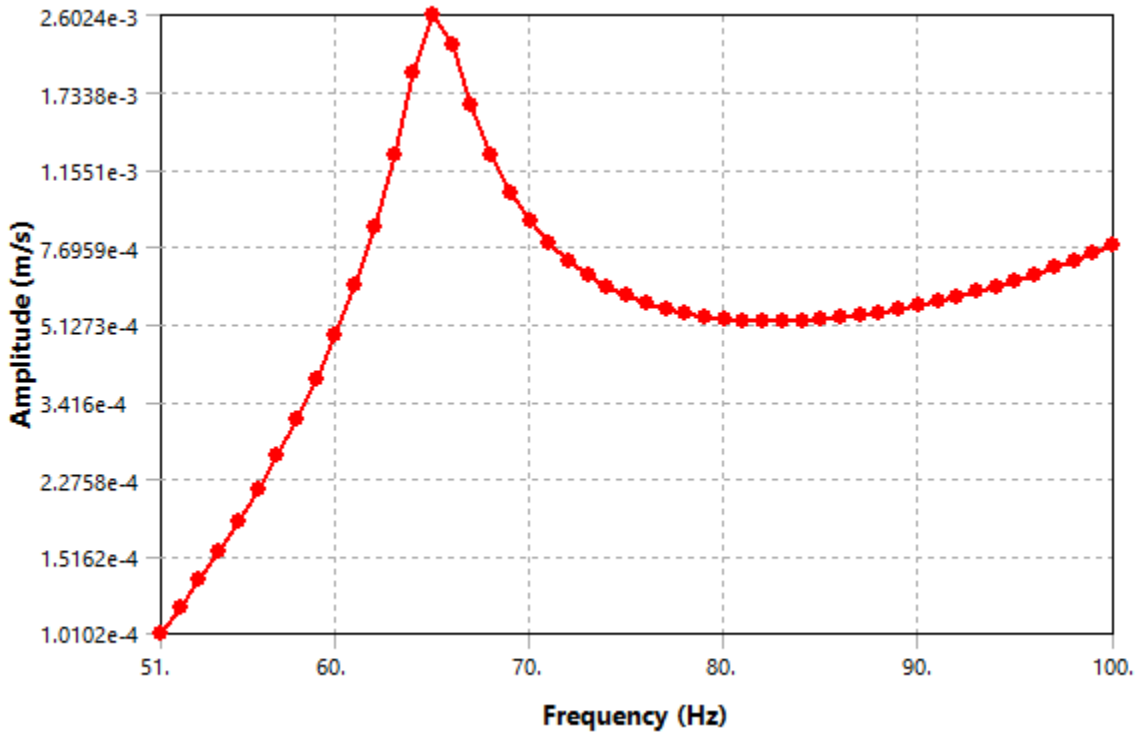


FIGURE 43
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM5z

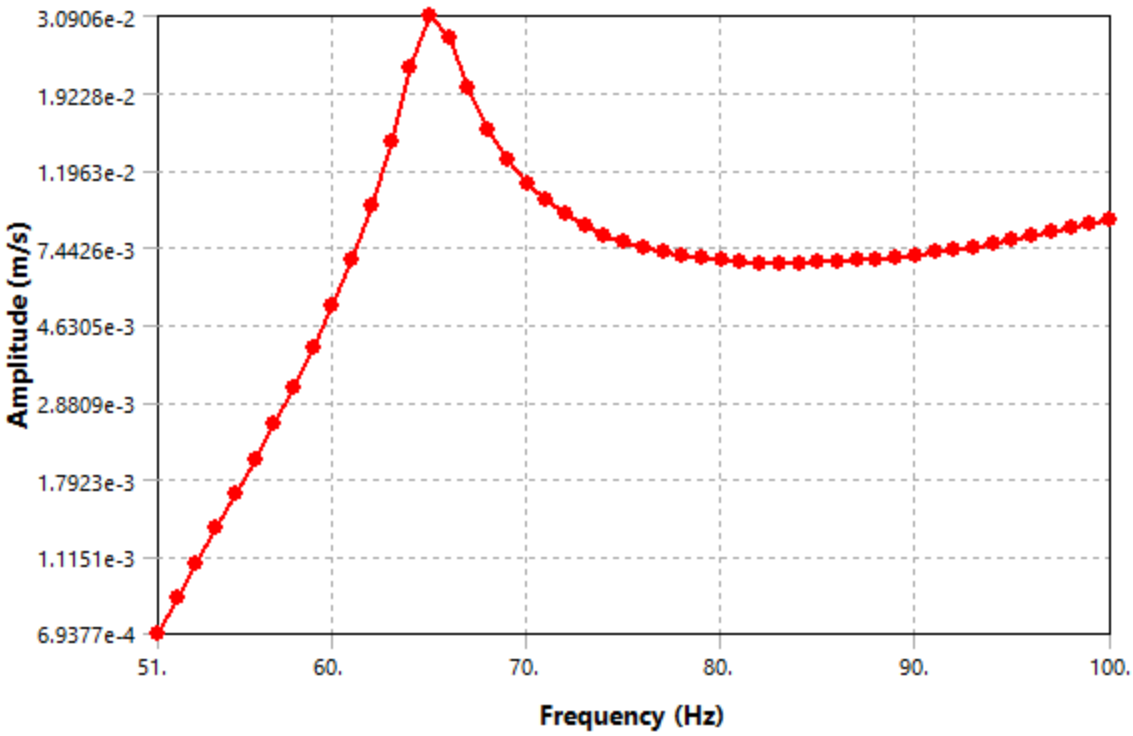


FIGURE 44
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5x

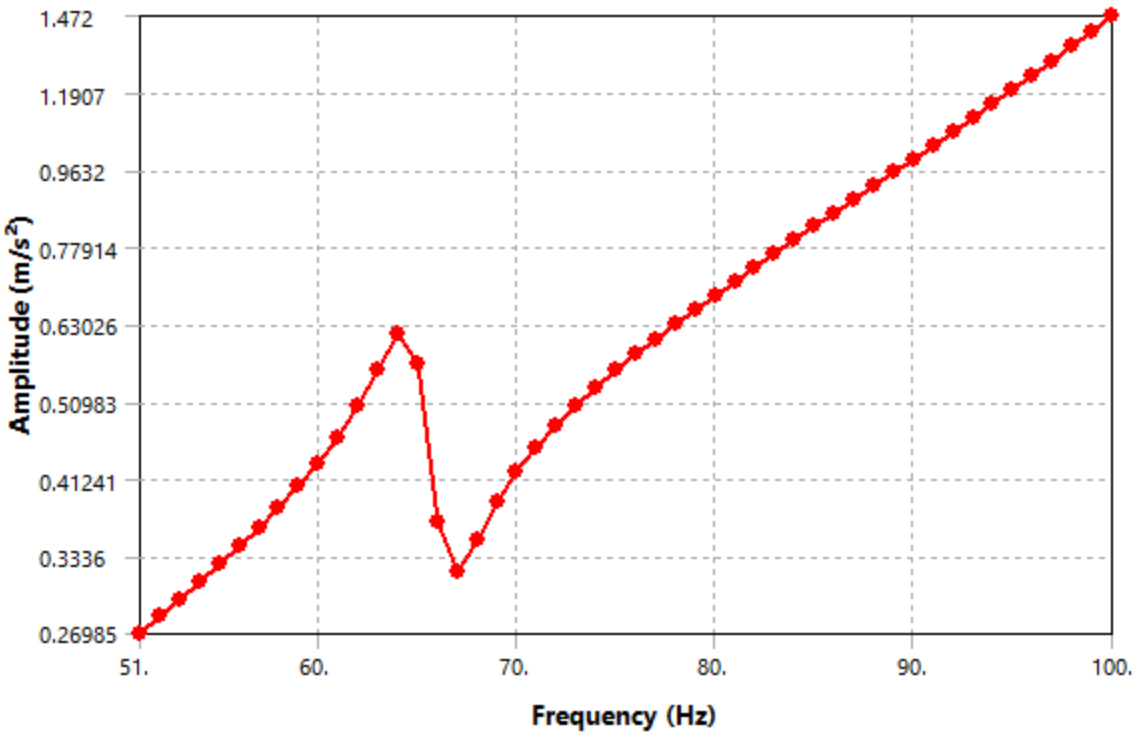


FIGURE 45
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5y

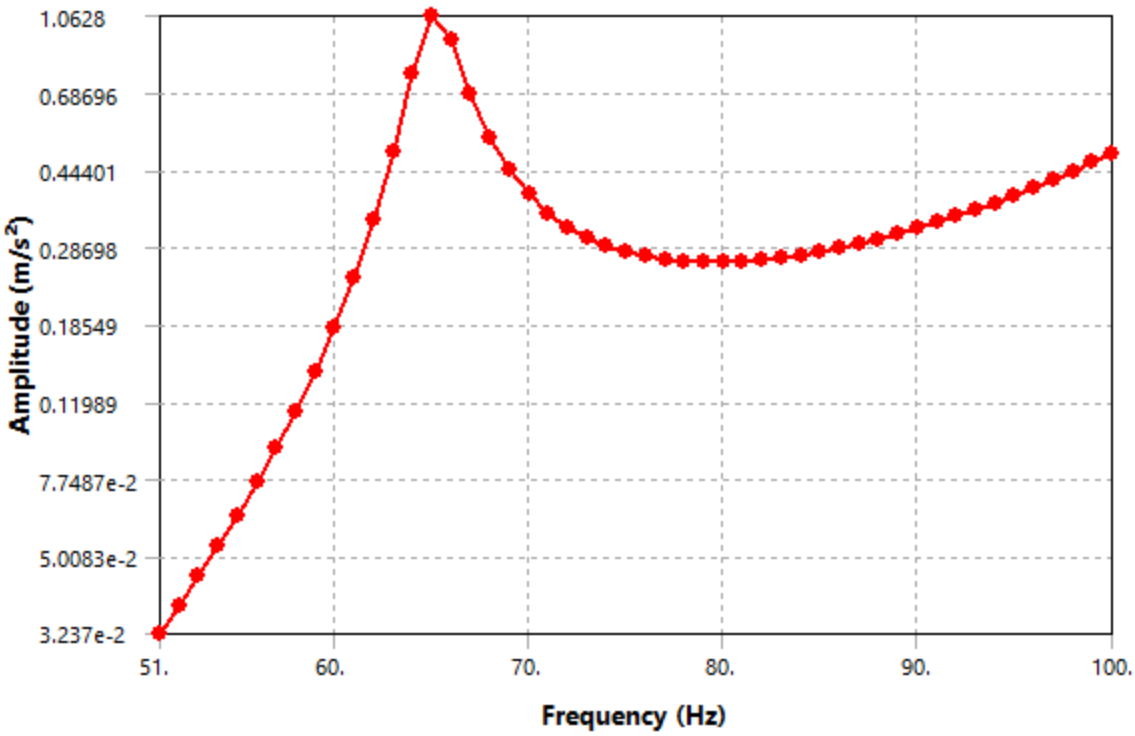


FIGURE 46
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM5z

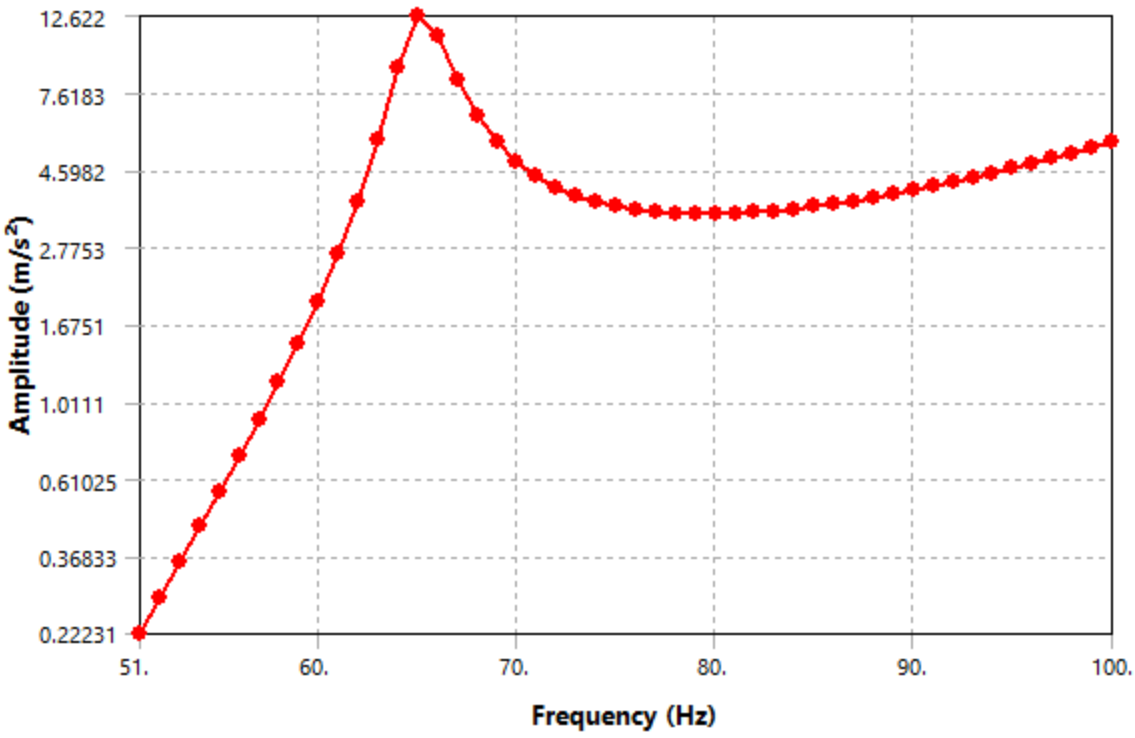


FIGURE 47
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5x

