

FAB\$ and LAB\$S

SV Microwave: RF Engineering for Harsh Environments



SV Microwave, a manufacturer of RF and microwave coaxial connectors, cables and passive components, has grown significantly since its start in 1968. The company was founded under a different name, Solitron Devices, and spun off into SV Microwave in 1993. Following this transition and growth period, SV established headquarters in West Palm Beach, Fla., in 2001. Four years later, they were purchased by Amphenol Corporation under their military and aerospace group. In 2018, SV expanded its Florida operation with a new R&D facility, and in 2019, expanded to a facility in Mesa, Ariz., to support its growing number of West Coast customers.

More recently, SV has invested significant funding and effort into expanding these facilities in order to fulfill customer needs. SV Microwave's Mesa location was transformed in 2025 from two separate buildings totaling 20,000 sq. ft. of production space to one continuous building with a 30,000 sq. ft. footprint. In addition to providing more production space, the unification has promoted and improved collaboration across departments and product lines, better supporting customer needs. SV's Florida location saw two major updates as well, including an office space expansion and restructuring to gain 4000 ft. of additional manufacturing space. Most recently, SV added 4600 sq. ft. of space dedicated to CNC and Swiss lathe machines. SV will continue to support customer needs through its careful design, detailed manufacturing and customer support.

Within these facilities, SV Microwave designs, manufactures and tests products for military, IoT, 5G, satellite, high speed, aerospace, commercial, EW and telecom applications. SV supports these industries with cable harnesses, semi-rigid cables, SOSA-aligned products,

armored assemblies, LTI connectors, glass-sealed connectors, embedded phase tuners, PCB mounting hardware and more. SV's J-STD certified cable harness technicians have been supplying customers with reliable products for over 15 years. They manufacture a variety of cable harness types, including pure-play and complex, multi-signal bundles and can service build-to-print or design-to-spec approaches. Additionally, they offer fully and partially armored cables for harsh environments. SV has the full range of capabilities to design, build and test these cables and harnesses in-house, including automated wire cutting and stripping, over-braiding, over-molding, potting, in-process RF testing, automated RF testing, real-time X-ray, shock and vibration. In addition to these in-house capabilities, SV has access to Amphenol's more extensive test equipment to fill any gaps quickly and precisely.

In addition to their cable assemblies, SV produces connectors for harsh environments, both for on-wire and PCB-mounted applications. As temperature requirements become more complex due to higher powers and frequencies, many engineers are turning to glass dielectrics to replace PTFE dielectrics. SV supports this with glass-dielectric SMP, SMPM and SMP5 connectors that operate up to 500°C without reflowing, warping or breaking. They further support PCB connector durability with customizable mounting hardware that protects connectors from axial and radial forces created by frequent motion and vibration.

Ultimately, SV Microwave is a dedicated partner to RF users in harsh environments, and continues to support them through product development, manufacturing and supportive facility expansion.

svmicrowave.com