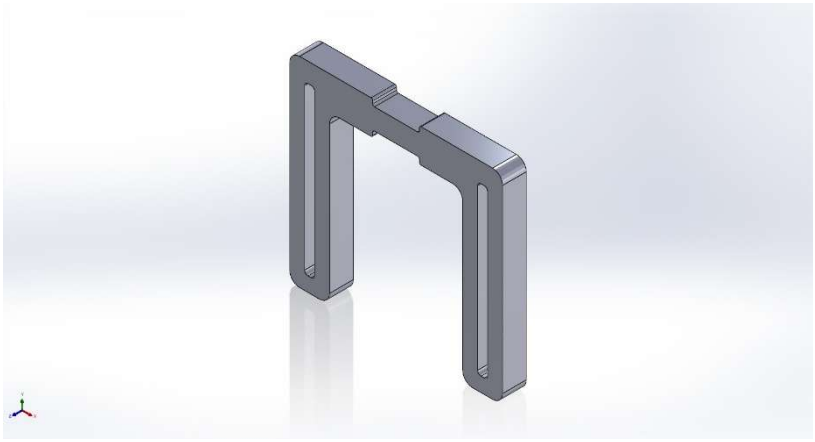


Simulation of Electronic Department

Date: Wednesday, December 4, 2024
Designer: Solidworks
Study name: Static 1
Analysis type: Static

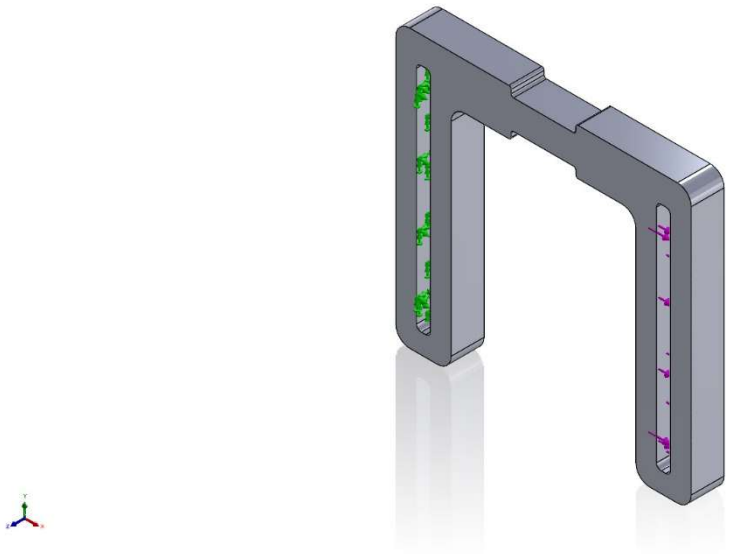
Table of Contents

Description

No Data

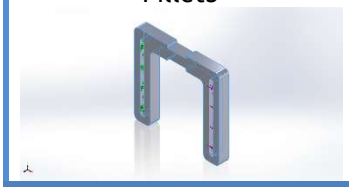
Assumptions

Model Information



Model name: Electronic Department
Current Configuration: Default

Solid Bodies

Document Name and Reference	Treated As	Volumetric Properties	Document Path/Date Modified
Fillet3 	Solid Body	**Mass:0.0294734 kg** **Volume:1.0602e-05 m^3** **Density:2,780 kg/m^3** **Weight:0.28884 N**	**F:\PVT\Uni\Electronic Department.SLDPRT** Nov 11 12:28:04 2024

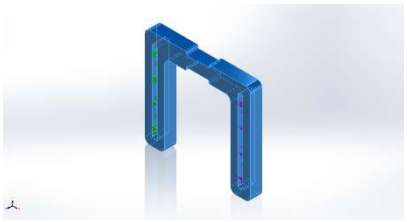
Study Properties

Study name	Static 1
Analysis type	Static
Mesh type	Solid Mesh
Thermal Effect:	On
Thermal option	Include temperature loads
Zero strain temperature	298 Kelvin
Include fluid pressure effects from SOLIDWORKS Flow Simulation	Off
Solver type	Automatic
Inplane Effect:	Off
Soft Spring:	Off
Inertial Relief:	Off
Incompatible bonding options	Automatic
Large displacement	Off
Compute free body forces	On
Friction	Off
Use Adaptive Method:	Off
Result folder	SOLIDWORKS document (F:\PVT\Uni)

