

Custom Thin Film Build to Print

Miniaturized Passive Circuits Deposited on Ceramic Substrates. High Value, Hard to Displace Business

SIMPLE RULE
If the design requires:
Smaller. Hotter. Faster.
Bring STF in early.

VISHAY

The DNA of tech.

► WHERE TO HUNT

Defense and aerospace (primary market): radar, EW systems, space electronics, avionics, missile guidance, detonators

RF and microwave modules: cellular infrastructure, SATCOM, test and measurement

Advanced industrial: industrial laser & photonics, high speed digital, medical imaging, AI infrastructure, infrared imaging, inkjet printheads

Target Customers: Amazon LEO, Quorvo, Stryker, NXP Semiconductors, SpaceX, Amazon LEO, Empower RF Systems, Ophir RF, Elite RF, Triad RF Systems, Abrisa Technologies, Advanced Optowave, Aperture Optical Sciences, A-Star Photonics, Avantier, Coherent, Cutting Edge Optronics

Who to Call On:

- RF design engineers
- Microwave filter designers
- High speed digital engineers
- Packaging engineers
- Photonics / laser engineers

Door Opener Questions:

- Are you pushing into higher frequencies, above 8 GHz?
- Do your designs include high power / current or strange shapes?
- Are you running out of board space?

- Does your design need to go into a harsh environments?
- Are you struggling with tuning or repeatability?
- Do you use wire bonding in your design?
- Is thermal performance limiting your design?
- Do you need tighter tolerance than PCB can deliver?

► FIND THE RIGHT OPPORTUNITY

Look for These Design Triggers:

- High frequency (RF / microwave / mmWave)
- High power or high current
- Quantum computing
- Hybrid / module or miniaturization requirements
- Harsh environments (defense, space, industrial)
- LEO infrastructure and payloads

► HOW TO SELL: YOU BRING US THE OPPORTUNITY – WE HELP YOU CLOSE IT

“Vishay STF has its own salesforce and support staff.”

- Engineering support in customer meetings
- Design guidance
- Application engineering for tough problems
- Rapid prototypes

Wire Bondable Resistors, Capacitors, and Inductors

Smaller – Higher Power – Tighter Tolerances – Extreme Temperatures - Customization

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The DNA of tech.

▶ WHERE TO HUNT - Niche Market: Hybrid Modules, High Reliability Packaging, and Ceramic Applications

Defense and aerospace: EW systems, space electronics, avionics, missile guidance

Medical: implantable and diagnostic electronics

Industrial and instrumentation: test, measurement, precision analog / hybrid and control electronics

Target Customers: Amazon LEO, Lockheed, Raytheon, Northrop Grumman, General Dynamics, Boeing, L3Harris, BAE Systems, Honeywell, MACOM, Teledyne Microwave, Cobham, Mercury Systems, Qorvo (modules), Skyworks Solutions (modules), Maxar Technologies, Rocket Lab

Who to Call On:

- Power module designers
- MMIC Designers
- Industrial power supply designers
- Hybrid module designers
- Photonics / laser engineers

Door Opener Questions:

- Are you using any bare die or wire bonded components in this design?
- Are you currently placing discrete chip resistors, capacitors, or inductors inside a hybrid or module?
- Is board or module space becoming a constraint?

- Are you operating at frequencies where parasitics or component tolerances are affecting performance?
- Is reliability, shock, or environmental performance a concern in this design?
- Are you trying to manage heat or current density inside a compact module?

▶ FIND THE RIGHT OPPORTUNITY

Look for These Design Triggers:

- Request for custom wire bondable resistor, capacitor, or inductor
- High frequency (RF / microwave / mmWave)
- High power or high current
- Tight tolerances or repeatability issues
- Matched resistors or capacitors
- Harsh environments (defense, space, industrial)

▶ HOW TO SELL: Focus on our portfolio breadth

“Vishay STF is one of the few major players in wire bondable resistors, capacitors, and inductors.”

- Space-saving and small size with excellent power handling
- Tight tolerances and ratios
- Flexibility in-chip, package, and substrate geometry
- Do you have custom requirements?

IGBR – Wire Bondable, Miniature High Power Resistor

High Power in a Tiny Size

VISHAY

The DNA of tech™

▶ WHERE TO HUNT – Wherever SiC FETs Are Sold

Electric vehicle (primary market): traction inverters, power conversion, energy management systems, on-board chargers, DC/DC converters

AI infrastructure: power delivery, load management in servers, PSUs, rectifiers

Satellites and space systems: power conditioning in size- and weight-constrained platforms

Target Customers: BorgWarner/Delphi, Tesla, Magna International, GM / Ultium Drive Engineering, Ford Motor Company, Stellantis (North America), Eaton Corporation, Rivian, Lucid Motors, Efficient Drivetrains, Dana Incorporated, Cummins (ETI), Siemens Mobility / USA Power Electronics, SolarEdge Technologies, Enphase Energy, SMA America, Schneider Electric, GE Renewable Energy, GE Aerospace, FIMER, Tesla Energy, Carrier

Who to Call On:

- Power module designers
- Industrial power supply designers
- Hybrid power module designers

Door Opener Questions:

- Do you use wire bondable SiC MOSFETS?
- Do you need a wire bondable and sinterable, very small, high power resistor?
- Are you experiencing instability or noise in your SiC design

▶ FIND THE RIGHT OPPORTUNITY

Look for These Design Triggers:

- Wire bondable SiC MOSFETS
- Very high current, small size resistor questions
- Wire bondable GaN
- High temperature resistor needs
- Sinterable resistor needs
- AEC-Q200 qualification

▶ HOW TO SELL: Focus Performance

“IGBR is the smallest high power resistor on the market.”

- Space-saving and small size with excellent power handling
- Semiconductor quality
- Short lead times
- Flexibility in-chip, package, and substrate geometry
- Matches the semiconductor die assembly processes