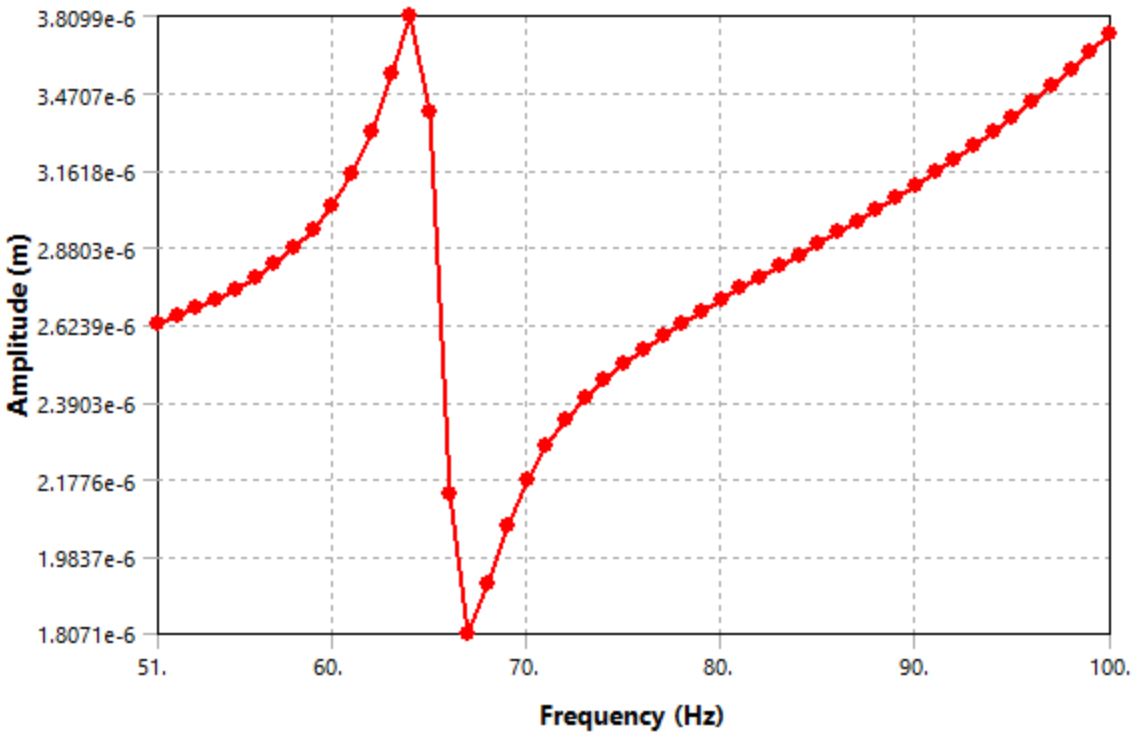


FIGURE 48
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5y

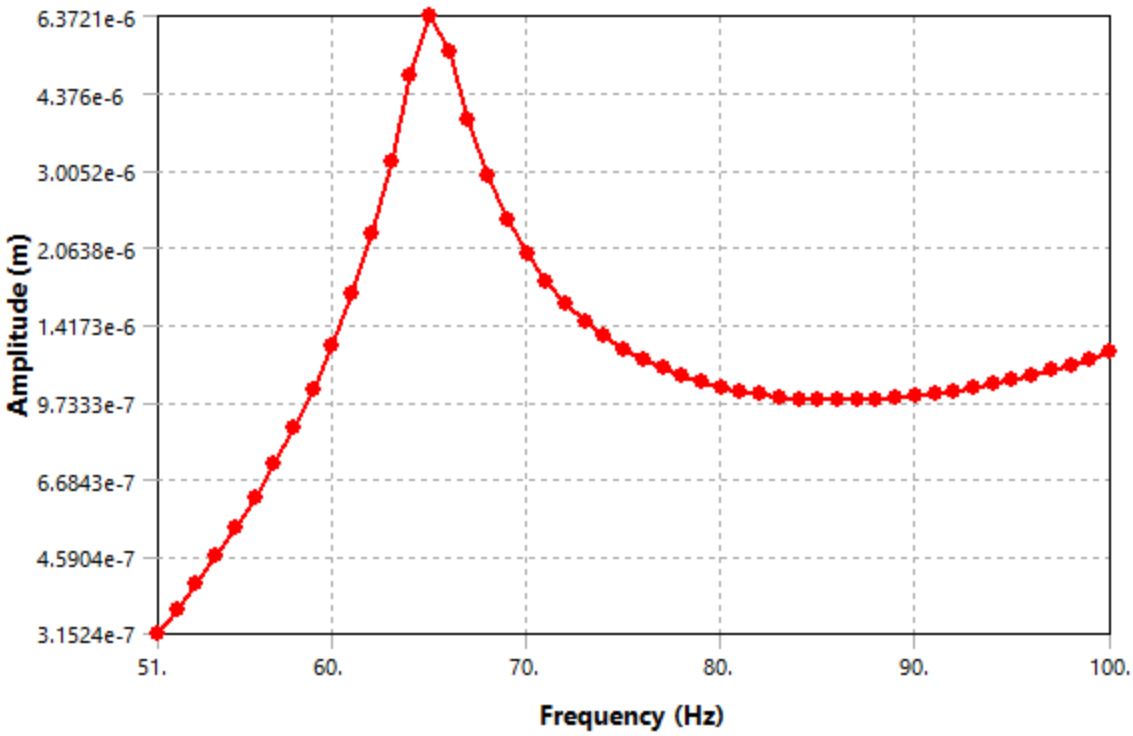


TABLE 69
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

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				

50. Hz
100. Hz
Bode
Log Y

Results				
.0009e-002 m/s	1.7281 m/s²	1.0668 m/s²	12.256 m/s²	4.4281e-(
	100. Hz	65. Hz		64. H
176.66 °	-2.603 °	89.166 °	-93.341 °	165.0
.9958e-002 m/s	1.7263 m/s²	1.5528e-002 m/s²	-0.71434 m/s²	-4.2791e-
.7491e-003 m/s	-7.8482e-002 m/s²	1.0667 m/s²	-12.235 m/s²	1.1391e-(

