

RADBLOK – A NANO GOLD COATED POLYMER SHIELD FOR THE EM-WAVES

INTRODUCTION:

The EMI Shielding for the radiation from a mobile phone has been a burning topic of exploration and controversies. Impact of the Radiations from the Towers however depends upon the time one spends in the radiation zone. It is found that human blood leukocyte when exposed to different temperatures and 1800 MHz RF radiation, the radiation causes damage to the leukocytes cells to make them lose the ability to move.

Maxwell EMR Research Center Pvt Ltd (Maxwell) is a research driven enterprise engaged in the research, design, development and manufacture of anti radiation products to mitigate risks caused by the electro-magnetic radiation (EMR) generated from various electronic communication devices such as Mobile Phone, Wi-fi Router, Laptops etc. RadBlok (www.radblok.com) is a brand name registered by Maxwell for promoting anti-radiation chips for cell phones and other communication devices.

ABOUT THE PRODUCT “RADBLOK”:

RadBlok, which is developed as a Nano gold Coated polymer Shield for the EM-Waves is tested on various parameters at TUV Rheiland Laboratory, Bangalore, INDIA. Several details of the Nano material developed by our scientists are under an application for a patent to Govt. of India.

The Polymer sheet is in the form of a mesh. It is taken and is used as the cathode in an electrolysis setup. Auric Chloride solution (slightly acidulated with Hydrochloric acid) is taken as the electrolyte. After the deposition until the specific mass requirement is fulfilled, the coated polymer mesh is used to determine the Electro Magnetic Interference (EMI) Shielding using standard equipment. This mesh is designed to be used for the mobile phones for the cited shielding. The Data established that the shielding was observed up to 0.02% of input signal.

The Uniqueness of RadBlok:

- ✓ RadBlok's patent-pending technology protects by superimposing an optimal random field or 'noise field' on the EM Radiation emanating from cell phones. This neutralizes the harmful effects without disturbing cell phones function and operation.
- ✓ It is proven to be reducing SAR levels up to 99.95% under standard test conditions.
- ✓ RadBlok is the only CE certified product that exhibits its properties according to MIL (Military Intelligence) Standards and prevents EMR affecting health.
- ✓ The polymer developed and used as base material of RadBlok is an absolute radiation resistant material of EMI (Electro Magnetic Interface).
- ✓ RadBlok is manufactured using 24 CARAT GOLD, the most electrically conductive of all metals that allow the signal waves to flow unimpeded. The anti-radiation conductive mesh used in RadBlok grounds the friction of electromagnetic waves without disturbing electric signal waves required for the call connection.

- ✓ Communication devices when receive the signal from the respective towers, RadBlok with mesh Antenna Properties absorbs and grounds the electromagnetic frequency generated by the electronic signals waves.
- ✓ In RadBlok, a layer of aluminium foil is also used to ensure no reduction in the signal quality.
- ✓ RadBlok effectively blocks EMF (Electro Magnetic Field), EM Cloud, Static Cloud generated by electromagnetic waves in process of inducing power by communication systems in to atmosphere.
- ✓ RadBlok acts as a Signal filter and Signal repeater as well.

TESTS AND RESULTS:

The fourplatforms for analysing the essential consequences of the RadBlok EM Interference by the mobile phone were systematically Tested on following parameters and proven to be effective in dealing with mobile radiation.

1. Specific Absorption Rate(SAR)
2. Radio Emission
3. Electric Static Discharge

1. Specific Absorption Rate (SAR) Test:

Any Mobile phone (Smart Phone) fed with the input signal on the key board “*#07#” reveals the details of the SAR limits internationally prescribed by the Federal Communications Commission (FCC) and adopted by Deport of Tele-communication, India. A standard Mobile should fulfil this requirement. The SAR test cited is done for this to give us an astonishing result. Our characterization with specific absorption rate analysis (as per Indian Standard- IS/IEC 62209-1: 2005) gave much more interesting information about RadBlok. With Dipole using no patch the SAR was 1.84 (W/Kg) and dramatic reduction in SAR to 0.00375 (W/kg) was recorded with big Gold Patch (Table 1).

Table1. Specific Absorption Rate

| Radiating Equipment | Orientation of Equipment | Patch | Specific Absorption Rate (W/kg) |
|---------------------|--------------------------|----------------|---------------------------------|
| Mobile | Front | No patch | 0.00821 |
| Mobile | Front | Small Patch | 0.00676 |
| Dipole | - | No Patch | 1.84 |
| Dipole | - | Big Gold Patch | 0.00375 |

2. RADIO EMISSION(RE) Test:

Radio Emission Test assesses the level of emission of the mobile phone for a particular design (2G, 3G, and 4G). The audio level being much lesser (nearly 25KHz), our experiment pointed that the average emission of transmission in RF 1-18 GHz for vertical polarization is (39%) shown in Fig 1.

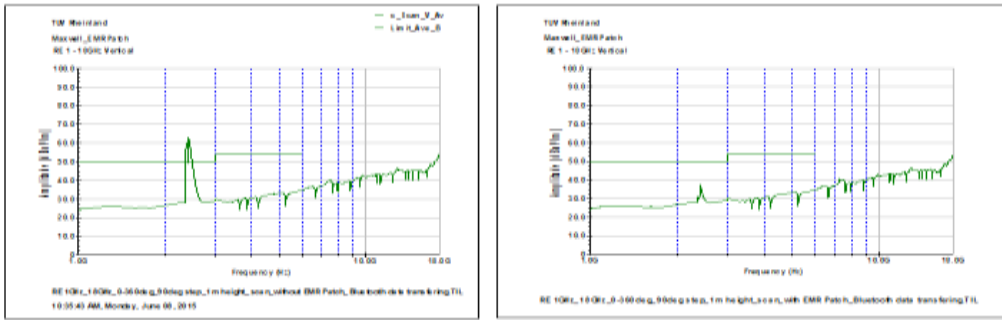


Fig 1.Average RE 1 – 18 GHz Vertical Polarization Without and with EMR patch
 Similar results for the RF 1-18 GHz for horizontal polarization are also presented

