

RF/ MICROWAVE POWER COMPONENTS FOR DEFENSE APPLICATIONS



**Traveling-Wave Tubes
(TWTs) & Microwave Power
Modules (MPMs)**



**Active/Passive
RF/Microwave &
Control Components**



**Klystrons, Magnetrons &
Crossed-Field Amplifiers
(CFAs)**



**Solid-State
Power Amplifiers
(SSPAs)**

Applications

- * Electronic Warfare
- * Electronic Protection
- * Secured Communications/ Datalinks
- * Missile Defense. Radar
- * Threat Simulators
- * Identification Friend Foe (IFF)



Together, We Can Go Farther.

OVERVIEW

Stellant has been a leading supplier of RF systems for the defense industry for decades. Our products meet and exceed the stringent requirements for operation and durability in today's advanced radar, EW and communication systems. Whether your application requires TWTs, MPMs or Linear Accelerators our miniature and lightweight products provide state-of-the-art power, bandwidth and efficiency for sea, airborne, and ground-based applications.

TRAVELING-WAVE TUBES (TWTs)

Stellant has delivered over 30,000+ Traveling-Wave Tubes (TWTs) for various defense missions as the leading domestic supplier of TWTs.

At our sites in Torrance, CA and Williamsport, PA, scientists, engineers, technicians and operators work together in producing our high-power tubes!

From UHF- to V-B, with RF output power to 600+ watts



Ring-Bar TWT



Miniature TWT



Helix TWT



Coupled Cavity TWT



Millimeter-Wave TWT

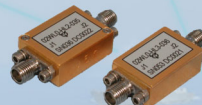
SOLID-STATE POWER AMPLIFIERS

Stellant PST offers Solid-State High-Power Broadband Amplifiers from 1 MHz to 18GHz, 10 to ~30kW in a 46,000 sq. ft. facility in Melville, NY. We design, develop, test, integrate & manufacture all in one facility.

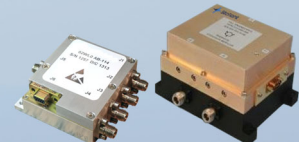


CONTROL COMPONENTS

Stellant PST formerly Hill Engineering control components and integrated assemblies are a specialty on to themselves. We design and develop high power multi-throw/multi-pole control devices while integrating LNAs and Limiters



Limiters



Switches

MICROWAVE POWER MODULES (MPMs)

Stellant is the industry leader in Microwave Power Modules (MPMs), having delivered thousands for use in some of the aerospace and defense industry's most highly-effective platforms. Our MPMs typically include a miniature Helix Traveling-Wave Tube (TWT), a Solid-State Amplifier (SSA) driver and a miniature power supply.

Our MPMs are qualified for space, ground, sea and/or airborne applications and are typically used in Unmanned Aerial Vehicles (UAVs), Radar and ECM systems, portable and mobile SATCOM systems, and point-to-point communications.

From 2 to 235GHz, with RF output power to 300+ watts



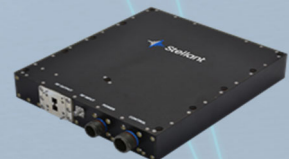
Millimeter-Wave
18 – 40 GHz, 100 W



Low Band



E-Band Secure Uplink
81 to 86 GHz, 100 W



High-Band
6.5 – 18 GHz, 200W

KLYSTRONS

Our Low-power klystrons are used as oscillators in terrestrial microwave relay communications links, while our high-power klystrons are used as output tubes in UHF television transmitters, satellite communication, radar transmitters, and to generate the drive power for modern particle accelerators.



X-Band Klystron



Clustered-Cavity Klystron

MAGNETRONS

Our magnetrons power the military radars that are used to protect assets and detect hazards across land, air and sea. They are specially designed to operate at extremely high frequencies and with very low noise levels to quickly detect small or complex threats at long range.

From L- to Ka-Band



THYRATRONS

Stellant produces a broad line of metal ceramic hydrogen Thyratrons that are capable of switching voltages up to 100 kV and currents up to 20,000 amps.

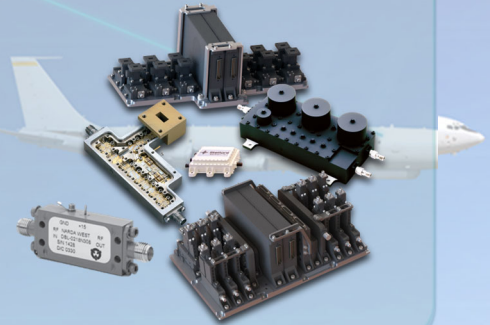
The tubes are used for a variety of applications, including radars, particle accelerators, broadcast transmitters, medical and industrial lasers.

RF COMPONENTS (ACTIVE & PASSIVE)

We are a trusted partner for RF, microwave and millimeter-wave components and subsystems, serving global connectivity and security challenges.

From UHF to V-Band

- * RF Filters
- * Power Combiners
- * Multiplexers
- * Low Noise Amplifiers
- * Receivers



CROSSED-FIELD AMPLIFIERS

Stellant has over 50 years of Cross-Field Amplifier (CFA) production and development.

From UHF to X-Band with power levels from 60 kW to 5 MW peak

Key Features

- * Ideal for radar systems requiring both high peak and high average power
- * Medium bandwidth, moderate gain, high-efficiency
- * Utilizes long life cold cathode technology



Stellant Systems is a premier manufacturer of critical spectrum and RF power amplification products to the space, defense, medical, science and industrial markets for both domestic and international customers.

Stellant has 5 domestic manufacturing facilities and approximately 1,100 employees.

History of Innovation

Our business started as Charles Litton's Engineering Laboratories in 1932 (Redwood City, CA) and Howard Hughes' Electron Tube Laboratory in 1959 (Culver City, CA).

Along the way, there have been multiple acquisitions and consolidation of divisions that operated under larger organizations such as Sylvania, Loral, GM Hughes, Sperry, GE, RCA, Boeing, L3Harris and Comtech —to name a few.

This heritage is preserved and continues today as Stellant Systems.



Our Business

- * Approximately 1100 employees
- * 5 manufacturing facilities — ISO 9001:2015, AS9100:2016, DCMA certified
- * ONLY Vertically Integrated Space TWTa supplier in the world
- * ONLY manufacturer of space-qualified TWTs in the USA



StellantSystems.com



Facilities



Torrance, CA (Headquarters)

3100 Lomita Blvd.
Torrance, CA 90505
T: 310-517-6000

460,000 sq. ft.
ISO 9001:2015 & AS9100:2016



Williamsport, PA

1035 Westminster Dr.
Williamsport, PA 17701
T: 570-326-3561

210,000 sq. ft.
ISO 9001:2015 & AS9100:2022



Folsom, CA

107 Woodmere Rd.
Folsom, CA 95630
T: 916-351-4500

57,000 sq. ft.
ISO 9001:2015 & AS9100:2016



Power Systems Technology

105 Baylis Road
Melville, NY 11747
T: 631-777-8900

46,000 sq. ft.
ISO 9001:2015 & AS9100:2016

417 Boston Street
Topsfield, MA 01983
T: 978-887-5754

8,000 sq. ft.
ISO 9001:2015