FIGURE 49
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM5z

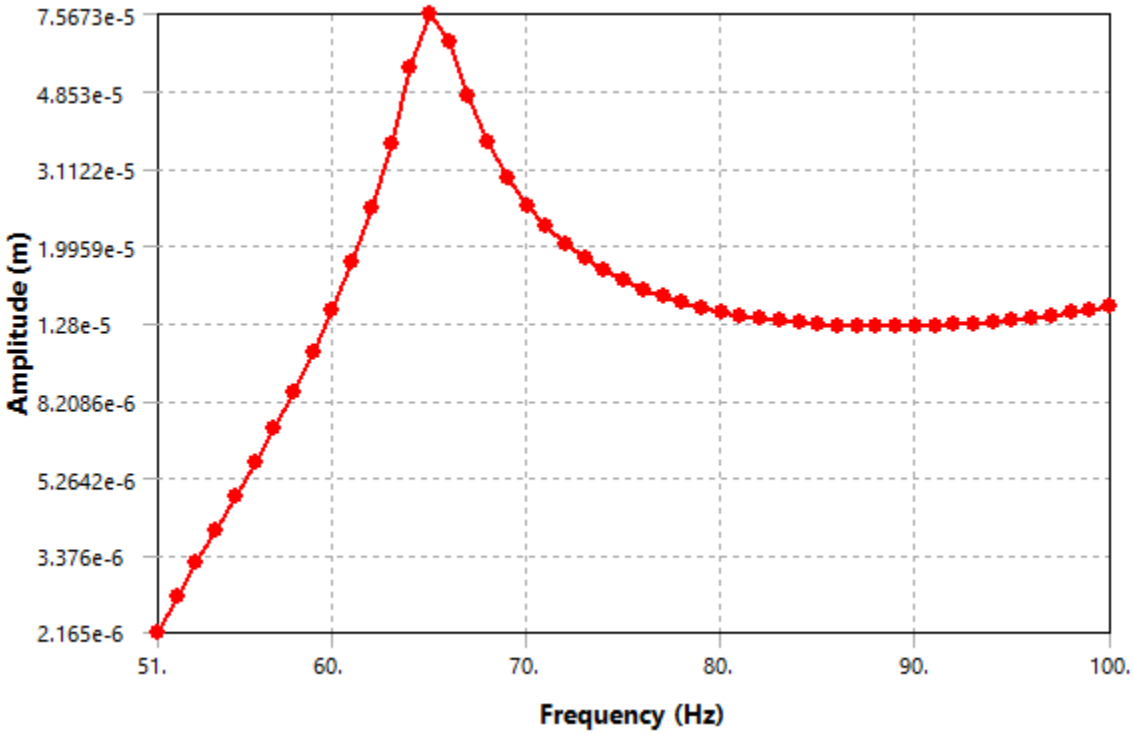


FIGURE 50
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6x

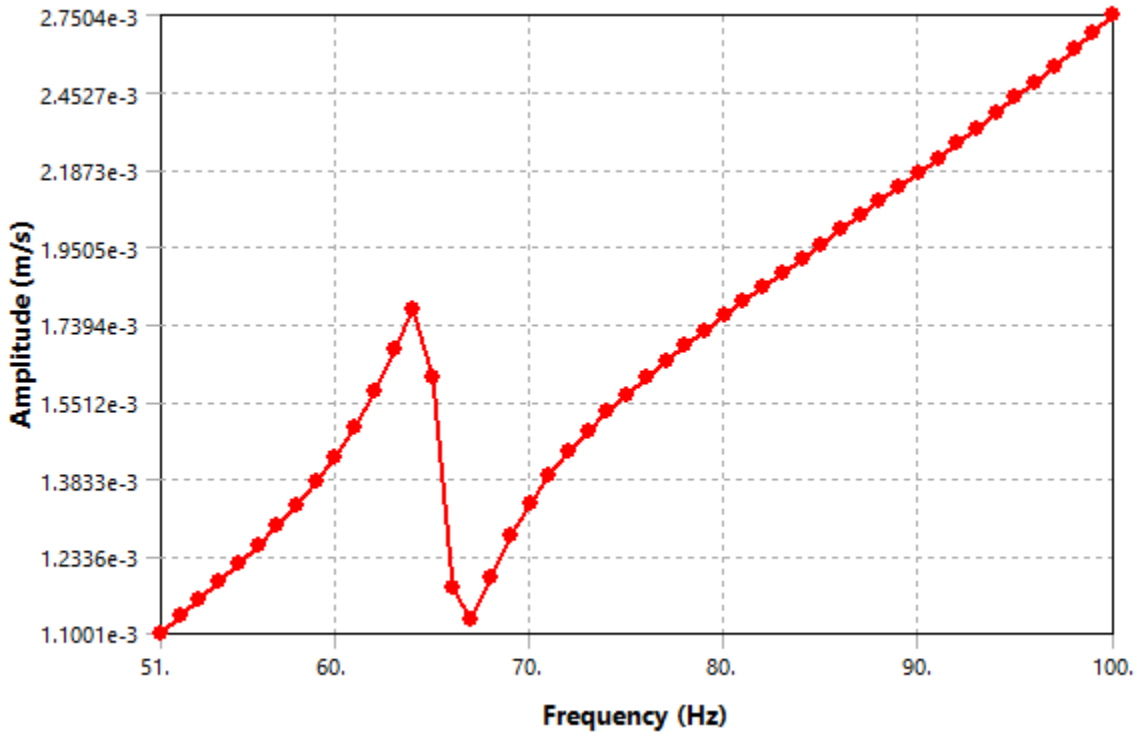


FIGURE 51
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6y

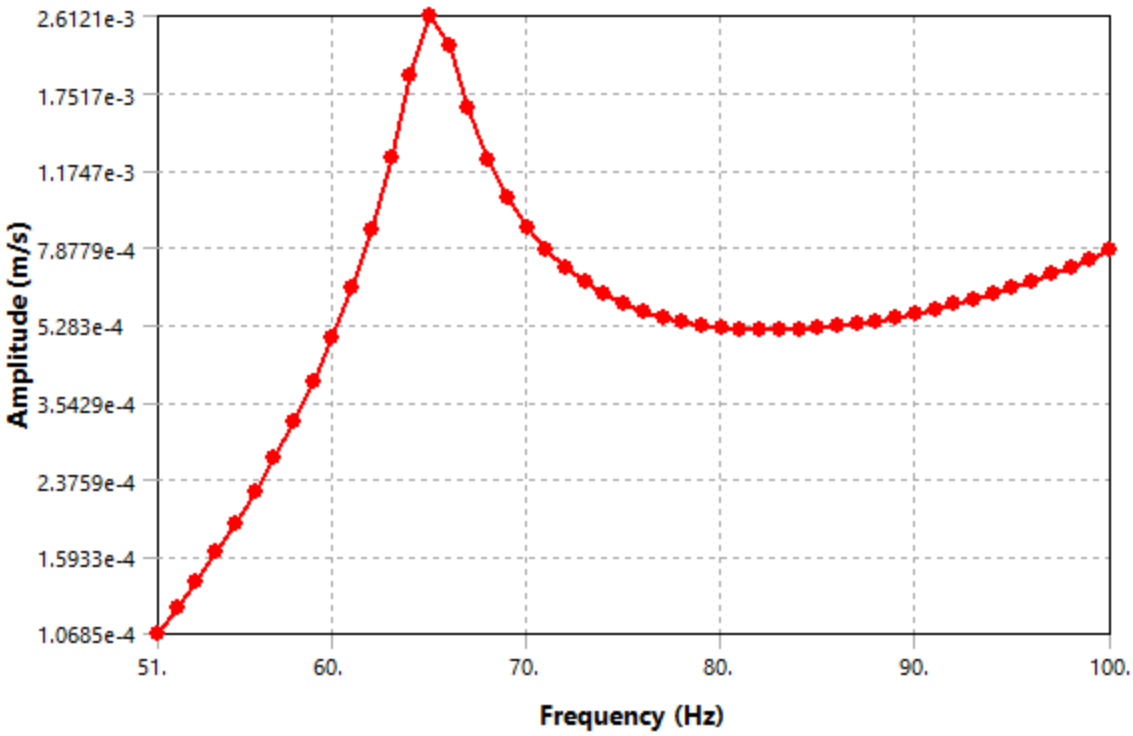


FIGURE 52
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM6z

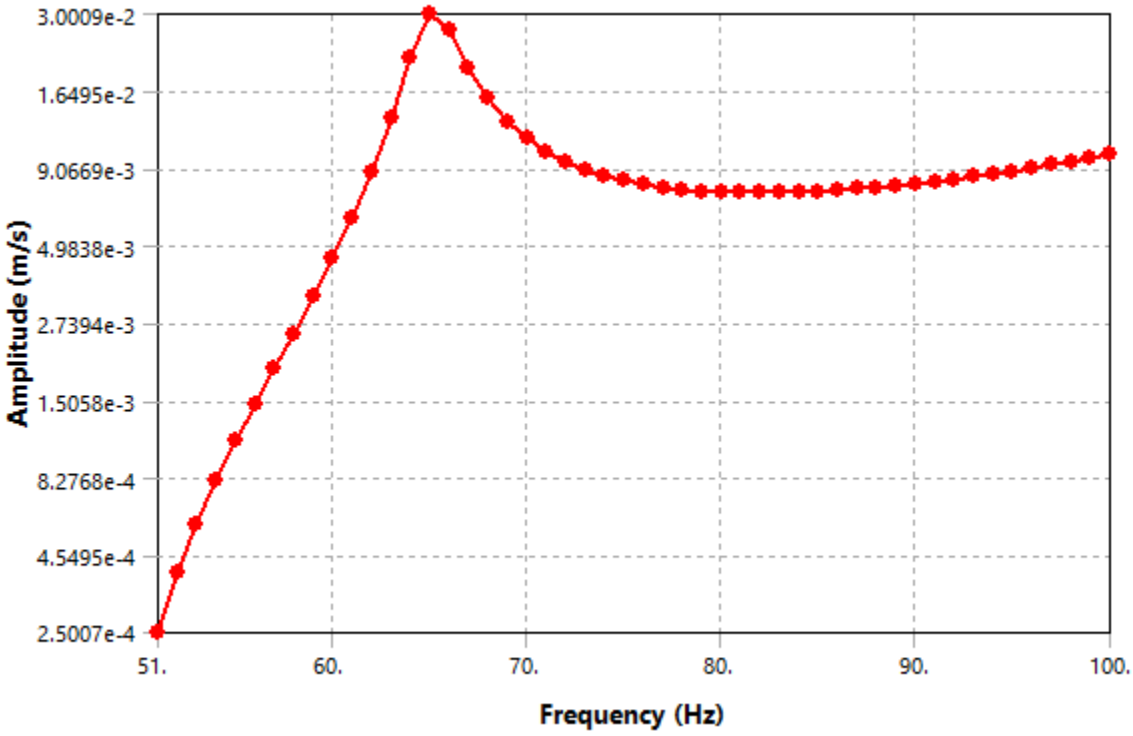


FIGURE 53
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6x

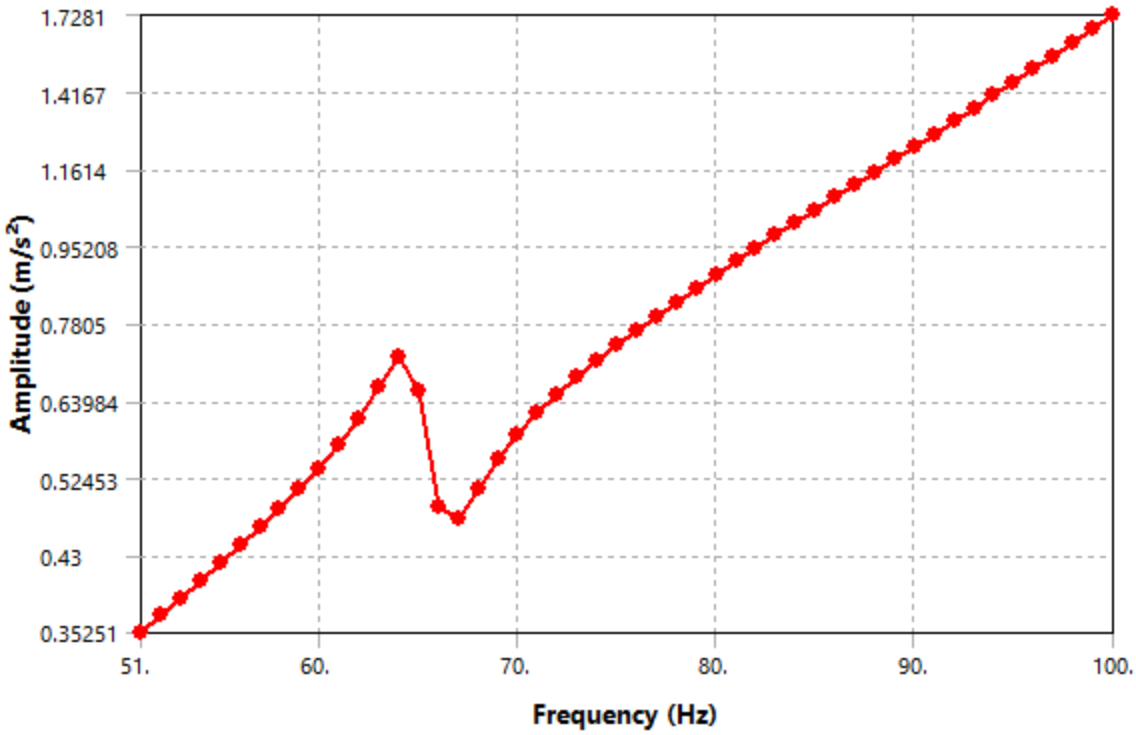


FIGURE 54
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6y

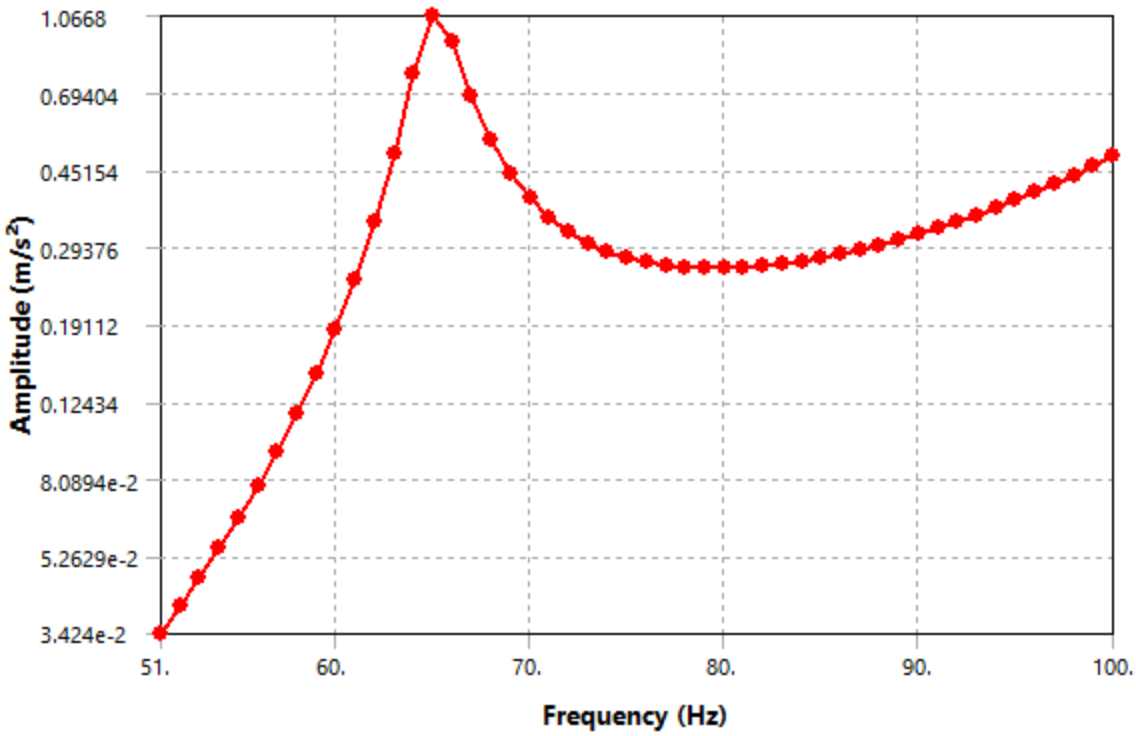


FIGURE 55
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM6z

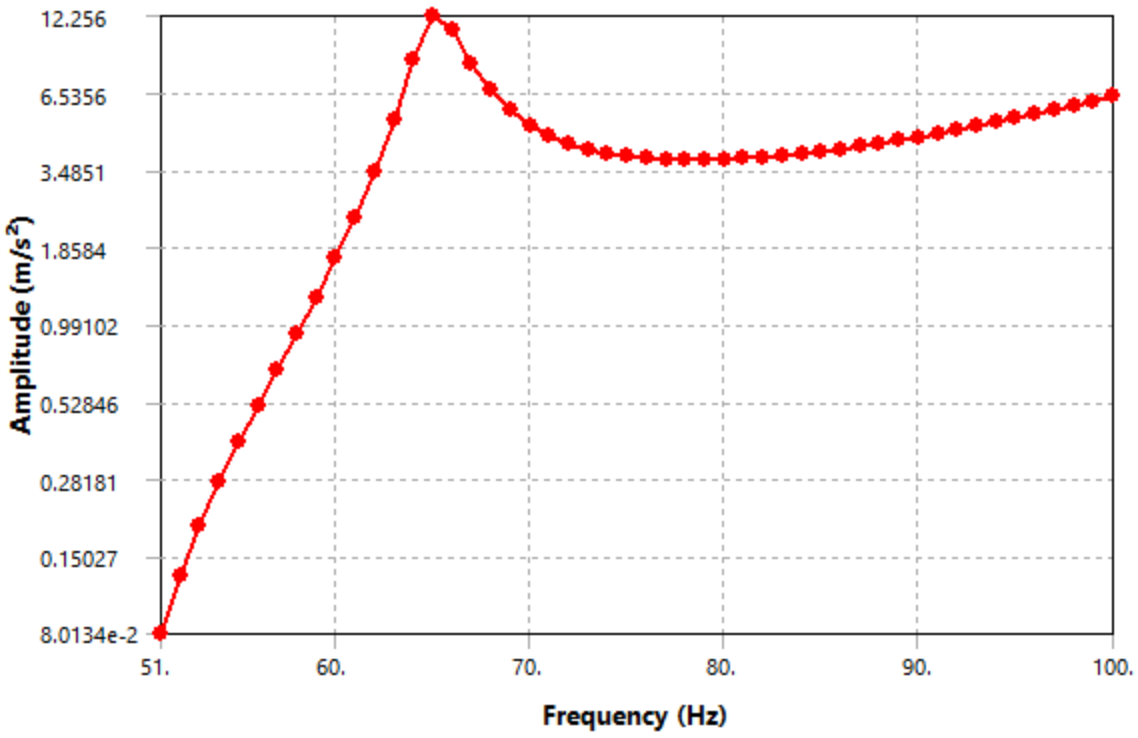


FIGURE 56
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6x

