KNM-2402 RFI FIELD INTENSITY METER 9kHz～30MHz

KNM-2402 is a RFI field intensity meter for the frequency range from 9kHz to 30MHz, which can measure the RF interference accurately and speedily, meeting the requirements of CISPR, VDE, FCC or other specifications.
By using KNM-2402, RF noise generated from various apparatus can be measured with direct readouts as the coaxial 50Ω termination voltage and the field intensity by using antenna.
Besides, the field intensity measurements of broadcast and telecommunication radio waves can be also performed.
KNM-2402, controlled by a microprocessor and provided with the functions for various automatic measurements, such as automatic level caribration and auto-ranging, is able to perform efficient measurements.

■ MAIN APPLICATIONS

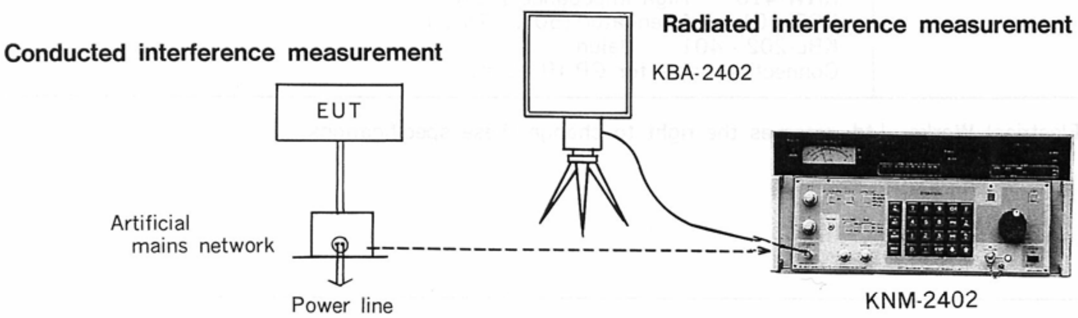
- RF interference voltage and field intensity measurements.
- measurement of undesired radiation, spurious radiation and VSWR of transmitters and receivers.
- Field intensity measurements of broadcast and telecommunication radio waves.
- Measurement of microvolt level voltages as a frequency selective voltmeter of high sensitivity.

■ FEATURES

- As a synthesizer-based receiver, the excellent setting accuracy and stability for the received frequency can be obtaind.
- Accurate and speedy measurements due to automatic level calibration.
- The whole frequency range from 9kHz to 30MHz can be tuned succesively without band switching.
- The frequencies, set and swept by two ways of rotary encoder and keyboard, can be swept with optionally set frequency step except four inherent steps.
- The equipped GP-IB interface allows various automatic measuring systems by computer to be assembled.
- Presetting of up to 99 channels for any measurement frequency and function.
- By using an antenna or an artificial mains network in optional accessories, the correction factor is automatically added, field intensity and noise termination voltage can be measured with direct readouts.
- Tracking generator equipped, make it possible to measure the characteristics of antenna and filter and the shielding effect of shield material.
- By the action of autoranging, attenuator can be set automatically for input signal level.

■ TEST SETUP

Measurement of RF interference



EUT = Equipment Under Test

■ SPECIFICATIONS

Frequency range	9 kHz to 30 MHz
Frequency setting	1. Keyboad entry (Resolution 100 Hz) 2. Tuning knob or up-down key in step of 100 Hz, 1 kHz, 3 kHz, 10 kHz or any preset size (Switch-selected)
Frequency display	6-digit LED display, resolution 100 Hz
Memory	Up to 99 channels (For measuring frequency and function)
RF input impedance	50 Ω (BNC connector)
RF input VSWR	≦ 1.5 (RF att. ≧ 10 dB)
Measuring range	Input terminal voltage : (50 Ω termination, 1 μV= 0 dB, C/N = 6 dB) 9 to 149.9 kHz −17 −114 dB (Quasi-peak value, bandwidth 200 Hz) 0.15 to 30 MHz −5 −114 dB (Quashi-peak value, bandwidth 9 kHz) Field intensity : Input terminal voltage + antenna factor ≦ 130 dB (1 μV/m = 0 dB)
Measuring accuracy	±1.5 dB (Input terminal voltage)
Selectivity (Bandwidth)	9 kHz to 30 MHz 200 $^{+20}_{-30}$ Hz (6 dB) Conforms to CISPR specifications 0.15 to 30 MHz 3 $^{+1.5}_{-0.5}$ kHz (6 dB) 0.15 to 30 MHz 9 ± 1 kHz (6 dB) Conforms to CISPR specifications
Image frequency rejection and other spurious response	≧ 80 dB
Input attenuator	109 dB (10 dB step × 10 and 1 dB step × 9) Manual and auto-ranging, 3-digit LED display
Output meter scale	Linear range : − 5 to + 5 dB (Resolution 1 dB) Log. range : − 5 to + 25 dB (Resolution 1 dB)
Electrical time constant of detectors	9 to 149.9 kHz Peak-value : (Direct indication) Charge ≦ 1 ms Hold time 1 sec Quasi-peak value : Charge 45 ms ± 20 % Discharge 500 ms ± 20 % Average value : Charge and discharge ≦ 1 ms 0.15 to 30 MHz Peak-value : (Direct indication) Charge ≦ 20 μs Hold time 1 s Quashi-peak value : Charge 1 ms ± 20 % Discharge 160 ms ± 20 % Average value : Charge and discharge ≦ 20 μs
Mechanical time constant of output meter	160 ms ± 30 %
Overload factor	Conforms to CISPR specifications
Pulse response	Conforms to CISPR specifications
Output	IF output : Approx. 90 dB for 30 kHz, with output meter indication at 0 dB (50 Ω terminal voltage, 1 μV= 0 dB, BNC connector) Recorder output : Approx. 1 V into 100 kΩ min. load with output meter indication at 0 dB (BNC connector) Tracking generator output : 100 ± 1 dB (50 Ω termination voltage, 1 μV = 0 dB, BNC connector) Remote control : GP-IB (Compatible with IEEE-488) Function : SHI, AHI, T6, L4, SR1, RL1, DC1, PPO, DTO, CO
Monitor	AM and CW (with BFO) can be monitored with speaker or earphone.
Power supply	AC 100 V ± 10 %, 50/60 Hz, ≦ 35 VA DC 12 V (Using optional accessories KPS-002C DC power supply)
Dimensions and weight	425 (W) × 200 (H) × 400 (D) mm, approx. 16.5 kg

Optional accessories	KPS-002C DC power supply KBA-2402 Broadband antenna (9 kHz to 30 MHz) KNW-242・2431・2441・ Artificial mains network (VDE) KNW-242C・243C・244C・341C Artificial mains network (CISPR) KNW-403D・405D Artificial mains network (CISPR) KNW-404 Line-impedance stabilization network (IEEE) KNW-407・408 Line-inpedance stabilization network (FCC) KNW-410 High impedance probe KPD-401 Attenuator (50 Ω / 75 Ω) KBL-202・401 Balun Connection cable for GP-IB (2 m)

Kyoritsu Electrical Works., Ltd. reserves the right to change these specifications.

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