

# ASKA-25 (Non-IP Rated)

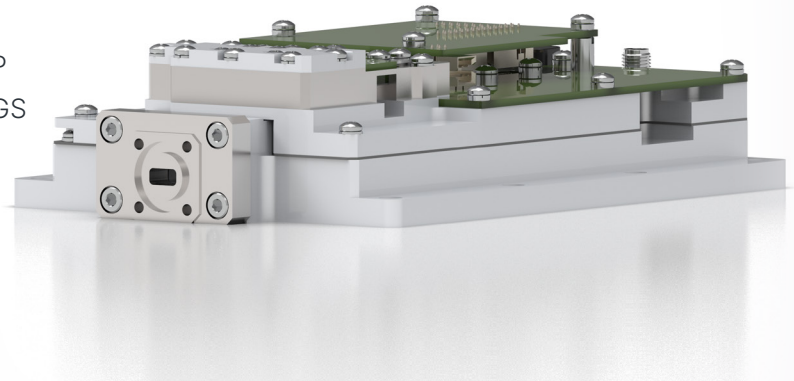
## GaAs + GaN Technology

25 Ka-Band BUC 27.5 to 31.0 GHz



### FEATURES:

- Hyper-Light yet Robust Package: 2lbs (0.9kg)
- Superior Quality, Efficiency, Reliability and Performance
- Built-in HPA Overdrive Circuit Protection
- High Temperature Mode - up to + 70°C
- OPEN-BMIP Ready to Work with iDirect X7 and 950MP
- Complies with MIL-STD-188-164C, RTCA DO-160G, WGS
- Industry Leading Over Temperature Performance
- Assembled and Rigorously Tested in the USA
- 3 Year Warranty



### DESIGN OVERVIEW:

The "SLIM FAN-LESS" Series with non-IP rated housing 27.5 to 31.0 GHz Frequency 25W Full Ka-Band BUCs are the next generation of the World's Smallest feed-horn & boom-arm mountable BUCs in the industry, weighing-in only at 2lbs (0.9kg) and working at high temp up to 70°C.

### PERFORMANCE SPECIFICATIONS

<b>Operating RF Frequency</b>	ASKA 27.5 to 31.0 GHz	
<b>Operating IF frequency</b>	950 to 1950   1000 to 2000 MHz	
<b>Local Oscillator</b>	Selectable	
<b>Rated Output Power PSAT</b>	ASKA-25	25W 44.0 dBm
<b>Linear Power SR @ -26dBc PLIN</b>		16W 42.0 dBm
<b>IMD3 (two tones) 3dB Back Off</b>	-25 dBc max. 2 signal 5MHz apart at P-LINEAR	
<b>Spectral Regrowth at PLINEAR</b> (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 3dB back-off from rated power)	-30 dBc	
<b>10MHz or 50 MHz External Ref. OdBm +/- 5dBm</b>	10MHz or 50MHz	

### PROTECTION

VOLTAGE	OVERTEMP	VSWR
SMART ALARMS IN THE M&C	MICROPHONIC	CURRENT

### COMPLIANCE INFORMATION

MIL - STD - 188/164C	MIL - STD - 461	ROHS, REACH, WEEE
MIL - STD - 810E	DO - 160 G	

### SPURIOUS & PHASE NOISE

<b>In-Band/Out-band Spurious</b>	-60dBc max.	
<b>Group Delay</b>	Ripple 1 nsec point to point max.	
<b>AM/PM Conversion</b>	2.0°/dB max. at 3 dB output backoff	
<b>Noise Power Density (TX)</b>	-80dBm/Hz	
<b>Noise Power Density (RX)</b>	-150dBm/Hz	
<b>Phase Noise (Up Converter) (Ext. Ref.)</b>	-33 dBc/Hz @ 10 Hz	-115dBc/Hz
	-63 dBc/Hz @ 100 Hz	-135dBc/Hz
	-73 dBc/Hz @ 1 kHz	-150dBc/Hz
	-83 dBc/Hz @ 10 kHz	-155dBc/Hz
	-93 dBc/Hz @ 100 kHz	-160dBc/Hz

