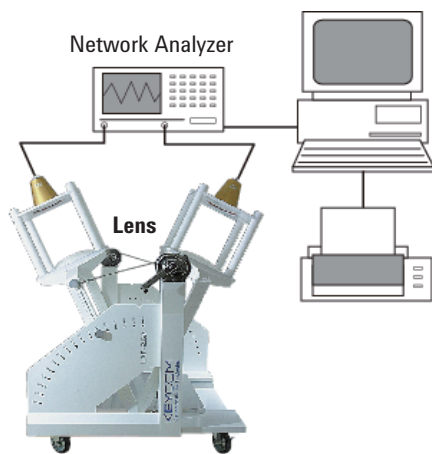


Keysight Technologies

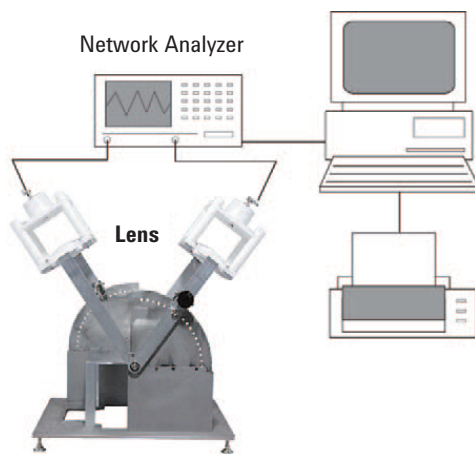
and KEYCOM Corp.

Electric Wave Absorber (Material),
Return Loss Measurement System

Lens Antenna Method, Diagonal incidence type System No. EAS03, 05



Model No. LAF-2.6A for 2.6-26.5GHz



Model No. LAF-26.5A for 26.5-110GHz

Ideal solutions for developing and manufacturing
electric wave absorbers and meta-materials
(Option: Transmission Attenuation Measurement)

〈JIS, IEC Standard〉

Despite their compact dimensions, EAS03 and 05 deliver highly accurate measurement by plane wave because the lenses are attached to the antennas. Samples can be smaller than before because they can be placed in the vicinity of the antennas. Transportable type is available for heavy or immovable objects such as concrete wall or asphalt road. Transmission attenuation measurement option is also available.

Publications

H.Suzuki, Others
"Free space measurement method with parallel electromagnetic wave beam by using dielectric lenses and horn antennas for reflectivity of electromagnetic absorbers in millimeter waves" IEICE Trans, electro., Vol. E89-C, No.1 Jan. (2006) 24-29

Reasons for high accuracy:

- Its plane wave is in phase on sample face.
- Its parallel beam prevents interferences of unnecessary electric wave.
- No anechoic chamber is required.
- Wide dynamic range, more than 50dB with gating and 40dB without.

Standardization

JIS R1679 : 2007
(Japanese Industrial Standards)
IEC 62431 : 2008
(International Electrotechnical Commission)

Specifications

Measurement frequency:
LAF-2.6A: 2.6-26.5GHz
LAF-26.5A: 26.5-110GHz

Specimen size:
LAF-2.6A:
larger than 450×450mm
LAF-26.5A:
larger than 100×100mm

Angle of incidence
(Half-width)
LAF-2.6A:
Minimum : $\angle 0^\circ$
Maximum : $\angle 80^\circ$
($\angle 90^\circ$ ver. available)
LAF-26.5A:
Minimum : $\angle 0^\circ$
Maximum : $\angle 90^\circ$