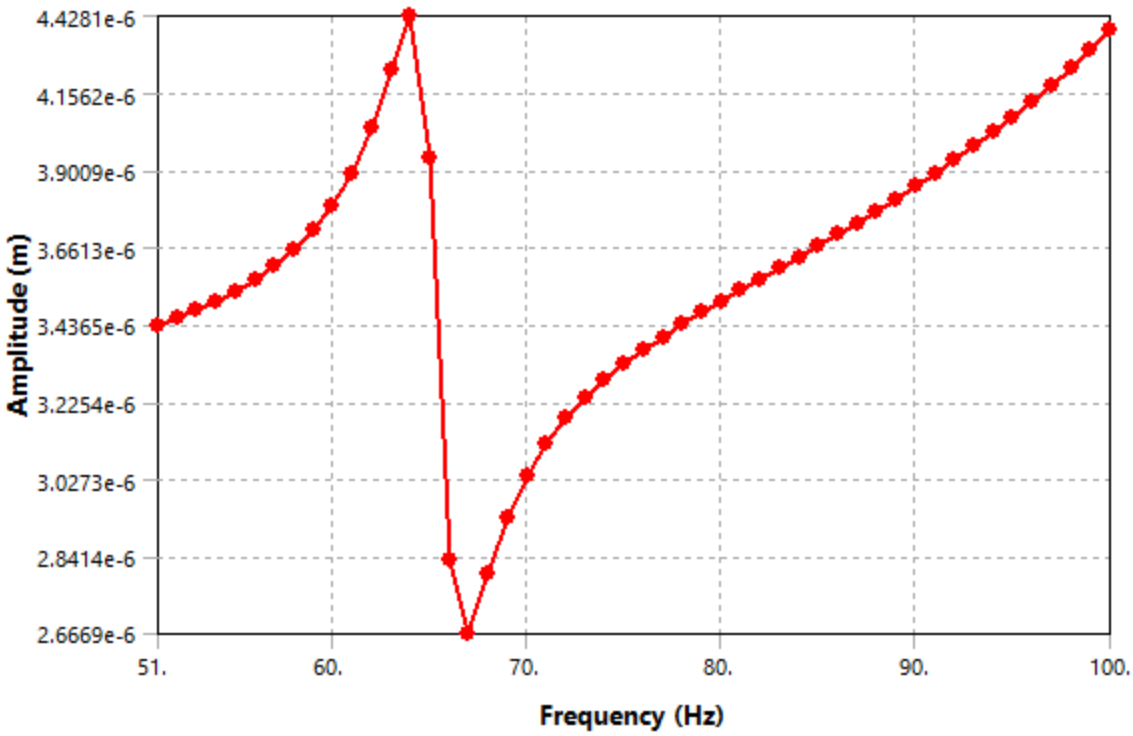


FIGURE 57
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6y

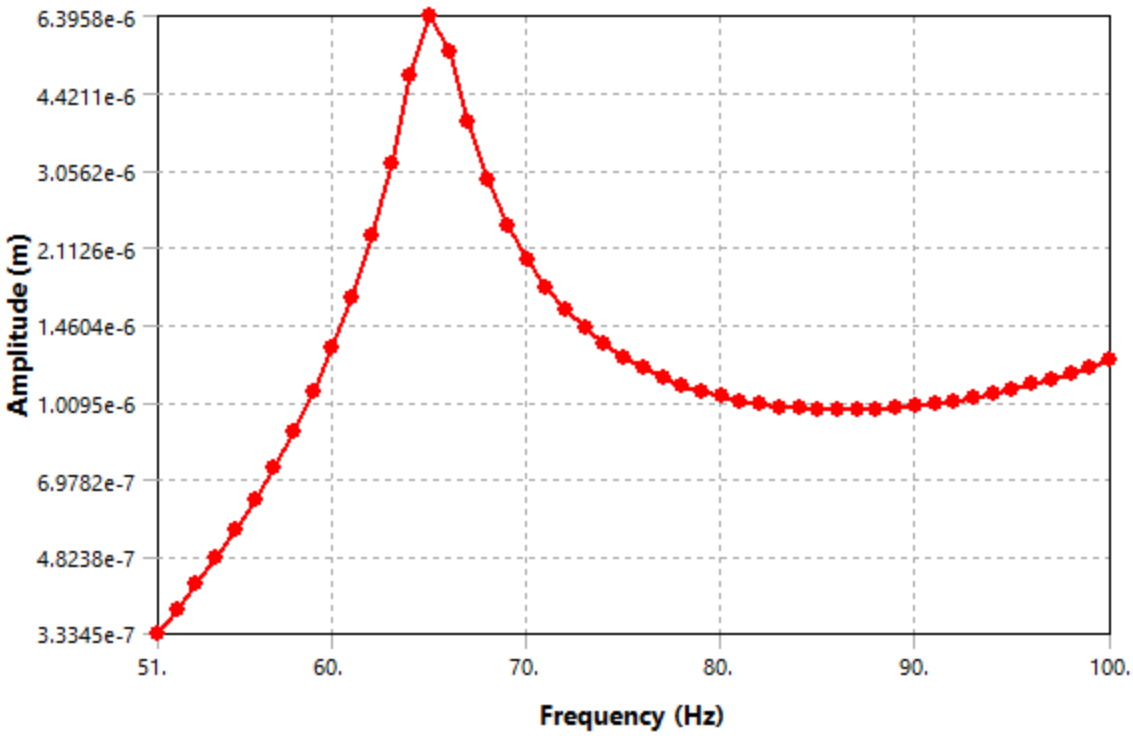


FIGURE 58
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM6z

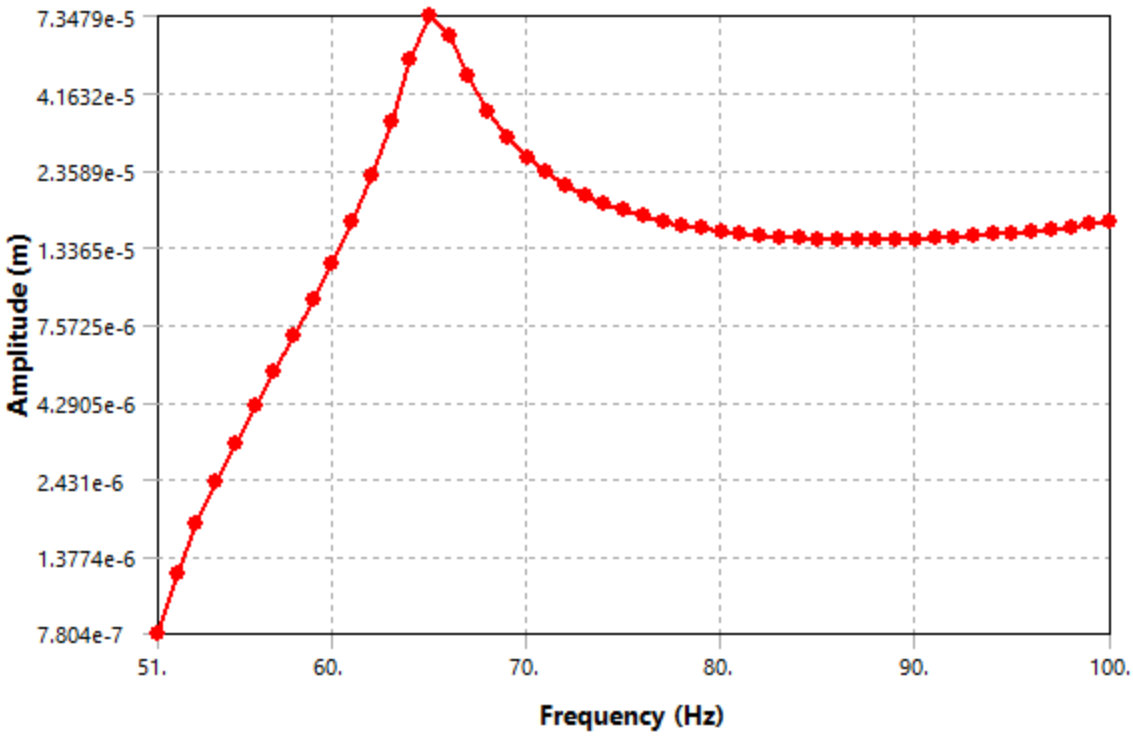


FIGURE 59
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7x

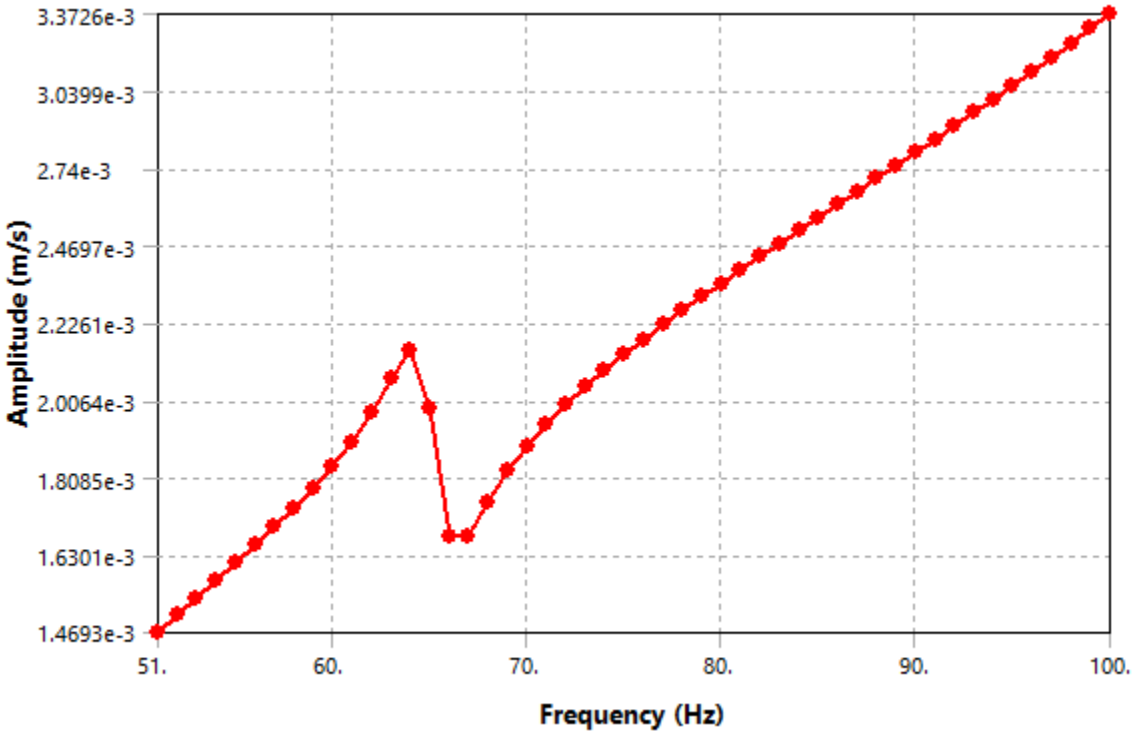


TABLE 70
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

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				
50. Hz				
100. Hz				
Bode				
Log Y				
Results				
1.0736 m/s²	11.906 m/s²	5.3677e-006 m	6.4367e-006 m	7.13
65. Hz		100. Hz	65. Hz	
89.46 °	-94.89 °	178.19 °	-90.54 °	
1.0111e-002 m/s²	-1.015 m/s²	-5.365e-006 m	-6.0619e-008 m	6.08
1.0736 m/s²	-11.863 m/s²	1.6984e-007 m	-6.4364e-006 m	7.11

