(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :27/08/2021

(21) Application No.202111038925 A
(43) Publication Date : 10/09/2021

(54) Title of the invention : LOW COST PARASITIC PATCH ARRAY ANTENNA FOR AUTOMOTIVE RADAR APPLICATION

(51) International classification	:H01Q0021060000, H01Q0001240000, H01Q0021000000, H01Q0001380000, H01Q0003260000
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)Sumit Srivastava
Address of Applicant :Department Of Electronics And Communication Engineering, Faculty Of Engineering And Technology, Mjp Rohilkhand University Campus, Bareilly - 243006 (Uttar Pradesh) Uttar Pradesh India
(72)**Name of Inventor :**
1)Sumit Srivastava

(57) Abstract :
This antenna array uses a single parasitic element that improves the impedance matching and 5 radiation pattern of the antenna array. This antenna array operates at the frequency of 23.65-24.65GHz. This antenna array is designed with the help of glass epoxy FR-4 dielectric substrate, having er 4.4, with thickness of 0.8mm. This material makes the antenna array of low cost. This antenna array is used 8 elements in series that make the gain of the antenna approximate 8.06dBi. E- Plane -3 dB beam-width is of approx. 10o and H-Plane -3dB beam-width is about 72o. Side 10 lobe level (SLL) is about -15 dB is found that specification of the antenna array is useful for the Short range radar applications for automotive radars.

No. of Pages : 14 No. of Claims : 2