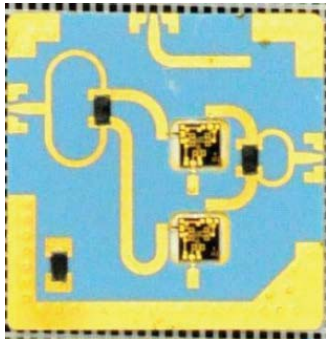



<b>Activity Title:</b>	<b><i>Ka-Band SSB Mixer</i></b>		
<b>Contract type</b>	<b>ARTES 5.2</b>	<b>Budget (k€)</b>	<b>400</b>
<b>Company (-ies) (including country)</b>	Airbus Defence and Space		
<b>Team (name of the participants in the project)</b>	Neil Faulkner - Responsible Engineer Steve Parker - Project Manager		
<b>(* Speaker (s)</b>	Ralph Green	<b>Email</b>	ralph.green@airbus.com
<b>Short Speaker Information (experience and involvement in this project – maximum 60 words)</b>	Ralph Green is the RT&D and Institutional Liaison Manager for Airbus Defence and Space, Communications Products within the Space Systems Telecom business. As a member of the Chief Engineers office he is the Internal Company Sponsor and is responsible for the business investment and monitoring the technical progress of of RT&D programs.		
<b>Summary of the activity (maximum 400 words and 2 pictures)</b>	<p>The ARTES 5.2 programme was aimed at designing a Ka-band SSB Mixer to the conclusion of a fully analysed, manufactured and evaluated part. The primary challenge for the programme of work was to design and develop a SSB Ka mixer with low level spurious performance over a wide bandwidth.</p> <p>In summary, the key goals were :-</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Design and develop a SSB mixer over the Ka uplink frequency band</li> <li><input type="checkbox"/> Produce a design tolerant to manufacturing and device variations with performance margin</li> </ul> <p>AIRBUS Defence &amp; Space have been very successful in achieving these goals. More design work could be carried out to further develop the product into a single MMIC solution. The development programme has resulted in the design and development of a Ka-Band SSB Mixer, with inherent low-level wideband 5LO-RF mixing spurious whilst maintaining other aspects of mixer performance, for example low conversion loss and high linearity. Further work can readily be carried out based on the outcome of the performance achieved to implement a bespoke MMIC solution for improved equipment integration.</p>		
			

(\* ) The speaker needs to do the registration through this website