TYLER CARROLL

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https://infiniteloop12.github.io/cv/

EDUCATION

Oklahoma State University, Stillwater, OK
Bachelor of Science, Mechanical Engineering — May 2016

EXPERIENCE

Raytheon Intelligence and Space, Dallas, TX
Multi-Disciplined Engineer I — January 2020 – Present

- Liaison between process engineering, tooling, manufacturing operations, and a sister-site to implement 2nd source manufacturing capability for RF heads and TRIMMs from planning to low rate initial production
- Communicated progress and roadblocks to stakeholders and management to ensure on-time deliveries
- Forecasted cost, hours per unit, and throughput to project how many new machines, operators, and tooling were needed for full production
- Create and provide product specifications, qualification plans, assembly instructions, workflows, and data collections for all sub-assemblies and higher-level assemblies and ensure all specs are met
- Disposition, track, and report production defects and work with process engineers to resolve issues
- Submitted cross-sections and SEM jobs to help optimize the cure profile of silver sintered epoxy to help the electrical and thermal performance of MMIC sub-assemblies
- Developed lamination and manual assembly processes and trained operators
- Qualified new a new capacitor manufacturer to help reduce assembly costs by 12%

Finisar/II-VI, Sherman, TX
Senior Process Engineer — September 2018 – January 2020

- Process owner of die-attach, all environmental testing, and CNC video measurement metrology
- Qualify and certify ten new toolsets from site start-up to mass production and implemented processes, workflows, data infrastructure, in-line process control charts, and KPI
- Main contributor in solving a long-standing, interconnected die shear issue which led to 700% die shear increase by working with back-end engineering team to perform DOEs to isolate product and process issues
- Co-led a team that exceeded many KPI during a six-week development plan that decreased cycle time through the evaluation loop by 62%, decreased particles by 50%, reduced scrap, increased capacity, increased yield improvement by 10%, and increased first-pass yield by 55%
- Statistical data analysis using JMP including CpK, GR&R, Variability Studies, and DOEs.
- Managed projects with vendors that saved a total of $126k+ per year by changing epoxy tube sizes, tape, and substrates while also reducing epoxy waste and increasing die shear values
- Generated work instructions, process documents, workflows, engineering change orders, build requests, deviations, product change notification, one-point lessons, PFMEA's, and submit failure analysis jobs

Access Optics, Broken Arrow, OK
Manufacturing Engineer I — September 2017 – Sept 2018

- Lead engineer for military projects, optical components and assembly production for medical devices
- Conducted R&D, first article inspection, environmental, durability and performance tests for approval
- Developed and maintained pricing and process estimation tool to provide quick and accurate product quotes
- Designed 3D models and drafted, approve, and released drawings using GD&T
- Documented non-conforming product and disposition via material review board reports

SKILLS

- Software: SolidWorks, VBA, JMP, Python, SQL, CATIA v5, PTC Creo (Pro-E), AutoCAD, SAP Scripting
- Shop Machinery: Lathe, Mill, CNC Machining, Soldering, Drill Press, Band Saw