FIGURE 60
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7y

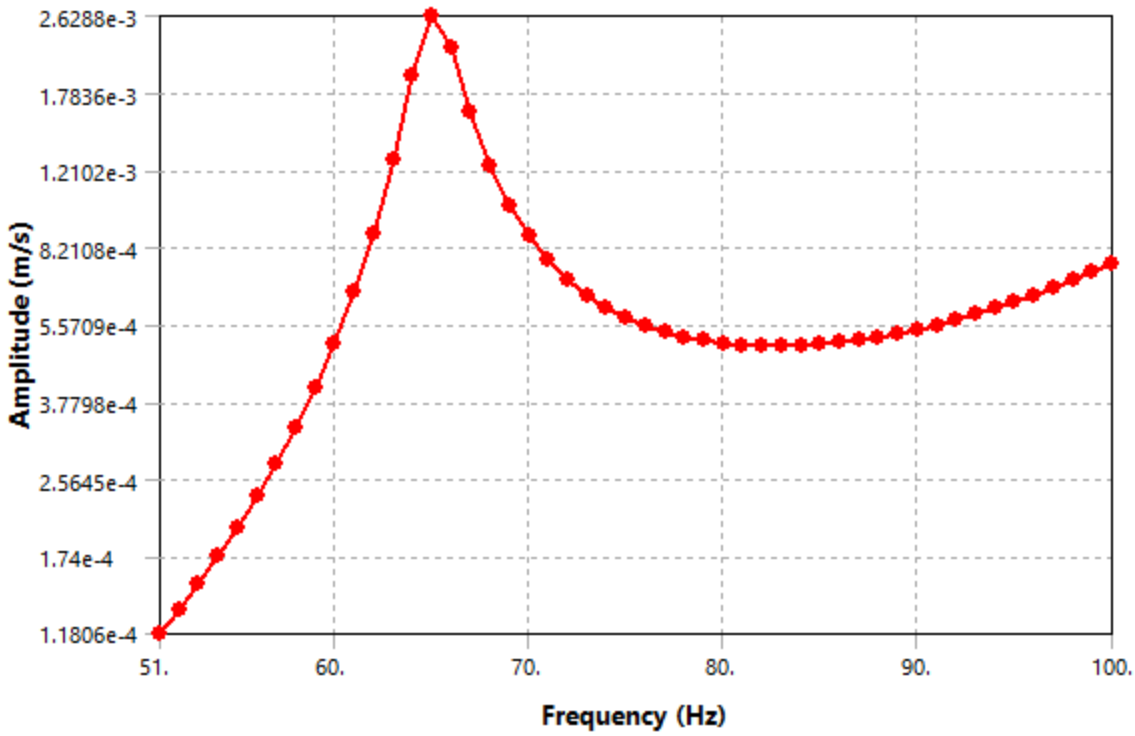


FIGURE 61
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM7z

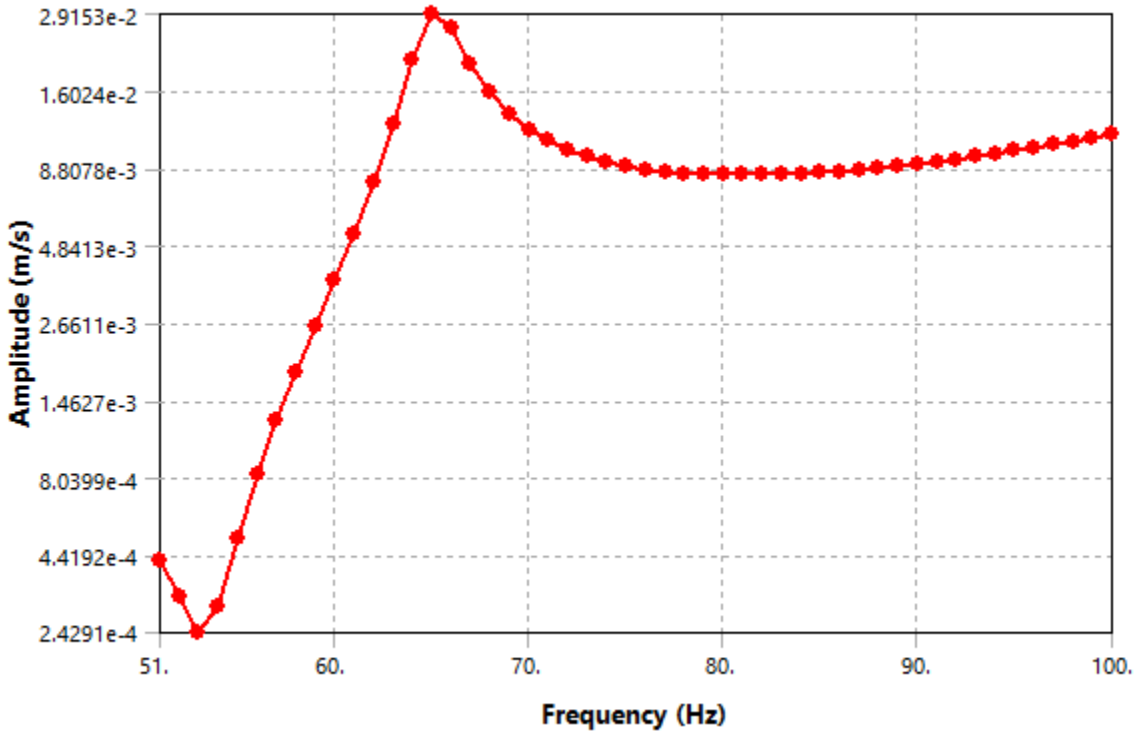


FIGURE 62
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7x

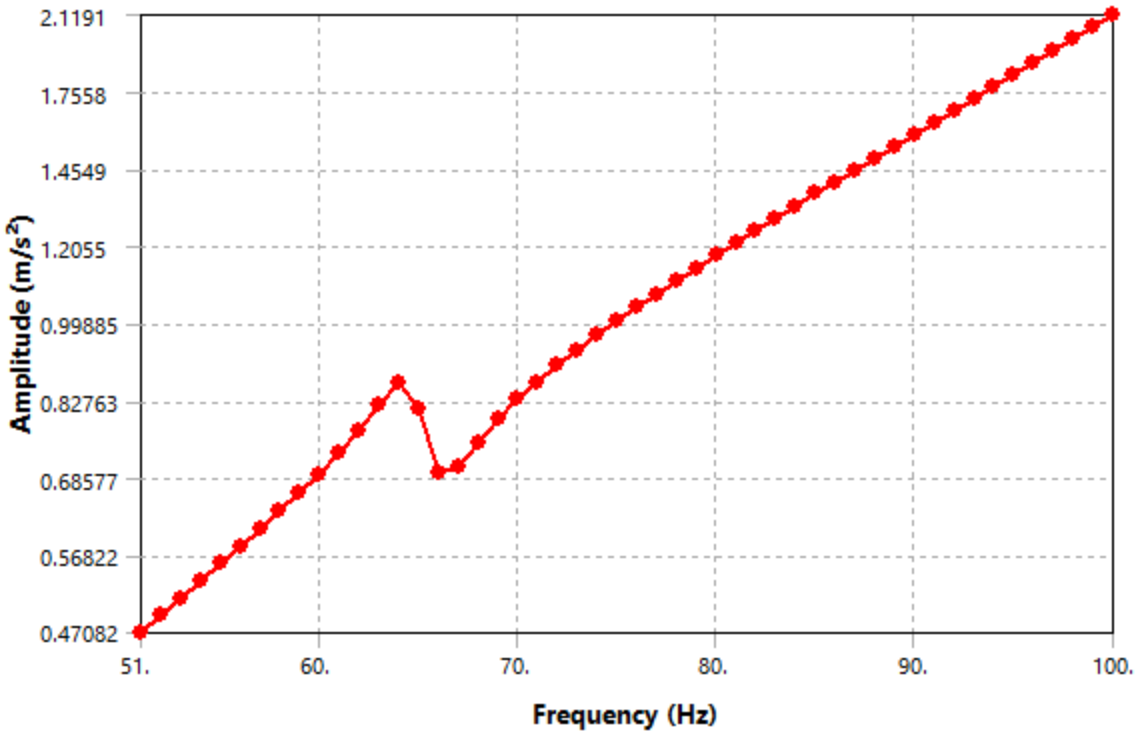


FIGURE 63
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7y

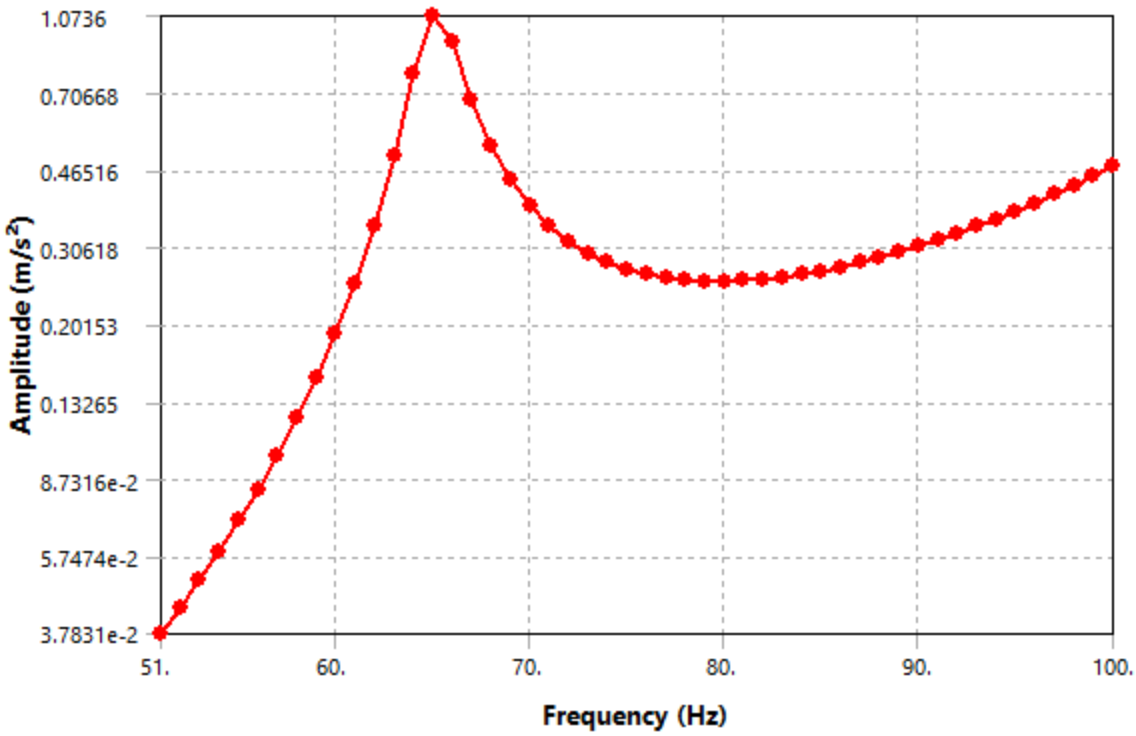


FIGURE 64
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM7z

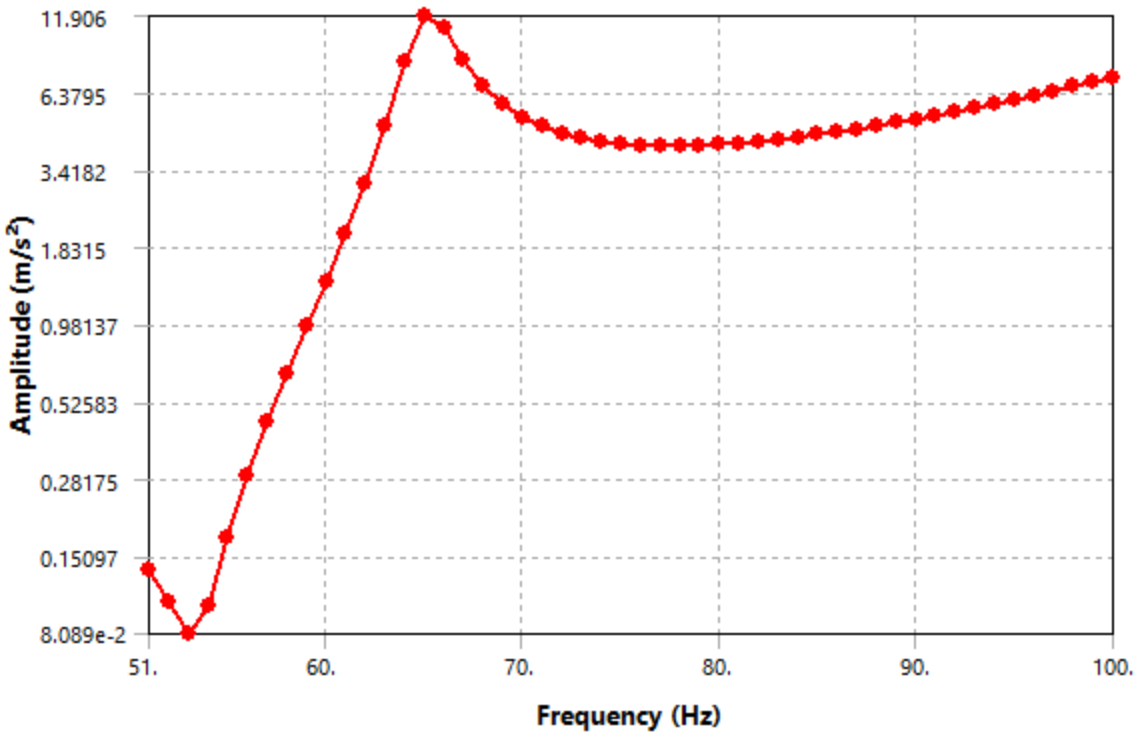


FIGURE 65
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM7x

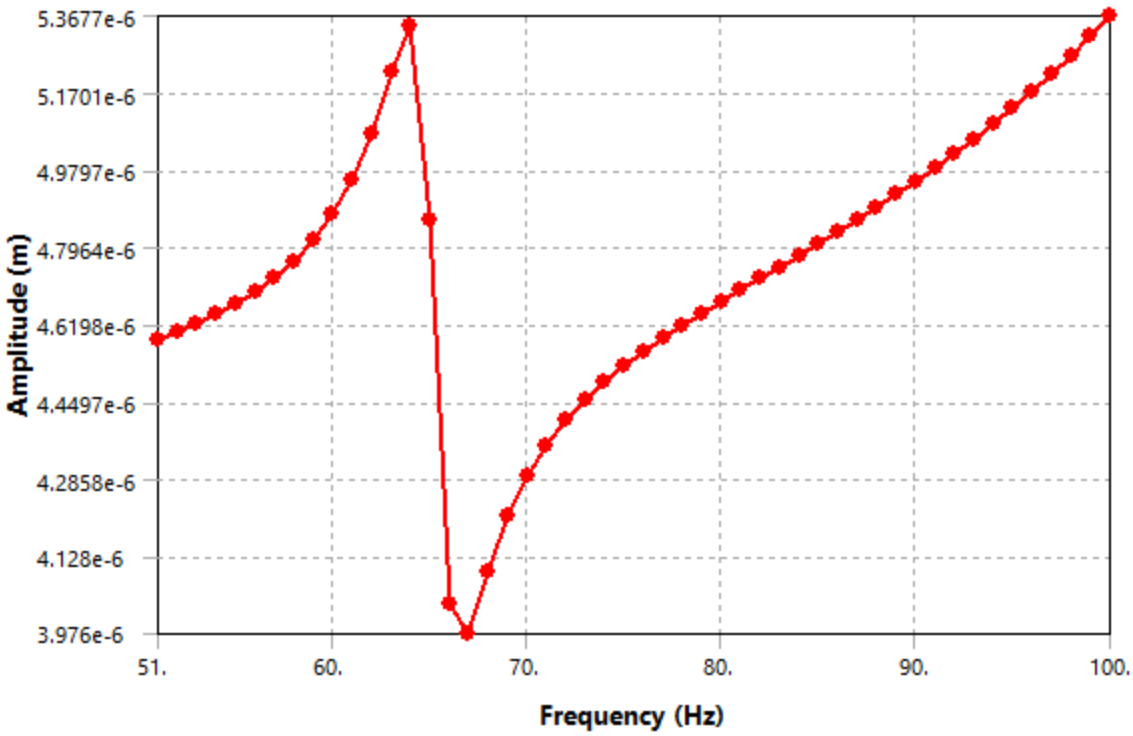