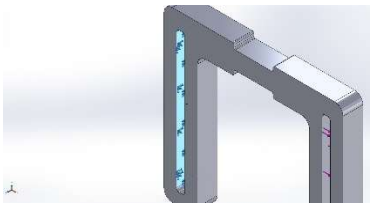
Units

Unit system:	SI (MKS)
Length/Displacement	mm
Temperature	Kelvin
Angular velocity	Rad/sec
Pressure/Stress	N/m^2

Material Properties

Model Reference	Properties	Components
	**Name:** Aluminium 2024-T3511 **Model type:** Linear Elastic Isotropic **Default failure criterion:** Max von Mises Stress **Yield strength:** 3.24e+08 N/m^2 **Tensile strength:** 4.69e+08 N/m^2 **Elastic modulus:** 7.31e+10 N/m^2 **Poisson's ratio:** 0.33 **Mass density:** 2,780 kg/m^3 **Shear modulus:** 2.8e+10 N/m^2 **Thermal expansion coefficient:** 2.3e-05 /Kelvin	SolidBody 1(Fillet3)(Electronic Department)
Curve Data:N/A		

Loads and Fixtures

Fixture name	Fixture Image	Fixture Details
Fixed-1		**Entities:** 1 face(s) **Type:** Fixed Geometry

Resultant Forces

Components	X	Y	Z	Resultant
Reaction force(N)	-117.682	-0.000122357	0.00276653	117.682
Reaction Moment(N.m)	0	0	0	0

Load name	Load Image	Load Details
Force-1		**Entities:** 1 face(s) **Type:** Apply normal force **Value:** 12 kgf

Connector Definitions
No Data

Interaction Information
No Data

Mesh information

Mesh type	Solid Mesh
Mesher Used:	Blended curvature-based mesh
Jacobian points for High quality mesh	16 Points
Maximum element size	1 mm
Minimum element size	0.087066 mm
Mesh Quality	High

Mesh information - Details

Total Nodes	144705
Total Elements	95433
Maximum Aspect Ratio	4.211
% of elements with Aspect Ratio < 3	100
Percentage of elements with Aspect Ratio > 10	0
Percentage of distorted elements	0
Time to complete mesh(hh;mm;ss):	00:00:02
Computer name:	NEELANJANA

Sensor Details

No Data

Resultant Forces

Reaction forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	-117.682	-0.000122357	0.00276653	117.682

Reaction Moments

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N.m	0	0	0	0

Free body forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	-0.0241201	-0.00561629	0.0261222	0.0359958

Free body moments

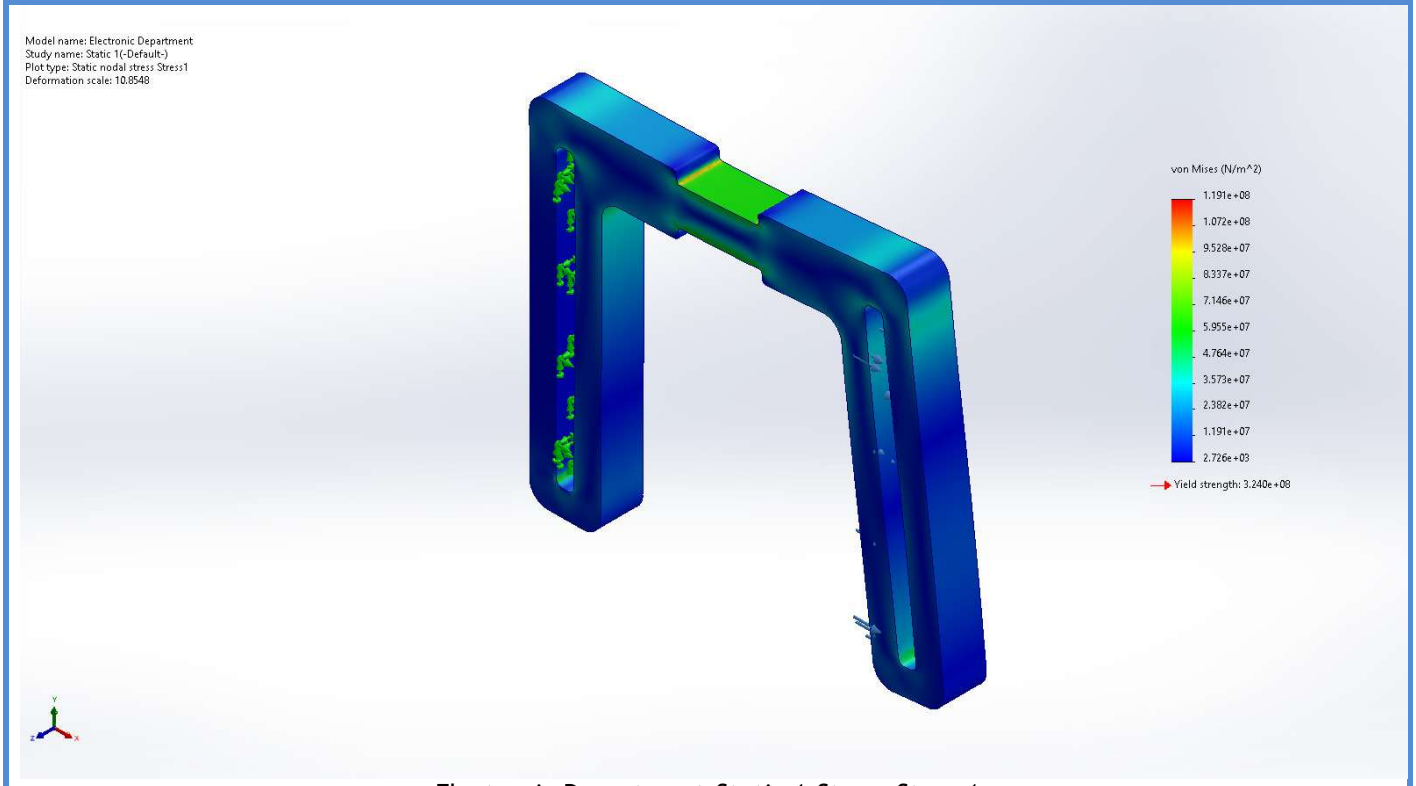
Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N.m	0	0	0	1e-33

