

## CLEAR™ TECH DATA

### **QUICK TECH OVERVIEW**

- 1. Up to 100% of potentially harmful smartphone radiation is redirected away from the user's head and brain when using CLEAR™.
- 2. CLEAR™ redirecting the smartphone signal away from user's head and brain causes a significant increase in usable signal for calls, apps and data.
- 3. The increased signal strength resulting from using CLEAR™ allows the phone to function at lower power. Lower power usage results in longer battery life per charge.
- 4. CLEAR™ has been tested and verified by an independent third party testing company.

#### **HOW DOES CLEAR™ TECH WORK?**

CLEAR™ incorporates long proven RF technology with cutting edge materials and proprietary design. Band pass filters, a proven technology that rejects (attenuates) frequencies within a certain range and passes frequencies outside that range, have been historically only effective in limited narrow frequency ranges. CLEAR™ utilizes a repetitive surface design to create a proprietary patent pending wide band-pass filter designed to reflect unwanted cellular band frequencies away from the user's head and brain.

To make the technology compatible with modern smartphone touch screens,  $CLEAR^{m}$  is manufactured using Carbon Nanotubes or CNTs. CNT's are large molecules of pure carbon that are long and thin and shaped like tubes about 1-3 nanometers (1 mm = 1 billionth of a meter) in diameter, and hundreds to thousands of nanometers long. Carbon Nanotubes can be extremely efficient conductors of electricity.

Using a special hybrid CNT, the CLEAR™ proprietary periodic structure is printed onto a smartphone screen protector. Placing this on the front of the smartphone protects the user from the unwanted and potentially harmful radiation. The strategic placement of CLEAR™ on the phone's screen is important, considering that competitive reflecting/blocking RF devices that are placed on the backside of smartphones actually intensify the RF signals being directed towards the user. And, those RF blocking devices that fully encase the smartphone render the phone useless due to completely blocking any signal from leaving the phone.

CLEAR™ redirects the RF signals away from the user, and at the same time increases the usable RF signal of the smartphone as well as the life of the battery charge.



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Third party tests were performed on CLEAR™ in an RF Anechoic Chamber used to test Radio Frequency characteristics including the amount of radiation emitted from an antenna. The tests show how much radiated power that goes from the screen to a smartphone users head and brain is redirected by using CLEAR™. With CLEAR™ Next Gen Screen Protector up to 100% of the emitted radiation coming from the screen is redirected. Without CLEAR™ the radiation directed toward the head and brain can be as high as 500mW.

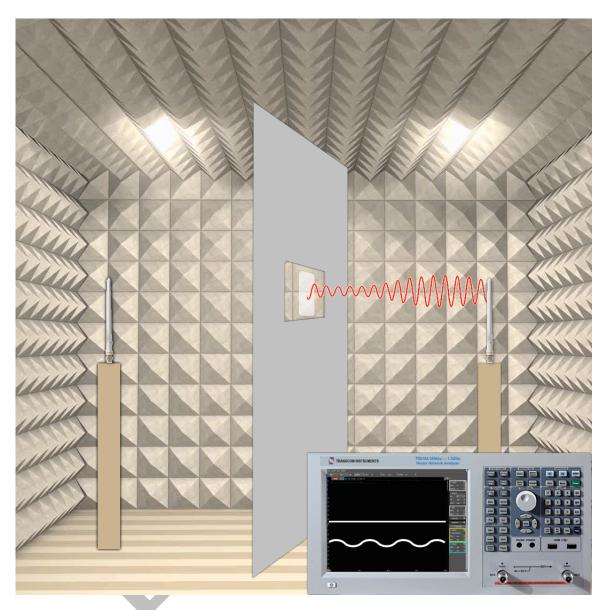
And because the radiation is directed up and away, the signal strength of the phone is increased resulting in lower power needed to operate, which in turn increases the length of time between battery charges.





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### **TESTING METHODOLOGY**



Lab testing of CLEAR $^{\text{TM}}$  is performed in an Anechoic Chamber, a room designed to completely absorb reflections of electromagnetic waves. Inside this chamber, a metal partition is placed vertically in the center of the chamber. This metal partition prevents radio waves from passing through to the other side of the chamber. In the center of the partition is a 3" x 5" cutout, which radio waves can pass through. On either side of the partition antennas are placed. One is a transmit antenna, the other is a receive antenna. A signal generating network analyzer, an instrument that measures the network parameters of electrical networks, is used to send a test



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signal (698 MHz to 2.7GHz) from the transmit antenna. That test signal passes through the cutout in the partition. The receive antenna on the other side of the partition is connected to a receive port on the network analyzer. The network analyzer then records the amount of radio waves that are received by the receive antenna.

Testing  $CLEAR^{m}$  in the chamber starts first by sending the test signal to the receive antenna with no  $CLEAR^{m}$  protection in place. The amount of radio waves received is recorded as the baseline. Next, a  $CLEAR^{m}$  protector is placed over the partition cutout. The test signal is again sent to the receive antenna and the reduction of the received radio waves is recorded.

The chamber is then used to test with an actual smartphone. This is to ensure that the results achieved with a smartphone using  $CLEAR^{m}$  are consistent with the above rigorous testing without a phone.



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### **CLEAR™ TECH ADVANTAGES**

CLEAR™ PROVIDES	RADIATION SHIELD	SIGNAL BOOSTER	BATTERY EXTENDER
WHAT IS HAPPENING WITHOUT CLEAR™	Smartphone power and radiation is directed at the user's head and brain.	Smartphone signal strength is scattered rather than concentrated, resulting in reduced call quality.	The signal currently reaching the user's head and brain is wasted, making the smartphone work harder by forcing the power level to increase which reduces the usable battery time
WHAT IS HAPPENING WITH CLEAR™	CLEAR™ redirects up to 100% of cellular radiation from hitting your head and brain, which means less risk of harm to your health.	CLEAR™ redirects the phone's signal away from user's head and brain, which serves to generate good to excellent connections in nearly all circumstances.	The increased signal strength resulting from using CLEAR™ allows the phone to function at reduced power. The reduction of power results in significantly longer batter charge, up to 40% longer.