FIGURE 66
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM7y

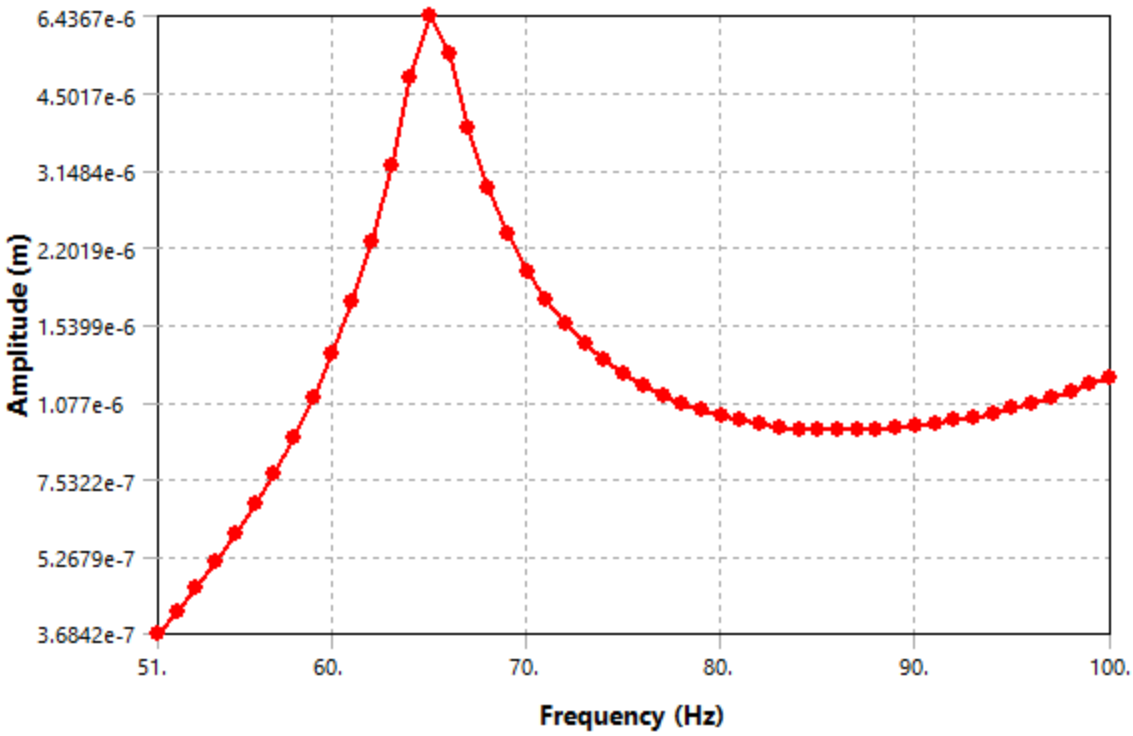


FIGURE 67
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM7z

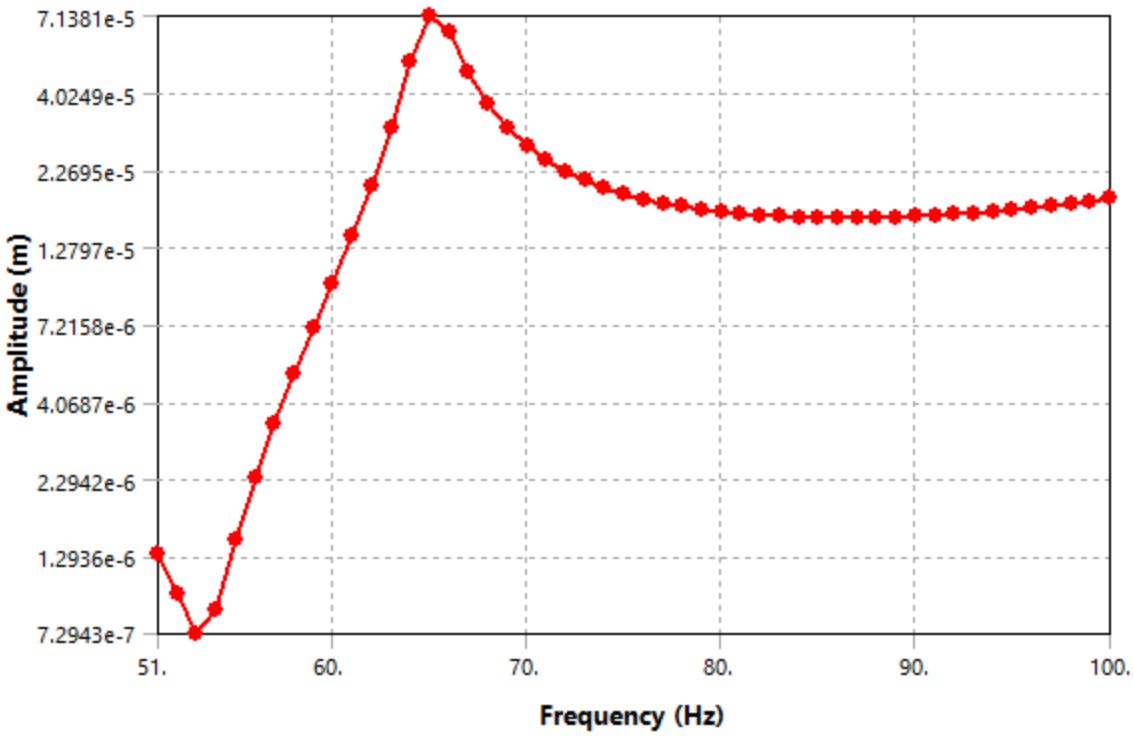


FIGURE 68
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8x

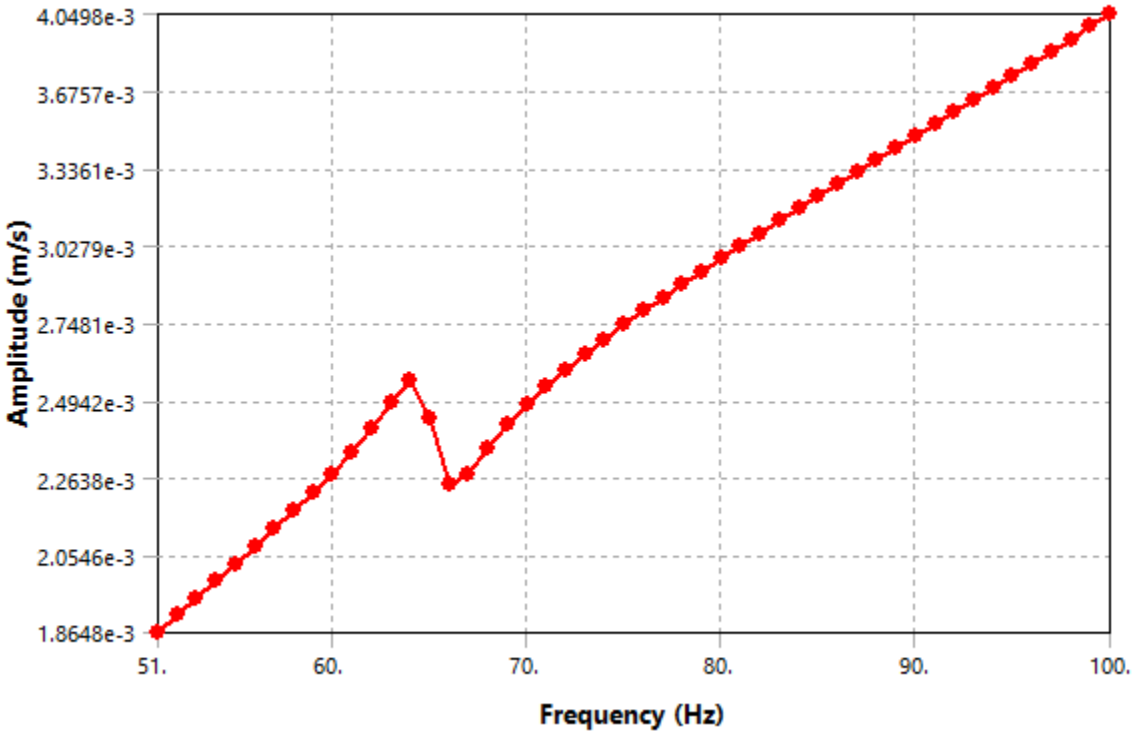


FIGURE 69
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8y

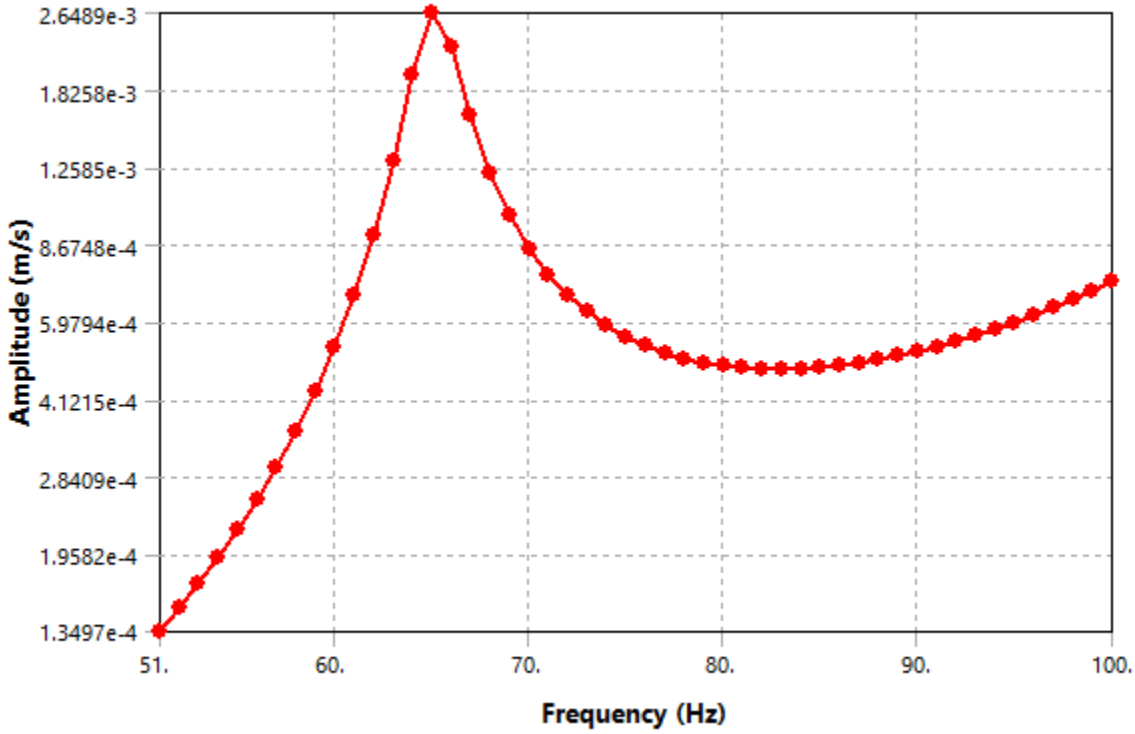


FIGURE 70
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > VelocityFrequencyResponseDIMM8z

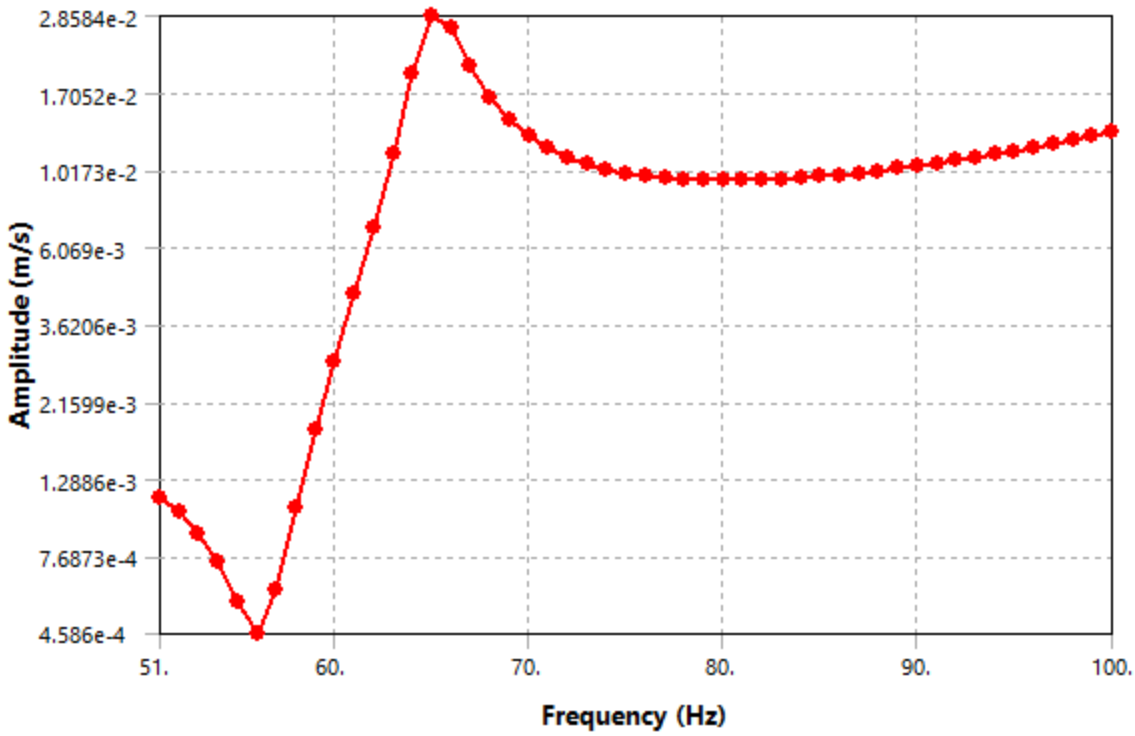


TABLE 71
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > Result Charts