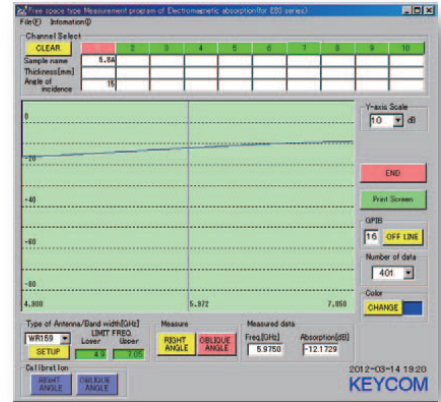
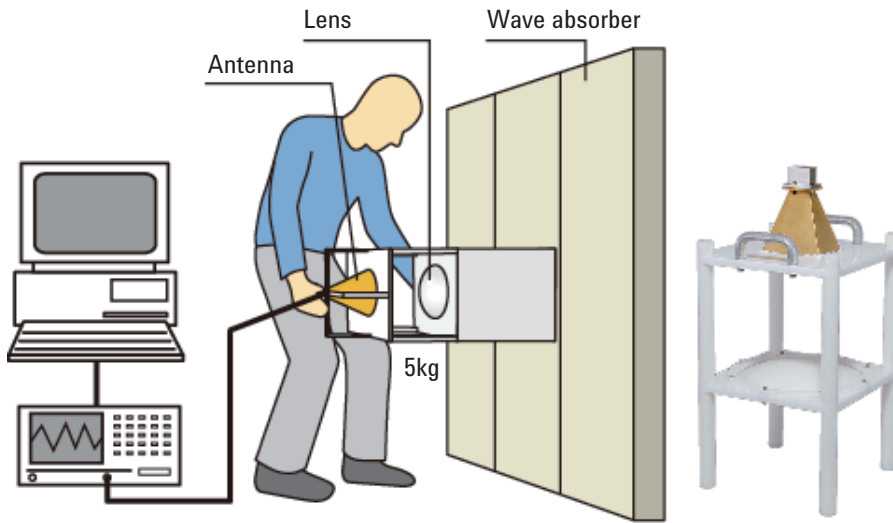
Main body size:
LAF-2.6A:
Height 2.1m
Weight 150kg
LAF-26.5A:
Height 400mm
Weight 15kg

Measurement Process

1. Set a frequency range and the number of frequency steps.
2. Calibrate your analyzer at the end of the cable which will connect to the antenna
3. Perform a zero calibration with a metallic plate of the same size as your specimen
4. Replace the metal plate with your specimen at and start measurement

Electric Wave Absorber (Material), Return Loss Measurement System

Lens Antenna Method, Diagonal Incidence type



Data sample

Transportable type: System No.EAS12
(for heavy or immovable electric wave absorber, such as concrete wall or asphalt road.)

Ordering Information

Keysight Technologies, Inc.

Vector network analyzer
- PNA series (N52xx) - ENA series (E50xx)

KEYCOM Corp.

System No. EAS03(2.6~26.5GHz), EAS05(26.5~110GHz)

1. Main Body
(Lens, Lens fixed frame, Antenna fixed stand, Metallic board for calibration)
 - 2.6-26.5GHz.....LAF-2.6A
 - 26.5-110GHzLAF-26.5A
2. Antenna
 - For LAF-26.5A:
 - 75-110GHz (WR-10) (waveguide type)RH10R23
 - 50-75GHz (WR-15) (waveguide type)RH15R23
 - 33-50GHz (WR-22) (waveguide type)RH22R23
 - 26.5-40GHz (WR-28) (waveguide type)RH28R23
 - 33-50GHz (WR-22) (w/coaxial waveguide converter)RH22R23APC2.4(f)7
 - 26.5-40GHz (WR-28) (w/coaxial waveguide converter).....RH28S23SMA(f)7
 - For LAF-2.6A
 - 18-26.5GHz (WR-42) (w/coaxial waveguide converter).....RH42S23SMA(f)7
 - 12.4-18GHz (WR-62) (w/coaxial waveguide converter).....RH62S22SMA(f)7
 - 8.2-12.4GHz (WR-90) (w/coaxial waveguide converter).....RH90S19SMA(f)7
 - 5.85-8.2GHz (WR-137) (w/coaxial waveguide converter).....RH137S18SMA(f)7
 - 4.90-7.05GHz (WR-159) (w/coaxial waveguide converter)RH159S17SMA(f)7
 - 3.95-5.85GHz (WR-187) (w/coaxial waveguide converter)RH187S16SMA(f)7
 - 2.60-3.95GHz (WR-284) (w/coaxial waveguide converter)RH284S14SMA(f)7
 - 1.70-2.60GHz (WR-430) (w/coaxial waveguide converter)RH430S14SMA(f)7
3. Software.....DMP-20
4. CableCM06x-xx-1000
5. GPIB cableGP-01
6. Windows PC, PrinterAvailable upon request

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