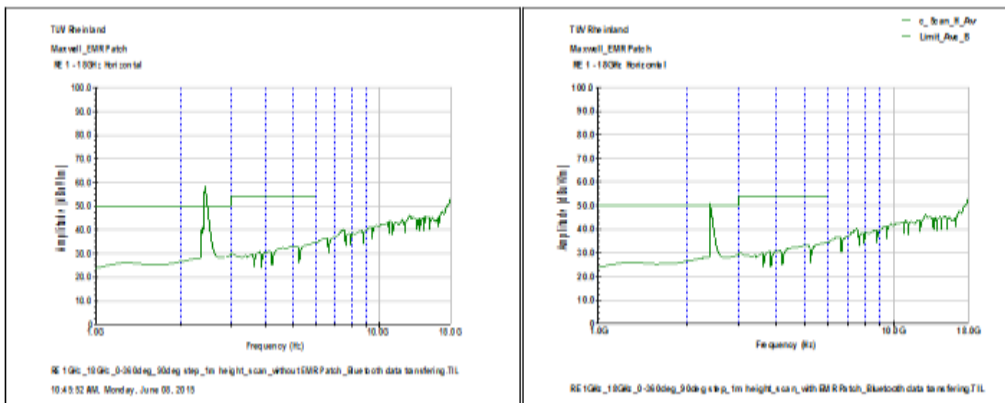


Fig 2.Average RE 1 – 18 GHz Horizontal Polarization Without and with EMR patch

The RadBlok patch that is developed by us is essentially responsible, to affectively generate this phenomenal absorption. The combined result of the above two tests shows that there is lesser exposure to the mobile radiation when device is equipped with Nano Coated - Nano-Gold Patch called “RadBlok”.

3. ELECTRIC STATIC DISCHARGE TEST

The Basic EMC Standards for the ESD define the methods of generating consistently reproducible electrical stresses for test purposes. They specify the capacitances and the resistances to model the human body’s charge storing capability and discharge impedance, respectively. This model produces a current waveform, as defined in the Standards.

The mobile is placed on metallic platform with the Nano patch available at the top for the application of the high voltage up to 15 KVfor the passage of the electric discharge up tothe limit given by the above standard.



Fig3. ESD test on mobile

It is observed that the mobile with the RadBlok patch could withstand, without having any impact on the functionality of the mobile. The circuit of mother board got damaged when the test was repeated without Nano patch being placed at the top for the application.

Our product is submitted for the approval of a patent by the Govt. of India (Patent Application No-596/CHE/2014; Dated **10 Feb 2014** under Section 11A (2) of the Act) which is pending acceptance. The content of our application appeared in Gadget and this restricts the further revelation of a very important susceptibility test on the product.

Product Usage:

Installing RadBlok is as is as 1-2-3

1. Choose a spot preferably above or closer to the antenna/ ear piece.
2. Clean the outer surface of the spot selected on the cell phone or the Battery by removing the back cover.
3. Peel paper from the back of the Patch and press it firmly.

COROLLARY:

The characterization results obtained for the product “RadBlok” emphatically make it land on a platform that would cater to the human welfare.

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Certificate of Compliance

RICL hereby certify that the Technical Documentation for Product

Anti Radiation Mobile Chip

Manufactured by:

Maxwell EMR Research Center Pvt. Ltd.

B - 72, 2nd Floor, Vengal Rao Nagar, S. R. Nagar, Hyderabad - 38, (Telangana), India

Found to comply, with the requirements of Electromagnetic Compatibility 2004/108/EC

The technical documentation/inspection/test results comply with the requirements of EMC. Hence the Manufacturer has issued a Declaration of Conformity according to above directives and places the CE Marking with his own responsibility as follows:



Date of Certification: 13/01/2015
Date of Expiry: 12/01/2018
Ist Surveillance on or before: 12/12/2015
IInd Surveillance on or before: 12/12/2016
Recertification on or before: 12/01/2018

Tralok Kumar

**Director
Royal Impact Certification Ltd.**

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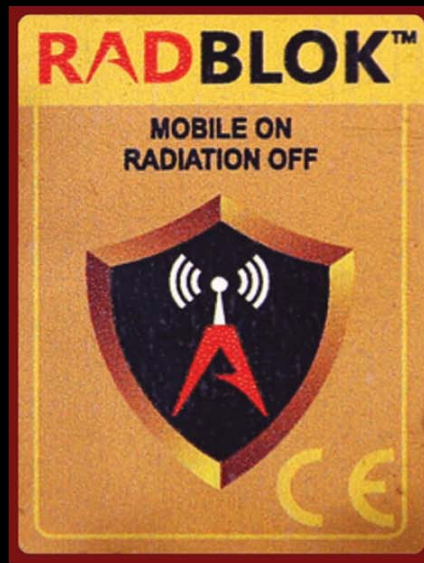




RADBLOK™
MOBILE ON - RADIATION OFF

Anti Radiation Chip for Mobile Phones

**STOP RADIATION
BEFORE IT
STOPS YOU**



- . A Genuine Product with Patent Pending Technology
- . Embedded with 24Ct. Gold Plated Micro Strip
- . Reduces SAR (Mobile Radiation) upto 99.9%
- . Tested & Proven at TUV Rheinland Labs

Certified by : 
(Confirms to European Standards)

**Cellular Phone | WiFi Routers | Bluetooth
Electronic Communication Devices**



A Product of

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