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			
50. Hz			
100. Hz			
Bode			

Log Y

Results			
1.0818 m/s²	11.674 m/s²	6.4455e-006 m	6.485
65. Hz		100. Hz	
89.91 °	-96.859 °	178.75 °	-9
1.7001e-003 m/s²	-1.3941 m/s²	-6.444e-006 m	-1.019
1.0818 m/s²	-11.59 m/s²	1.4115e-007 m	-6.485

FIGURE 71
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8x

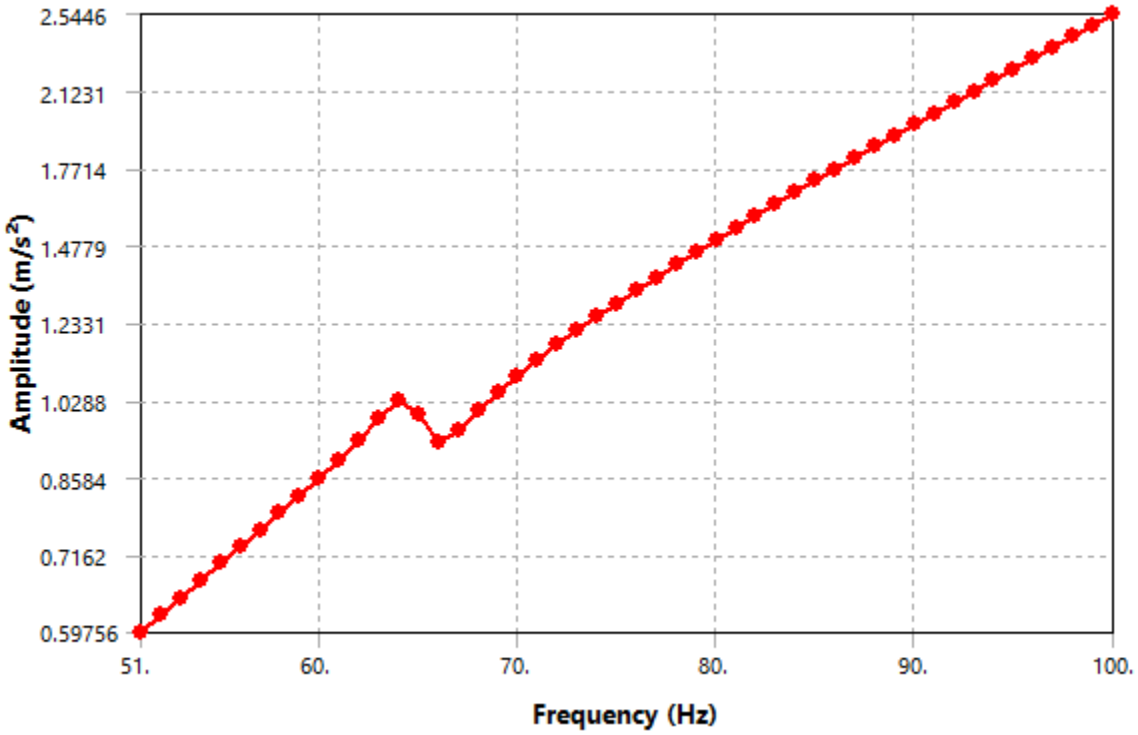


FIGURE 72
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8y

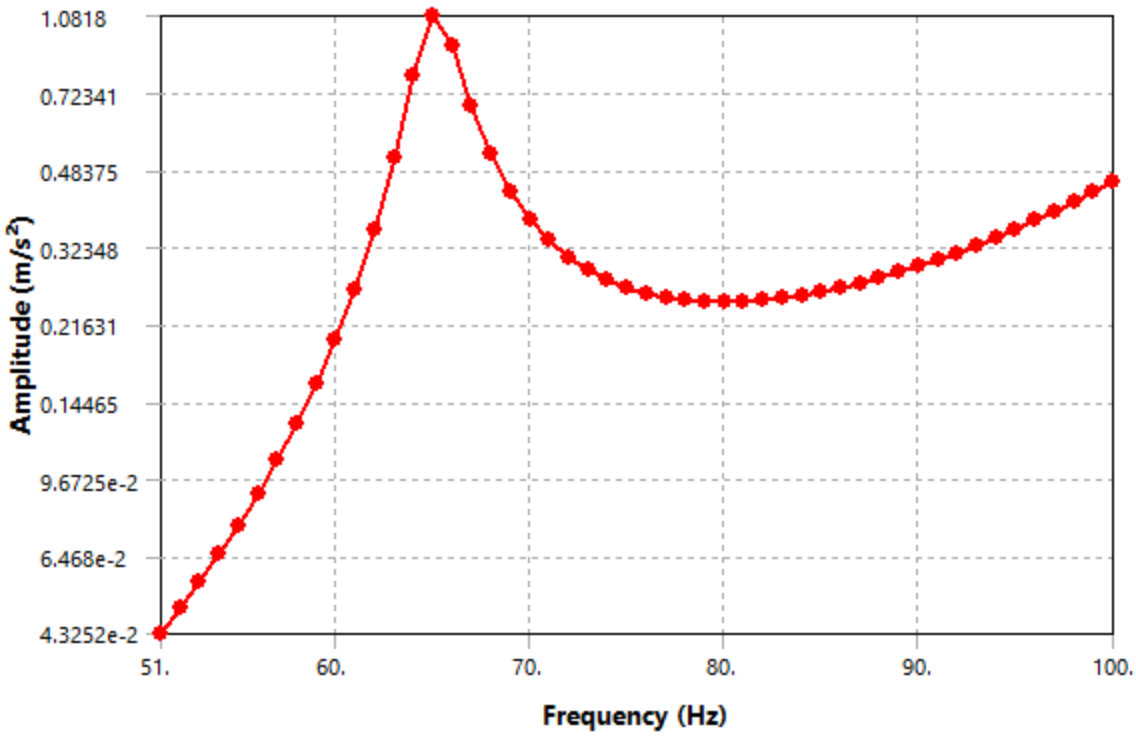


FIGURE 73
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > AccelerationFrequencyResponseDIMM8z

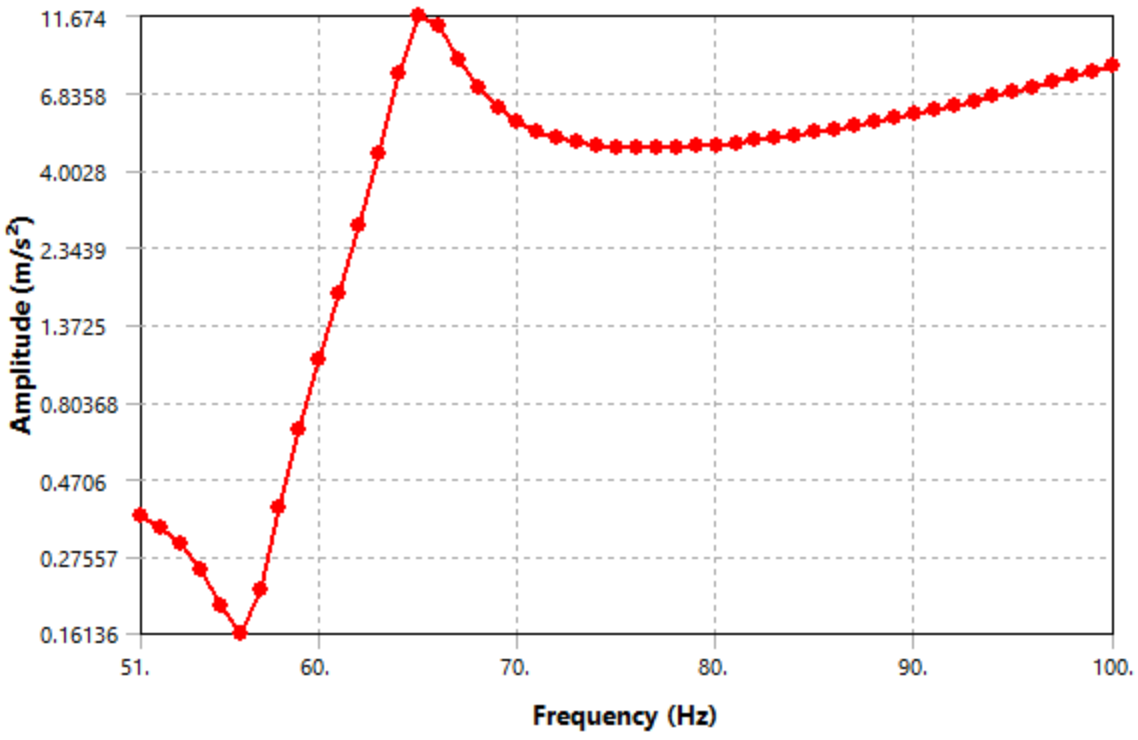


FIGURE 74
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8x

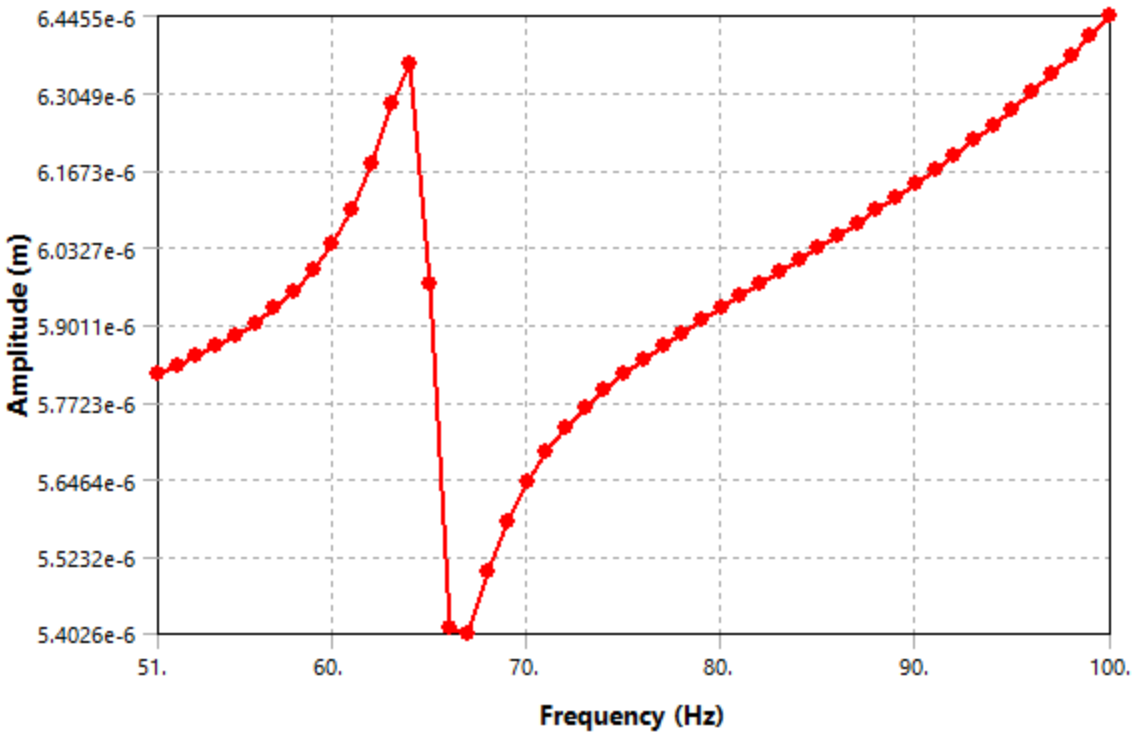


FIGURE 75
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8y

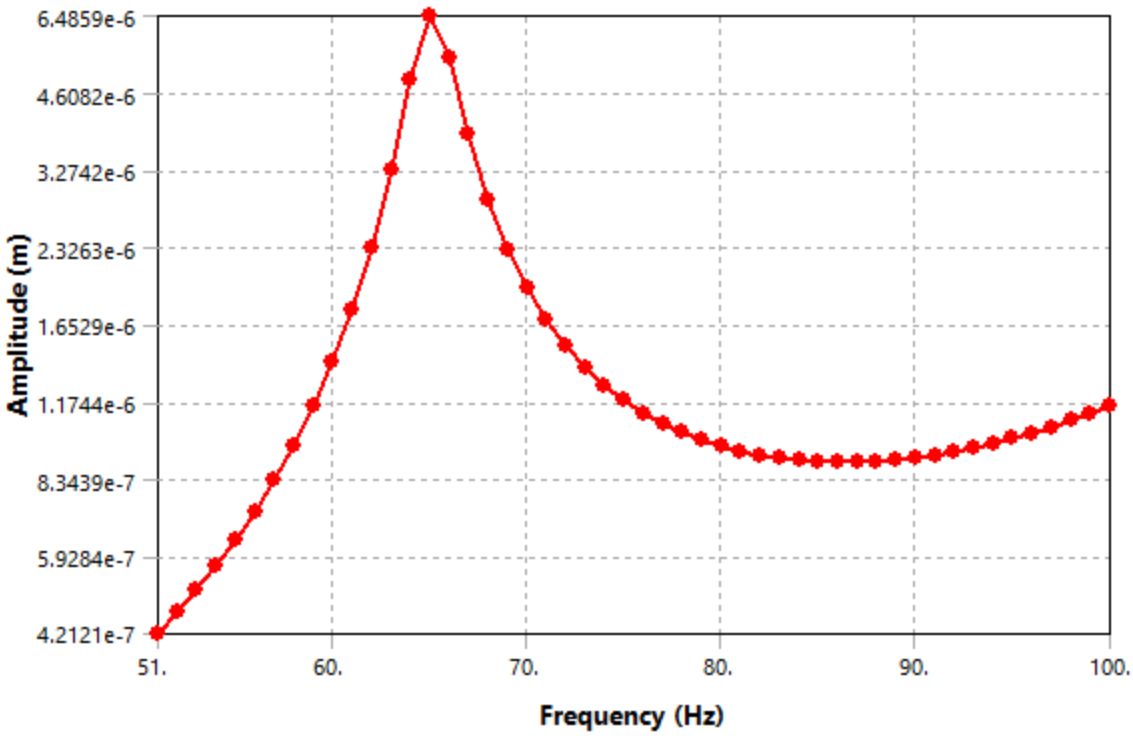
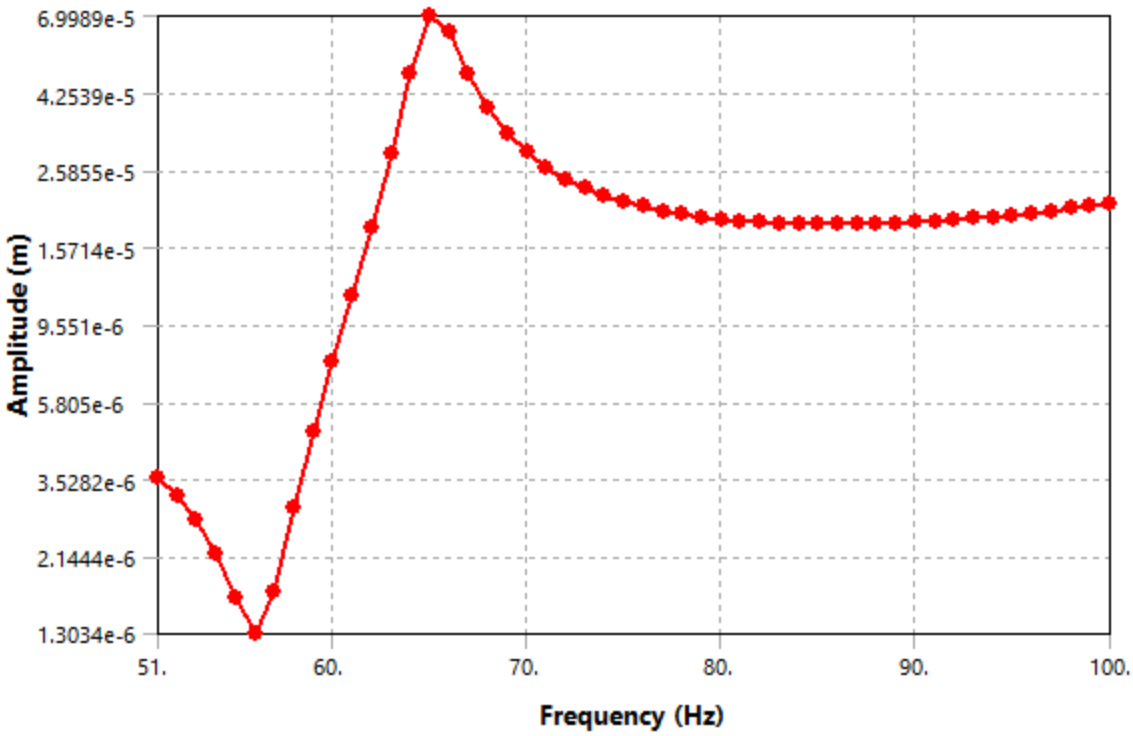


FIGURE 76
Model (A4, B4) > Harmonic Response (B5) > Solution (B6) > DeformationFrequencyResponseDIMM8z



Material Data

AISI 1020 Steel, cold rolled

TABLE 72
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 73
AISI 1020 Steel, cold rolled > Density

Density kg m^-3
7870

TABLE 74
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 75
AISI 1020 Steel, cold rolled > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 76
AISI 1020 Steel, cold rolled > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
4.2e+008

TABLE 77
AISI 1020 Steel, cold rolled > Specific Heat Constant Pressure

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

TABLE 78
AISI 1020 Steel, cold rolled > Isotropic Thermal Conductivity

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

Aluminum 6061-T6; 6061-T651

TABLE 79
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 80
Aluminum 6061-T6; 6061-T651 > Density

Density kg m^-3
2700

TABLE 81
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 82
Aluminum 6061-T6; 6061-T651 > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 83
Aluminum 6061-T6; 6061-T651 > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
3.103e+008

TABLE 84
Aluminum 6061-T6; 6061-T651 > Specific Heat Constant Pressure

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

TABLE 85
Aluminum 6061-T6; 6061-T651 > Isotropic Thermal Conductivity

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

Nylon

TABLE 86
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 87
Nylon > Density

Density kg m^-3
1160

TABLE 88
Nylon > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 89
Nylon > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 90
Nylon > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
7.e+007

TABLE 91
Nylon > Specific Heat Constant Pressure

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

TABLE 92
Nylon > Isotropic Thermal Conductivity

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

Glass Epoxy Composite

TABLE 93
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 94
Glass Epoxy Composite > Density

Density kg m^-3
7300

TABLE 95
Glass Epoxy Composite > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 96
Glass Epoxy Composite > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 97
Glass Epoxy Composite > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
3.19e+008

TABLE 98
Glass Epoxy Composite > Specific Heat Constant Pressure

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

TABLE 99
Glass Epoxy Composite > Isotropic Thermal Conductivity

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

LCP

TABLE 100
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 101
LCP > Density

Density kg m^-3
1760

TABLE 102
LCP > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 103
LCP > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 104
LCP > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
1.17e+008

TABLE 105
LCP > Specific Heat Constant Pressure

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

TABLE 106
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 107
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 108
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Density

Density kg m^-3
1653.5

TABLE 109
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 110
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 111
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
2.5e+008

TABLE 112
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Specific Heat Constant Pressure

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

TABLE 113
Oxygen-free Electronic Copper (OFE), UNS C10100, H00 Temper, flat prod > Isotropic Thermal Conductivity

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

ABS

TABLE 114
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 115
ABS > Density

Density kg m^-3
1300

TABLE 116
ABS > Isotropic Secant Coefficient of Thermal Expansion

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

TABLE 117
ABS > Tensile Yield Strength

Tensile Yield Strength Pa

TABLE 118
ABS > Tensile Ultimate Strength

Tensile Ultimate Strength Pa
4.e+007

TABLE 119
ABS > Specific Heat Constant Pressure

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

TABLE 120
ABS > Isotropic Thermal Conductivity

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