Beams

No Data

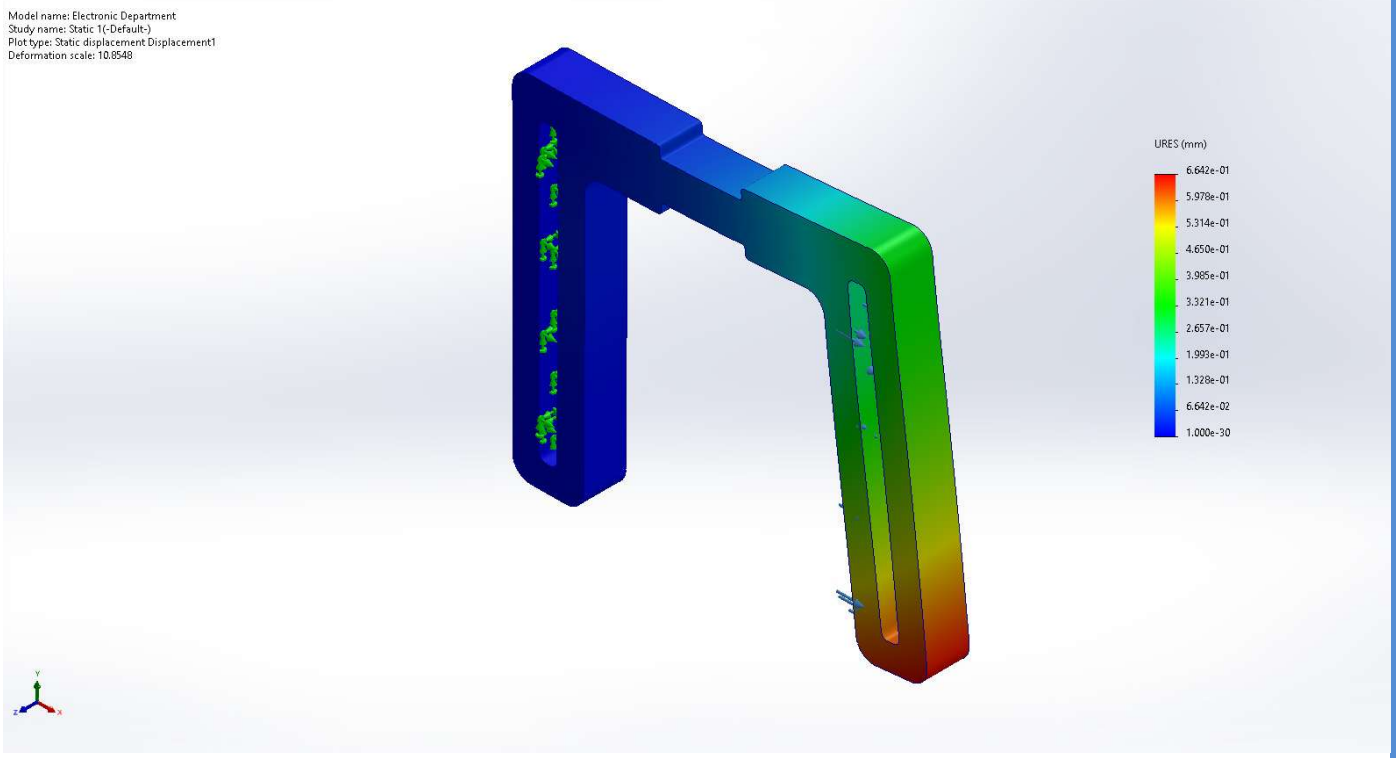
Study Results

Name	Type	Min	Max
Stress1	VON: von Mises Stress	2.726e+03N/m^2 Node: 106057	1.191e+08N/m^2 Node: 93889



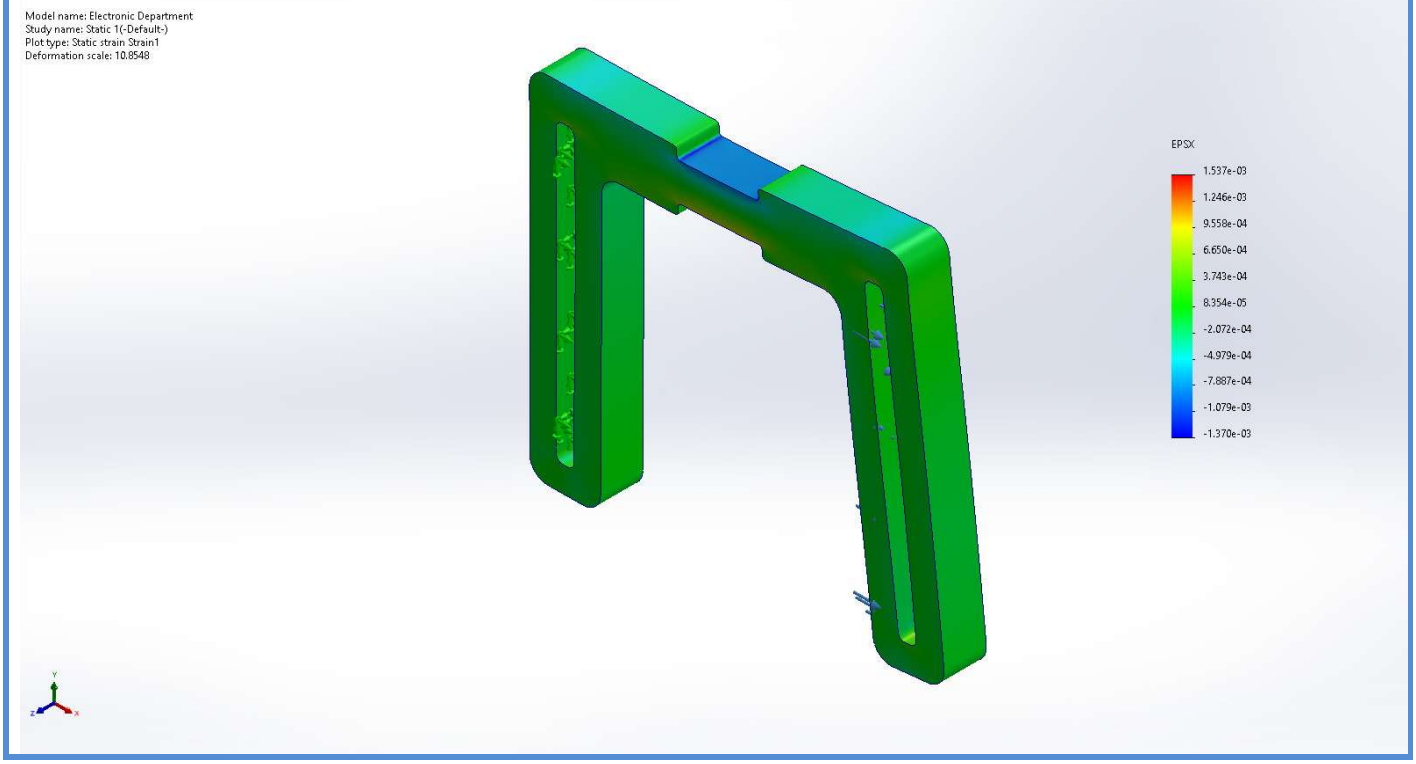
Electronic Department-Static 1-Stress-Stress1

Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0.000e+00mm Node: 47	6.642e-01mm Node: 138817



Electronic Department-Static 1-Displacement-Displacement1

Name	Type	Min	Max
Strain1	EPSX: X Normal Strain	-1.370e-03 Node: 6277	1.537e-03 Node: 4982



Conclusion