

Vibration Damping PID

Particle Impact Damper Component

Protect PCB from Cracks

Increase Life of PCB

Surface Mount



Invented by *NASA*
for Space Launch.

**Application:
Protection to PCB
assembly from
Massive Random
Vibration.**

Made by

TopLine®

The Story

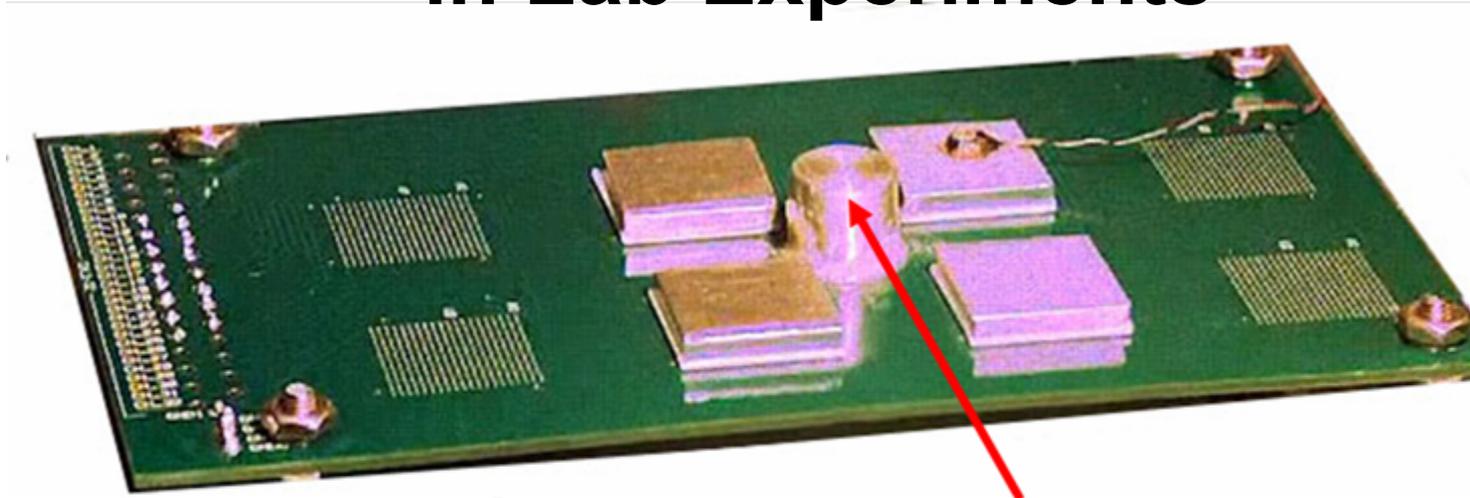
2016 – NASA transferred original PID technology to TopLine

2018~2020 – TopLine was granted 4 additional patents on PID

2020 – Engineering samples produced.

2022 – Manufacturing of PID in Orange County, California

Original NASA PID in Lab Experiments

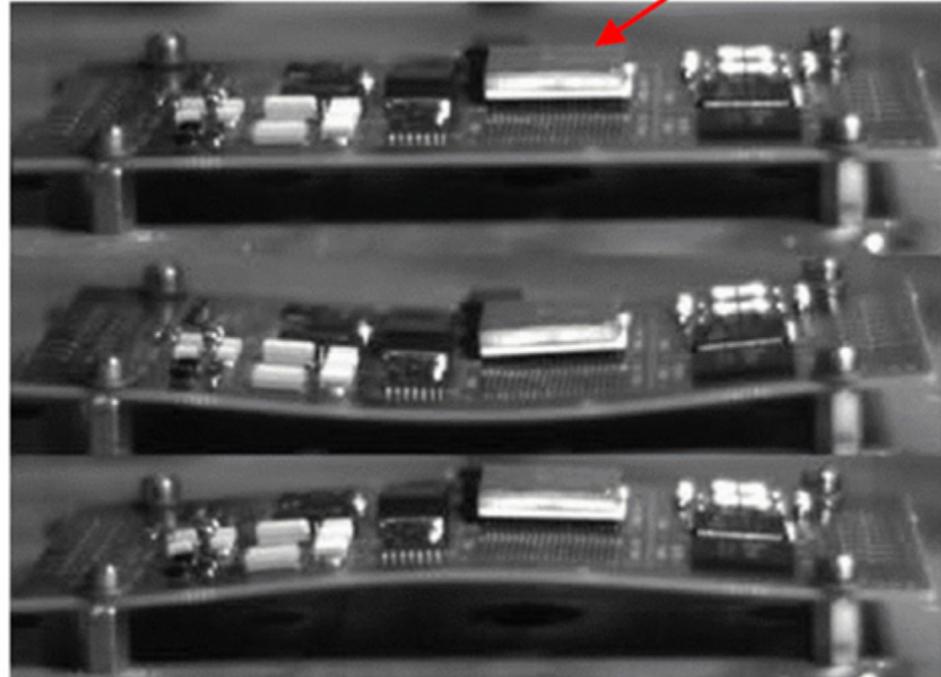


PID Particle Impact Damper

YouTube VIDEO:

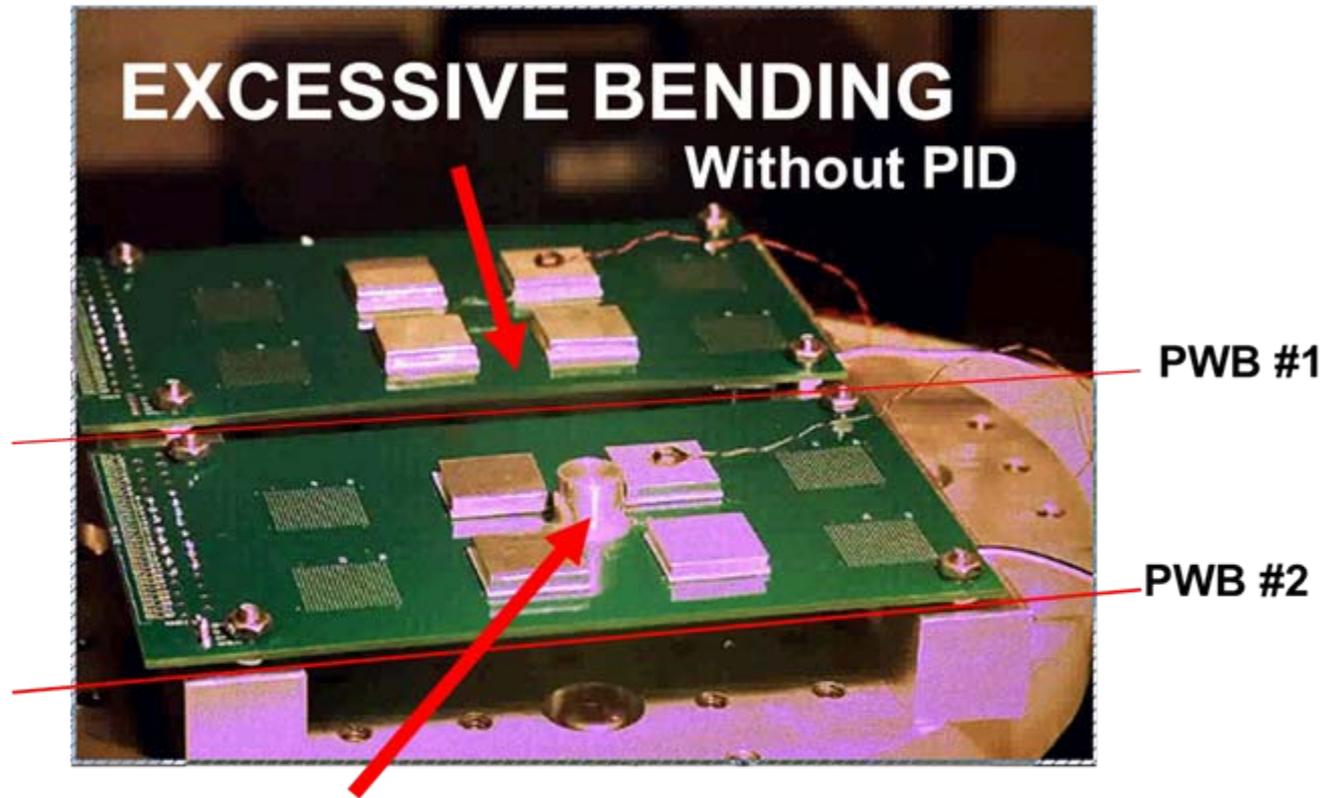
<https://www.youtube.com/watch?v=P4SQuBaKXWw>

