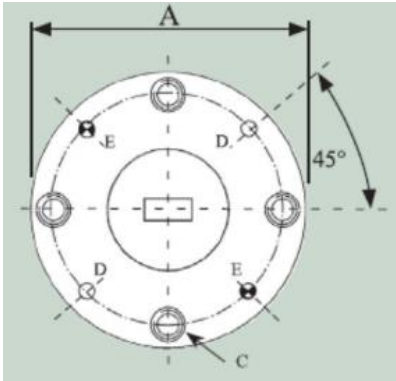


ANNEXURE- I: Technical Specifications for Commercial Waveguide Low Noise Amplifier (LNA) Module

1. TECHNICAL SPECIFICATIONS

Parameters		Specifications	Vendor offered Specification and compliance
Part/Model No.		To be offered by vendor	
Frequency Range		50 - 60 GHz	
Gain		≥ 30 dB	
Noise Figure		≤ 2.5 dB	
Output 1dB Compression point		≥ -3 dBm	
Input RL (IRL)		10dB (Typ.)	
Output RL (ORL)		≥ 10 dB	
DC Input (Single Supply Voltage and Power dissipation)		Voltage: 2V to 8V and Power dissipation ≤ 600 mW	
Operating Environmental Conditions	Temperature Range	-20°C to +60°C	
	Pressure range	Ambient to 10^{-6} torr or better	
Component Type		Waveguide Module	
DC Interface		Solderable DC Pins for Live and Ground	
RF Interface (Input and output)		WR15, UG 385/U or UG387/U	
Flange Dimension as per below figure		 <p>Holes C... 4 x4-40 UNC Holes D...2 x 1.65 dia Holes E...2 x dowels 1.562 dia x 4 projection All Holes on 14.29 PCD A.....19.05</p> <p>Note: All dimensions are in mm</p>	
Material and surface finish		Aluminium with gold plating	
Size (Max.)		30 mm X 30mm x 25mm (excluding connectors)	

2. DELIVERY SCHEDULE

Vendor shall provide the Waveguide module as per the following delivery schedule (typ.).

Order placement - T_0

Delivery of units – $T_0 + 24$ weeks

3. WARRANTY

The vendor shall provide warranty period of one year.

Guidelines to the Vendor

1. Vendor shall provide point-by-point compliance and valid datasheet.
2. Vendor should clearly indicate ordering information (order to be placed in favor of, component's part no. & other relevant information).
3. Vendor should provide valid authorization certificate from the manufacturer, if the vendor is not the manufacturer.
4. Vendor should provide certificate of conformance along with the deliverables.
5. Vendor shall provide individual test report (tested and generated after manufacturing the LNA's) for each LNA.
6. All the components shall be packaged in ESD safe packs to ensure they are isolated from mechanical, electrical and environmental damage.
7. Further, the individual packages and the intermediate packages shall be fixed within the shipping package, which shall be resistant to mechanical shocks, humidity and dust.
8. Mechanical interface drawings must be provided with the indent.
9. In addition to other mandatory shipping marking, the following additional marking shall appear on the shipping package in bold letters.

FRAGILE
HANDLE WITH CARE
TO BE OPENED UNDER CLEAN ROOM ENVIRONMENT WITH ESD PROTECTION ONLY
STORE IN A COOL AND DRY PLACE