50 MHz to 3 GHz, general purpose

3 AXIS RADIO FREQUENCY ELECTROMAGNETIC FIELD METER

Model : EMF-819 *ISO-9001, CE, IEC1010*

LUTRON ELECTRONIC

The Art of Measurement

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50 MHz to 3 GHz, general purpose
Radio Frequency Radiation Meters Electromagnetic Field strength measurement

3 AXIS RF ELECTROMAGNETIC FIELD METER

Model : EMF-819

FEATURES

* 3 Axis probe.
* Radio frequency electromagnetic field tester.
* Wide measuring frequency ranges, 50 MHz to 3 GHz.
* EMF-819 is used for broadband devices of monitoring the wide range radio frequency electromagnetic field value.
* For precision measurement consideration, the meter is included one probe : EP-05H (High frequency Probe, 50 MHz to 3 GHz)
* Unit : V/m, W/m^2, mW/cm^2.
* Frequency team selection : two points, Normal, 2.45 GHz.
* Alarm setting function can warn the user if the measuring antenna is too near the strong radiation sources, the buzzer will sound to remind the user.
* Peak hold function to latch peak value.
* Data hold function to lock the current reading.
* RS232 computer interface.
* Hard carrying case is included.
* Large size LCD with contrast adjustment, which can fit best viewing angle.
* Microcomputer circuit provides special function & offers high accuracy.
* Powered by 006P DC 9V battery or DC 9V adapter.

APPLICATIONS

This meter is specially developed for measuring or monitoring electromagnetic field, for example:
cell-phone station, hospital equipment, radar , micro-wave oven, radiation work, TV antenna , Radio station , welding equipment , baking- equipment, television , computer , factory, laboratory , and other environment...etc.

SAFETY INSTRUCTIONS

Danger

* For worker's safety, be aware that persons with electromagnetic implant (e.g. cardiac-pacemarker) are subject to especial danger in some case.
* Particular to observe the local safety regulations of the operator of the equipment.
* Before using the device, it need to know that how to setting " alarm-limit " value.

Attention

* Claims by some scientists that long term exposure to electromagnetic field may be the cause of childhood leukemia & other forms of cancer.
* Complete answers to any of these and related questions are not currently available. At the present time the most common practice is to avoid excess exposure over long period of time.
* Complete answers to any of these and related " Prudent Avoidance " as stated by the Environmental Protection Agency(EPA) USA is recommended.
* According to ICNIRP of reference levels to time-varying electromagnetic fields,The E-field strength levels are:

General public

Frequency range	e-field strength (V/m)
10 to 400 MHz	28
400 to 2000 MHz	1.375 x f^1/2
2 to 300 GHz	61

Occupational

Frequency range	e-field strength (V/m)
10 to 400 MHz	61
400 to 2000 MHz	3 x f^1/2
2 to 300 GHz	137

* Appearance and specifications listed in this brochure are subject to change without notice.

GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 58 mm x 34 mm.
Measurement Unit	V/m, mW/cm^2, W/m^2.
Accuracy	< 2 dB.
Probe structure	3 Axis.
Probe Input Impedance	50 OHM
Sensor Structure	Semiconductor
Frequency Team Selection	Two points selection : Normal, 2.45 GHz.
Data Hold	Freeze the display reading.
REC Function	Record Maximum & Minimum value.
Power off	Auto shut off saves battery life or manual off by push button. ** Can default auto power off or manual power off.* ** When default auto power off , power will off automatically after 10 min. if no button be pressed.*
Peak Hold	To latch the peak measurement value.
Alarm Setting	Buzzer will sound when display over the setting value.
Sampling Time	Approx. 1 second.
Low Battery Indicator	When display show Low battery Indicator, it should change the batteries.
Data Output	RS 232 PC serial interface.
Operating Temperature	0 to 50 ℃.
Operating Humidity	Less than 80 %RH.
Power Supply	DC 9 V battery (006P) ** Heavy duty or Alkaline type.*
	DC 9V adapter input.
Power Current	Approx. DC 5.95 mA
Weight	425 g/ 0.94 LB.
Dimension	*Main instrument :* 200.0 x 76.2 x 36.8 mm *Probe :* 70 mm (diameter) x 240 mm (length)
Accessories Included	Instruction manual..... 1 PC EP-05H Probe.....1 PC Memory card for EP-05H.....1 PC Hard carrying case.....1 PC
Optional Accessories	RS232 cable, UPCB-02. USB cable, USB-01. Data Acquisition software,SW-U801-WIN. DC 9V power adapter

ELECTRICAL SPECIFICATIONS (23 ± 5 ℃)

Strength Range	Resolution	Effective Value
0 to 200.0 V/m	> 1 V/m	
0 to 99.999 W/m^2	0.001 W/m^2	> 0.03 W/m^2
0 to 9.9999 mW/cm^2	0.0001 mW/cm^2	> 0.0003 mW/cm^2

Frequency Range	Accuracy	Test Point
* 50 MHz to 3 GHz	< 2 dB *	60 V/m

Remark:

**** The above accuracy is specified base on the measurement frequency within 100 MHz to 2.5 GHz. If measurement is on other frequency range (below 100 MHz and over 2.5 GHz), the reading value just for reference only.***

**** The default selection is " Normal ", however if the measurement frequency is microwave or its frequency is near " 2.45 GHz ", it should select to " 2.45 GHz " will get the high precision.***

NCC (National Communication Commission is the official organization on behalf Taiwan government)

NCC RECOMMEND EMF-839, EMF-819 for Mobile station measurement

The correct instrument for mobile station measurement

The wrong instrument for mobile station measurement

LUTRON

EMF-839

EMF-819

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