CCGA with Micro-coil Spring Interconnects



EXCESSIVE BENDING

Without PID

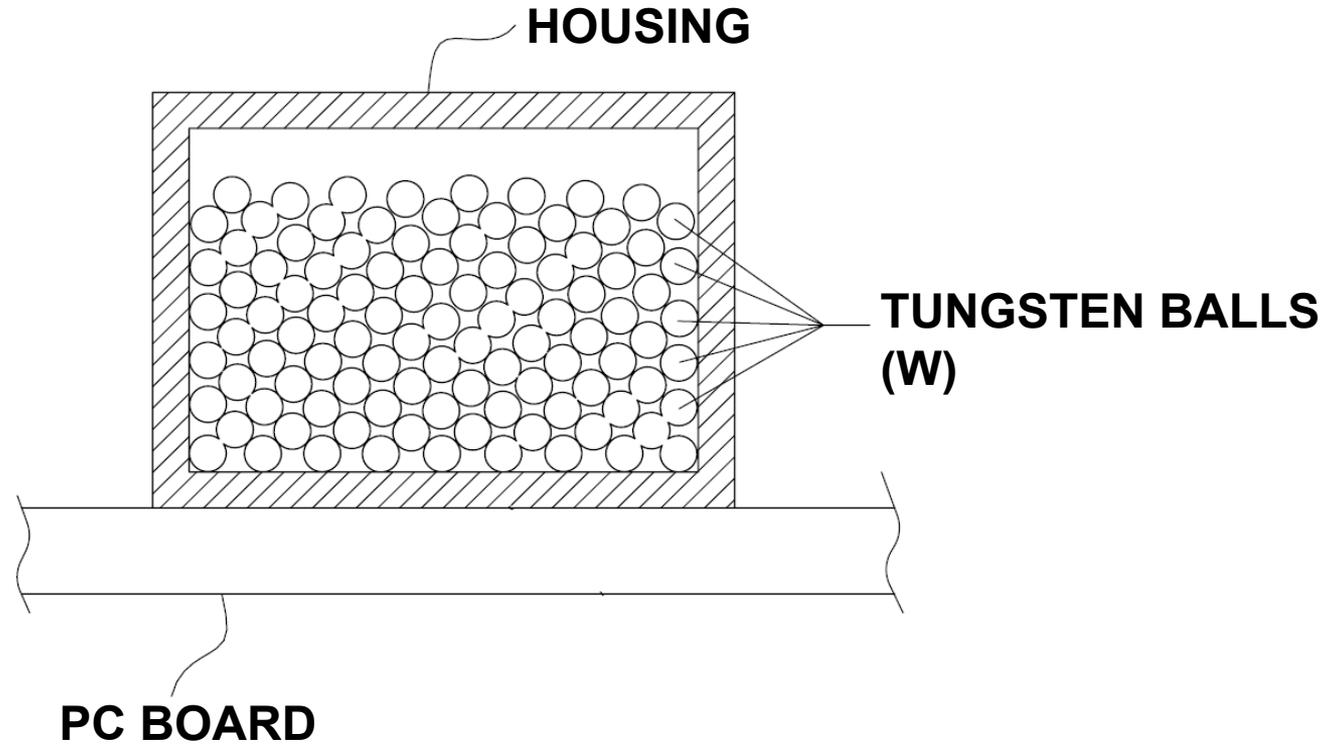


PID extends hardware life.
Lighter, simpler solution

PID Design Rules

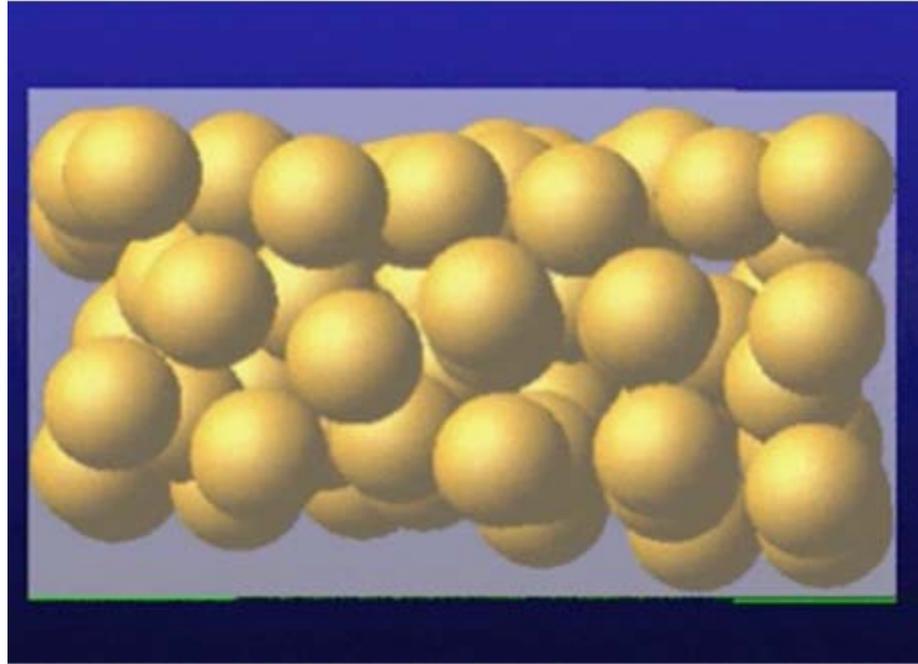
- The mass of the tungsten particles (inside the PID) is approximately 10% of the mass of the PCBA assembly (with components).
- Locate the PID on top or bottom of PCBA nearest the point of maximum excitation.
- OK to use multiple PID, if necessary.

INSIDE PID



Particles Moving inside PID

Movement



Let's continue the conversation !

info@TopLine.tv

1-800-776-9888



www.Vibration.Engineering