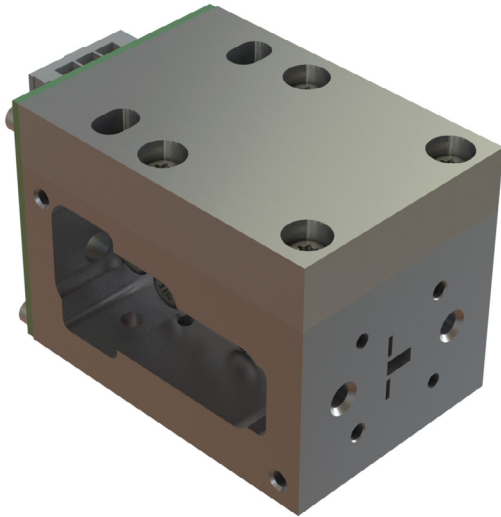
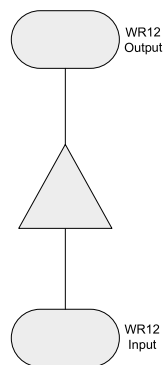


Features

- 71-76GHz and 81-86GHz High Power Amplifiers
- Saturated powers up to $>+28\text{dBm}$
- High linearity supports 256QAM modulation
- Wide 5GHz bandwidth
- $>20\text{dB}$ gain
- Suitable for military or commercial applications
- Low SWAP for airborne & HAPS applications



Cerus 1 Amplifier Block Diagram



Description

Filtronic's range of Cerus amplifiers provide market leading linear mmW power. Available in single to N-way configurations, the Cerus power amplifiers deliver unparalleled performance for long range E-Band communications.

The Cerus 1 E-Band amplifier modules each contain 1x Filtronic GaAs HEMT PA MMIC, performance matched to deliver maximum power.

- Proven system performance
 - Demonstrated in systems supporting 256QAM
- Field proven technology
 - $>50,000$ Filtronic millimetre wave transceivers deployed worldwide.

AA025 Outline Specification

Over baseplate operating temperature -40 to to +70C
All RF parameters referenced to waveguide output port.

Parameter	Min	Typ.	Max	Units
Tx Frequency	71		76	GHz
Bandwidth			5.0	GHz
Small Signal Gain		24		dB
P SAT		+28		dBm
P1dB		+24		dBm
OIP3 @ 20dBm		+36		dBm
Absolute maximum RF input power			+24	dBm
Supply voltage 1	3.5	3.8	4.2	V
Supply current 1		1.1		A
Supply voltage 2	-2	-0.6	0	V
Supply current 2			1	mA
Size		24 x 42 x 22.5		mm
Weight		33		g
Interface	Waveguide input & output: WR12 DC connector: IPLI-103-02-L-SH-K			

AA026 Outline Specification

Over baseplate operating temperature -40 to to +70C
All RF parameters referenced to waveguide output port.

Parameter	Min	Typ.	Max	Units
Tx Frequency	81		86	GHz
Bandwidth			5.0	GHz
Small Signal Gain		24		dB
P SAT		+27		dBm
P1dB		+23		dBm
OIP3 @ 20dBm		+34		dBm
Absolute maximum RF input power			+24	dBm
Supply voltage 1	3.5	3.8	4.2	V
Supply current 1		1.2		A
Supply voltage 2	-2		0	V
Supply current 2			1	mA
Size		24 x 42 x 22.5		mm
Weight		33		g
Interface	Waveguide input & output: WR12 DC connector: IPLI-103-02-L-SH-K			

Connector CON1

Connector CON1 controls the drain currents of the HPA assembly. The length of the wire harness must be as short as possible.

Connector CON2 pinout

Pin NO.	Name	Type	Description
1	VG	Power	Gate voltage (Vary to achieve ID).
2	VD	Power	Drain voltage.
3	GND	Power	Ground.