



SDI Review Form 1.6

Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	Ms_CJAST_49566
Title of the Manuscript:	SAR Calculations of Novel Dual-Band PIFA for Mobile Phone Applications
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

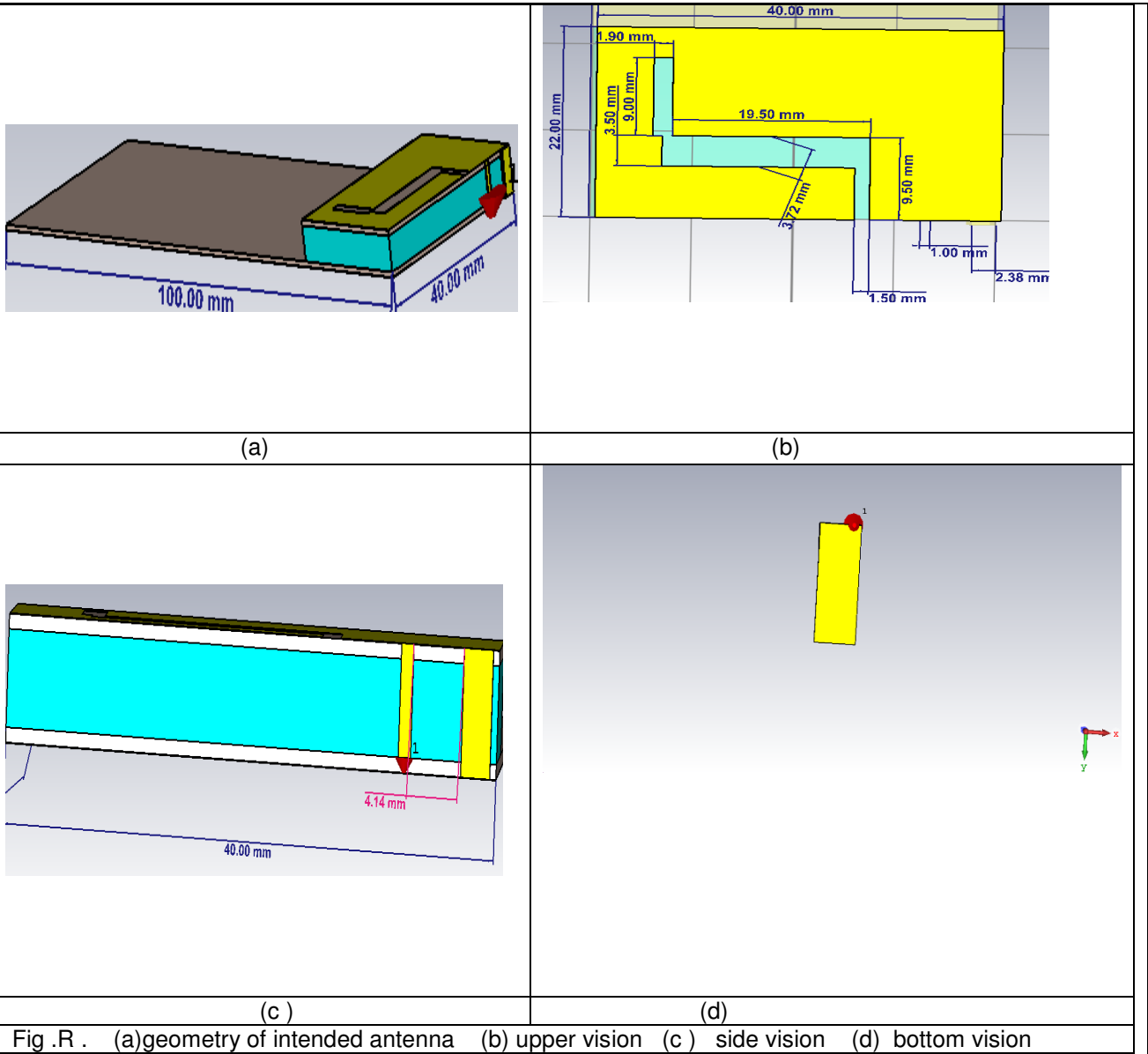
(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>Literature survey is not included</p> <p>Design of the antenna is not explained properly</p>	<p>Mobile headphones have come to be a necessary amongst all classes of people from kids to teenagers to adults all over the world. The significance of cell phones and their applications comes from providing the facility to retain in link with the surrounding world in a simple and up-to-date approach. With the advantages of cell phones, people typically forget the potential influence of the EM fields created by cellular headphones antennas' on the human brain.</p> <p>Mobile proficiency is speedily rising. On average, at the finale of the year, 2022 mobile subscriptions worldwide will be more than 9 billion people [1]. Alongside this development, serious concerns about the EM radiation effects on human well-being [2]. During mobile, call is portion of EM radiation wave either engrossed or ransmitted by the human head which in turn leads to heat effect on human tissue. The vital parameter that tated the quantity of power engrossed by the human tissue as exposed to (EM) radiation is (SAR).</p> <p>Now a day's different types of multiband antennas are planned which can able to cover more number of operating frequency bands with close size. In [3,4] multi-loop –type antenna with a meander structure were exploited to accomplish compact size and multiband operations .With technological development, therefore he diversity of desires during this space are resulting in the creation of ever smaller, lighter, and additional multifunctional mobile handsets [5]. As aresult, antennas have gone from external to internal; they need additionally become subject to varied constraints in size and performance. the planate inverted-F antenna (PIFA) is satisfy the necessities of the present market, .</p> <p>With this developments cellular headphones antennas have been transformed from single-band to multi-band characteristics [6-7].In [8] a tetraband planar inverted-F antenna (PIFA) for mobile handset applications is planned and meander line is exploited in reduction the antenna size . in [9] slot size modification and inset-feed point is utilized to accomplish dual-band property .</p> <p>Researchers are prepared to shrink SAR value. Various means were functioned to shrink the SAR created by a handset antenna definitely over the last years, the electromagnetic band-gap (EBG) secondary antenna elements, ferrite loading, meta-materials, and artificial magnetic conductors (AMC).Authors in [10] combined metamaterial configurations positioned between single-band (PIFA) and the human head and the SAR is condensed by 53% for 1 g tissue mass. In [11], the reduction of SAR is done by leading a U-edge wall made of an engrossing water material at each corner of the ground plane. In [12], the mobile antenna is intended to decrease antenna radiation towards the human body using the vertical sidewalls to blockade the radiation to the human body .</p>



Thanks for your significant note .the intended antenna is operated at two frequencies 900MHZ and 1800MHZ.

Fig .R. shows the geometry of the intended antenna. it consists of two FR-4 substance with dielectric constant 4.4, loss tangent = 0.02 and thickness = 0. 8 mm separated by foam . the ground (GND) found on the bottom surface of the first substance a has a dimension of 100 mm length and 40 mm width and it is connected with the top patch elements using a shorting strip with dimension 6.8 mm × 2.3 mm × 0.5 mm .Fig .R.(b) shows in details the geometry of the printed patch with slots as seen from above. The antenna takes up an area occupying 40*22 mm on the upper surface of the second substance. The patch is placed at a height h=6.8 mm from the horizontal plan of the ground plane . The proposed structure is excited with coaxial feed of input impedance ($Z_0= 50$ ohms) .



SDI Review Form 1.6

Minor REVISION comments		
Optional/General comments		

PART 2:

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	