EON INSTRUMENTATION, INC

15531 Cabrito Road
Van Nuys, CA 91406

www.eoninstrumentation.com
ISO9001:2008/AS9100C #C2015-02333
818-781-2185

3800 Oceanic Drive, #112
Oceanside, CA 92056

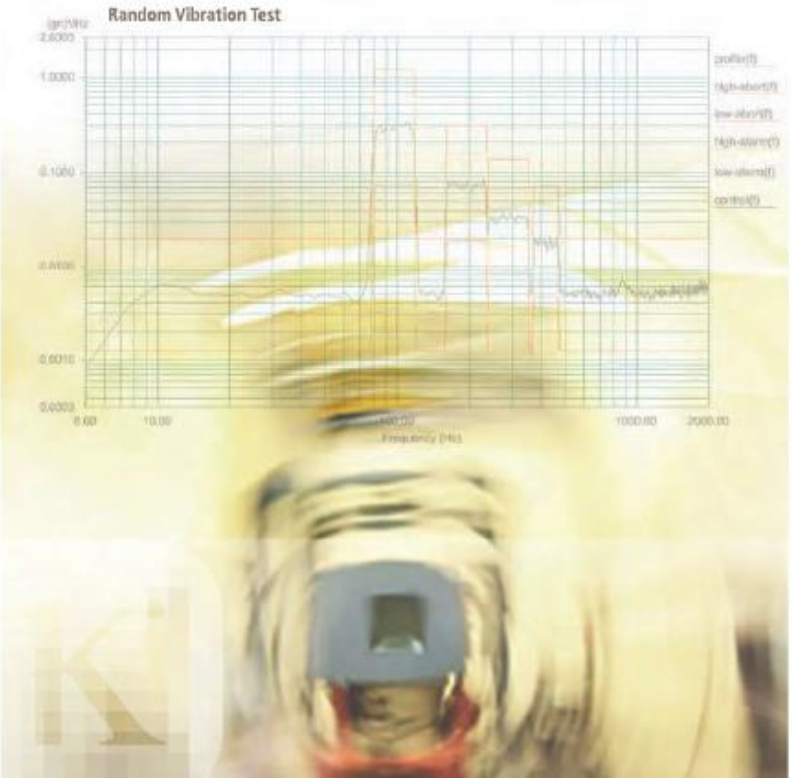
Product Data Sheet – Kappa Camera (1-15-18)

Advanced Camera Technology for Defence and Aviation

Kappa is one of the few camera manufacturers with comprehensive know-how in the development and manufacture of extremely rugged cameras. We develop, design and manufacture camera systems for applications in extreme environmental conditions. For more than 15 years, Kappa cameras have been used in the aerospace industry, military vehicles and industrial machines. These environments require absolute resistance to mechanical, climatic and electromagnetic stress as well as to surrounding substances and environmental impacts.

In many cases, for reasons of availability and cost we have to use industry-standard components. This makes it difficult to meet the requirements on EMC, resistance to temperature, shock and vibration. Thus, from the beginning, the technical design has to focus on these specific requirements, for example by using heat sinks or shock absorbers. Standard circuits or modules may hardly ever be used. Proof of origin is required for all components. We prepare our special cameras to resist extreme stress such as:

- Temperature range from –55°C to +85°C with rapid fluctuations, also under negative pressure (e.g., 11.6 kPa corresponding to a height of 50,000 ft according to DO-160D)
- Simulated lightning strike with overvoltages and currents of up to 1600 V/107 A on all connection pins according to DO-160D
- Mechanical shocks of up to 20 g acceleration for 11ms according to DO-160D
- Foreign bodies and water/salt water (protection rating up to IP 68)
- Micro organisms (sterilizable, autoclavable)
- Constant acceleration according to ABD0100.1.2 §1.18 or ISO 2669:1995
- Altitude test down to 116 mbar (50.000 ft)
- Fungus resistance according to RTCA/DO-160D (No test required. Kappa guarantees no nutrient materials.)



All required technical characteristics are analytically defined and then metrologically verified on the object. Specific knowledge and/or development environments are necessary, e.g. for MTBF calculations, thermal analysis or mechanical stress analysis. The prototype tests for verification of specific characteristics take place in specific installations. These are, for example, shock and vibration tests on shakers; temperature and climate tests in climatic chambers; overvoltage, and EMC tests. We offer all these analytical methods and tests for our products and execute them either on our own or in cooperation with external partners.

Air-to-Air Refueling
Kappa aviation cameras deliver 3D HD image information for airborne fueling procedures.

- Robust "Rugged" Quality per DO 160 D
- HD Format, 1080p/25 Real-Time
- S3D Imaging with HD cameras, Precision Stereo Rig, Video Coding und Recording

Precision Barrels
The unique barrel inspection system RIB by Kappa is used world-wide for the inspection of wear on the inside surfaces of barrels.

- Robust "Rugged" Quality per MIL-STD 810
- Nato Stock Number
- Multisensor Technology
- Image Measurement

Armored Vehicles
Kappa defense cameras are used as sight systems on periscopes and weapon stations as well as for reversing aid.

- Robust "Rugged" Quality per MIL-STD 810
- Image Performance
- Long-Term Security

Unmanned Aerial Vehicles
For flight control and border patrol, Kappa aviation cameras are part of the payload or are mounted directly on the outside of aerial vehicles.

- Robust "Rugged" Quality per DO 160
- Thermo Control
- In HD or Video Resolution via SDI to Ground Station