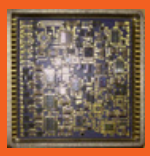
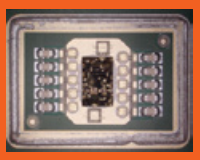
TTM Technologies®
Time-To-Market Interconnect Solutions

Microelectronics

Applications for Space, Defense & Aerospace

For over 50 years, TTM Microelectronics has been a trusted leader in designing and manufacturing high-performance, high-reliability hybrid and Multi-Chip Modules. TTM modules are specifically designed to withstand harsh environments that would cripple lesser components. Imagine downhole applications enduring scorching ambient temperatures exceeding 150°C, munitions surviving extreme mechanical shock from bunker-busting missions, and electronics functioning flawlessly amidst the damaging radiation environment of deep space. TTM modules can handle all of these and more, thanks to our rigorous design practices and MIL-PRF-38534 Class H (military) and Class K (space) qualifications. Our Radiation Hardened Microelectronics standard product line includes Linear and Switching Voltage Regulators, Operational & Video Amplifiers, Motor Drives, as well as countless custom modules.

Microelectronics Capabilities

Key Characteristics	 Custom Military	 Custom Space	 Standard Military	 Standard Space Rad Hard	 RF Assembles
Electronics Technologies	Power, Analog, Motor Control, Mixed Signal, RF	Radiation Hardened, Power, Analog, Motor Control, Mixed Signal, RF	Power, Analog, Motor Control, Mixed Signal	Radiation Hardened; Power, Analog, Motor Control	Analog, RF
Core Functions	Virtually every electronic function		Linear and PWM Amplifiers, Bridges, Linear and Switching Regulators, DC-DC Converters, High Temp, Motor Controllers	Amplifiers, 3ϕ Bridges, Linear and Switching Regulators, References, Power Switches	Tx/Rx Front Ends, LNAs, PAs, IMAs, Up/Down Conversion, Dividers, Combiners, Filters, Couplers, Detectors

Packaging Technology

	Construction	2D – Hybrid & MCM, Double Sided
	Substrates	Alumina, BEO, AlN, SiN, DBC, Organic
	Interconnect	Wire Bond, Ribbon Bond, Flip Chip, Solder, Epoxy
	Seal	Hermetic, Near Hermetic, PEMs, Coated
	Conductors	Thick & Thin film Au, Ag, Cu
Qualification / Screening		MIL-PRF-38534 Class H/K, Custom, Industrial
In House Screening Capabilities (DLA Certified)		Active Trim, Electrical Test, Insulation Resistance, Life Test, Stabilization Bake, Salt Atmosphere, Temp Cycle, Thermal Shock, Seal, Burn-In, Constant Acceleration, Solderability, Lead Integrity, External & Internal Visual, Element Evaluation, Qualification, Bond Strength, Radiography, Die Shear, PIND, Bond Pull, Ultrasonic Inspection, MIL-PRF-38534, AS9102, and more
Design to Capabilities		Spec, Print, Joint RF, Electrical, Mechanical, Process, Test

Visit www.ttm.com for more information.

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Inspiring Innovation