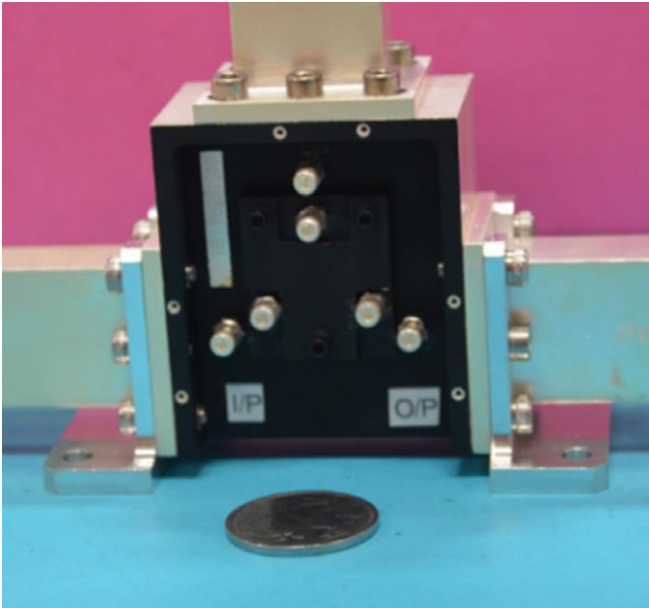
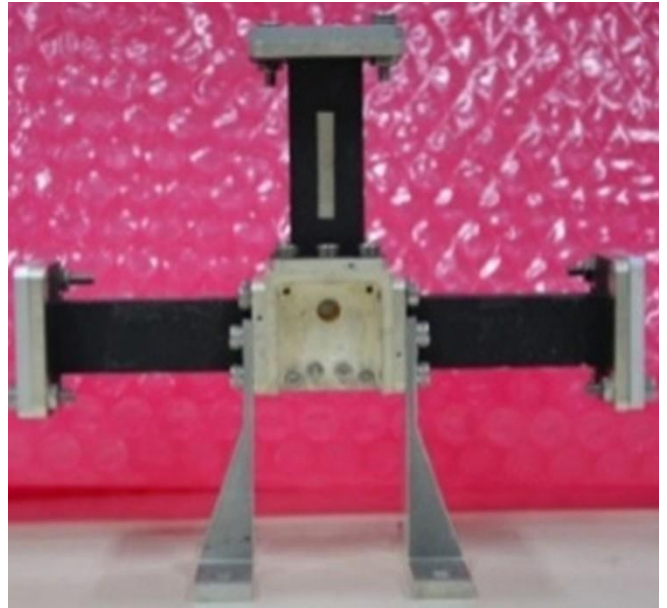


# Ferrite Based Wave Guide Circulators and Isolators



*Ku Band HP WG Circulator*



*Ka Band HP WG Circulator*



*Ka Band Low power Isolator*

Space Applications Centre (SAC) has developed Ferrite based high power waveguide circulators at Ku band and Ka band and low power isolators at Ka band have been successfully qualified for space use.

A circulator is an important non-reciprocal device which has wide applications in conventional communication and radar systems both as a duplexer and an isolator. It is used to provide perfect match conditions to devices connected at its input and output by isolating them.

## **Applications area**

Industries involved in the development of high power transmitters and low power receivers for space based and terrestrial applications at these frequencies are the potential users.

## Specifications:

- Y - junction ferrite waveguide circulator
- State of the art design with similar performance
- Thermally stable performance over -10 to 75 °C due to excellent thermal design for handling high power
- Wide band design to cover entire allocated frequency bands at Ku and Ka band

S. no.	Parameter	Specification		
		Ku Band High Power	Ka Band High Power	Ka Band Low Power
1	Frequency Range (GHz)	10.7-12.75	17.7-20.7	27.5-30.5
2	Insertion Loss (dB)	< 0.15	< 0.2	< 0.2
3	Return Loss (dB)	> 21	> 21	> 20
4	Isolation (dB)	> 21	> 21	> 20
5	Power Handling (W)			
	Average (Forward+Reverse)	210	130	Low Power
	Peak	840	520	

## Technology Transfer from ISRO

ISRO is willing to offer the knowhow of this technology to suitable entrepreneurs /

industries in India. Capable manufacturing industries interested in acquiring this knowhow may write with details of their present activities, requirements and plans for implementation, infrastructure and technical expertise available with them, their own market assessment, if any, and plans for diversification to the address given below: