

# Sfernice

Power Thick Film – LTO, D2TO, DTO, LPS, ISOA, RCEC

VISHAY

The DNA of tech.

## ► WHERE TO HUNT

**Target Customers:** Visteon, BorgWarner, Tesla, Rivian, Lucid Motors, Cummins, Boston Scientific, Wabtec, Raytheon, Lockheed, Medtronic, GE Healthcare, Northrop, Trane, Lincoln, Miller Electric, BAE, L3 Harris, Continental, LSeMobility, Magna Electronics, Peak Energy, Trane Technologies, Trenton Systems, Komatsu

### Door Opener Questions:

- Do you need to dissipate power (continuous) or energy (pulse)?
- What is the nature of the power or energy (pre-charging, discharging, damping, filtering, balancing, or heating)?
- What level of power (in Watts) or energy (in Joules)?
- What is the continuous voltage and / or peak voltage?
- What is the on-time and off-time of the voltage (duty cycle)?
- Will the resistor need to handle repetitive pulses? How many?
- Do you require a PCB-mounted component? Is a heatsink or metal plate available for heat dissipation?

**Automotive:** on-board chargers (OBC), BMS, DC/DC converters, traction inverters, motor controls, e-compressors, battery heating

**Industrial:** motor drives and soft starters, high power test benches and load testing, robotic power electronics, industrial drives, current sensing for control systems

**Aerospace / defense:** Power conditioning, radar and communication equipment, missile guidance and control electronics, high reliability current sensing

## ► HOW TO SELL: Engineers don't buy specs, they buy Solutions

**“Vishay Sfernice streamlines power resistor design with a comprehensive portfolio that reduces component count, lowers weight, and gives engineers superior design flexibility.”**

- Proven expertise: industry-first for high power (RCEC)
- Proven quality and reliability: very stringent qualification testing for AEC-Q200 products / severe partial discharge tests for high power products
- Customization through simulations / prototyping / testing (thermal, pulses, vibrations, etc.)
- Excellent and responsive design support
- Excellent environmental and dielectric performances
- Manufactured in Europe (non-China)

## ► HOW TO CLOSE: Moving the Opportunity Forward

**“We work directly with engineers to achieve the best power resistor solution to optimize design performance.”**

- Engage FAEs / regional technical support early in the design
- Support customers: provide design tools, models, simulations, pulse calculators, quick-turn sampling, and technical questions
- Empower with resources: infographics, white papers, application notes, toolkits, videos, tailored follow-ups

# Sfernice

## High Frequency and High Power Solutions

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### ▶ WHERE TO HUNT

**Target Customers:** Applied Materials, Advanced Energy, GE Healthcare, Texas Instruments, Nokia, Ericsson, BAE, SpaceX, Amazon LEO, Raytheon, Northrop Grumman, Lockheed, Analog Devices, AMD (ZT Systems), Coherent (Optical Modules), NVIDIA

#### **Door Opener Questions:**

- Do you have any transmit / receive modules in your application?
- What is the operating frequency range?
- How much power do you need to dissipate?
- Is the power continuous or pulsed?
  - If pulsed, what is the peak power, pulse width, and duty cycle?
- Are you in need of an SMD solution or will it be heatsink-mounted?
- What are your size requirements?

**Aerospace / defense:** phased-array radar (AESA), radio communications, Leo satellites, ground terminals, SATCOM

**Telecom:** base stations, remote radio units, mmWave, repeaters, broadcast, 5G / 6G

**Industrial & AI:** optical modules, GPU test loads, plasma generators, RF generators / power amplifiers, circulators, isolators

### ▶ HOW TO SELL: Largest RF portfolio, we have the Solution

**“With our combined thin film and thick film catalogs, Vishay offers the largest portfolio of high frequency resistive products on the market today. No matter the application, we have the solution.”**

- CH / CHA – AEC-Q200, highest frequency resistor (70 GHz)
- Barry flanged – highest power, up to 5 kW RF resistors
- B-RP – 0402 to 2010, highest power SMD RF resistors
- B-TV – 0402 to 3737, high frequency and power terminations
- WLKN (Wilkinson) – 15 GHz - 20 GHz power combiner / splitter

### ▶ HOW TO CLOSE: Test and Sample

**“Having the largest portfolio also means we have the most RF products available at distributors. As each PN behaves differently based on mounting and PCB layout, it is critical to make it easy for customers to sample our product.”**

- Pull in support early: engage FAEs / regional technical support
- Identify the right products: request application details and PCB information (dielectric constant, PCB thickness).
- Push to sample and support: provide samples, models, S-parameters, thermal simulations, app notes

# Sfernice

Encoder / Position Sensor - RAIK, RAME, 981HE, 34PHE, 40LHE, ROT, ECO, UIPMA

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## ► WHERE TO HUNT

**Target Customers:** Honeywell Aerospace, Triumph Systems, Dynetics, Anduril, Parker Hannifin, John Deere, General Atomics, Korry Electronics, Avtechtjee, Ontic Engineering, Woodward, Raytheon, Caterpillar, Motus Nova, Lockheed, Medtronic, Laza Medical, Crown Equipment, Whippany Actuation Systems, Crane Aerospace

### Door Opener Questions:

- Are you currently using any automation or control systems that rely on real-time feedback?
- How do you currently monitor or verify the position of moving elements?
- What do you expect in terms of specific performances such as accuracy, resolution, lifespan, and repeatability?
- Are there space, environmental (dust, moisture, vibrations), connectivity, or safety constraints we should consider?
- Would you prefer contactless sensing or are mechanical solutions acceptable?
- Would you be open to exploring some tailored sensor options for your setup?

**Aerospace / defense:** fin actuators and gimbals (missiles), optical devices, fighter aircraft actuators, missile launchers, ground vehicles, cockpit functions, side stick units, fly by wire controls, brake pedals, throttle command, actuators, angle of attack, antenna and solar panel actuators

**Off-road:** autonomous lawnmowers, steering wheel position, throttle and break pedals, suspension system monitoring

**Industrial:** collaborative and industrial robot arm positions, humanoids, machine tools, automation devices, valves

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## ► HOW TO SELL: Engineers don't buy specs, they buy Solutions

**Vishay Sfernice offers a broad range of encoders and position sensors, giving engineers extensive options to solve their design challenges.**

- Wide portfolio of reliable contacting and contactless technologies
- Engineered to meet the most demanding customer specifications with close support of our US and EU R&D teams
- Our unique conductive plastic element offers a pure passive solution for high accuracy, almost infinite resolution, and long lifespan needs
- Newly designed & patented encoders bring customers digital solutions for extremely high accuracy and high speed applications
- Our European and American production lines offer flexibility and capacity to address production range quantities from a unit to a million pieces a year

## ► HOW TO CLOSE: Problem solving

**“We work side by side with design engineers offering our expertise to shorten design cycles and reduce costs.”**

- Our position sensors and encoders are designed and manufactured to the highest quality systems (ISO9001, EN/AS9100,) and environmental regulations and standards (RoHS, REACH, ISO14001, ISO45001)
- Our 40+ years experience in aerospace & defense brings benefits to all projects for any market segment (industrial automation, off-road, medical)
- Manufactured in Europe and Americas (non-China)