### POWER CONSUMPTION

ASKA-25	25W 44.0 dBm PSAT	150W
	16W 42.0 dBm PLIN	120W

### GAIN

<b>Gain (Temperature Compensated)</b>	64dB (min) 68dB (typ.)
<b>TX Gain Flatness</b>	± 0.75 dB max. over 40 MHz
<b>TX Gain variation 50MHz</b>	± 0.5 dB
<b>TX Gain variation 500MHz</b>	± 1.5 dB

## ENVIRONMENT SPECIFICATIONS

<b>Environmental MIL-STD</b>	Compliant with MIL-STD810E
<b>Vibration MIL-STD</b>	MIL-STD810F, Method 514.5
<b>Operating Temperature Range</b>	- 40° C to + 70°C
<b>Storage Temperature Range</b>	- 60°C to + 85°C
<b>Humidity</b>	100% Condensing
<b>Shock</b>	20 g peak, 11 msec, 1/2 sine
<b>Altitude</b>	21,500ft, 6,500m
<b>Built-in Receive Reject Filter</b>	Suppression by +60dB (min)

## MECHANICAL SPECIFICATIONS

<b>Dimensions (DC Powered)</b>	6" x 4.41" x 1.43" (173.4 x 102 x 36.3 mm) Without Connectors
<b>Weight (DC Powered)</b>	2lbs (0.9kg)

## PART NUMBERING SYSTEM

AS - "SLIM FAN-LESS" MODEL SERIES

KAF - Full Ka-Band 27.5 - 31.0 GHz

KAC - Commercial Ka-Band 29.0 - 30.0 GHz

KAM - Military and Commercial Band 29 - 31.0 GHz

KAO - O3B Bands 27.652 - 28.388 GHz, 28.172 - 29.071 GHz

10 | 13 | 16 | 20 | 25 | 40 | 50 - Rated PSAT Power in Watts

S - 50 Ohm SMA Input Connector (other interface options available)

I - Isolator for VSWR Improvement to 1.35:1

M - M&C Option - RS232/485 + Ethernet + SNMP

O - OPENBMIP Protocol Ready

R - Auto Sense Ref Detector | Internal +/- 0.05ppm Stability

C - Custom color, housing or other options available

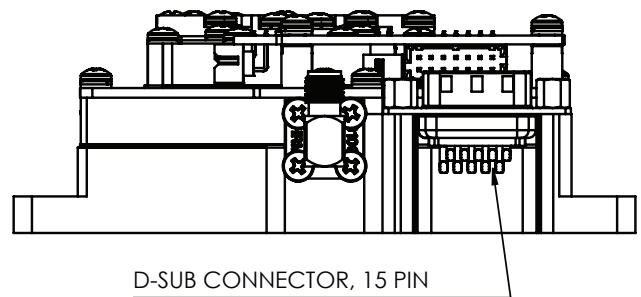
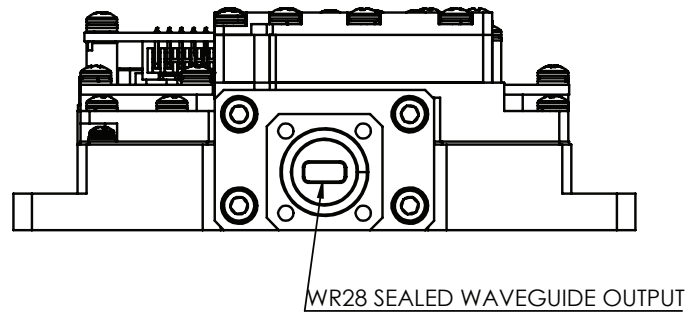
X - Custom option

## INPUT|OUTPUT INTERFACE

<b>IF Connector</b>	SMA (50 Ohm)
<b>Universal Prime Power via IF or MS/M&amp;C Connector (7.0 A Current Limit Protection Through Coax)</b>	+ 22 - 55 VDC
<b>Output VSWR</b>	1.5:1 (1.35:1 with optional Isolator)
<b>Output Interface</b>	WR28 Grooved
<b>Input VSWR</b>	1.5:1

## M&C INTERFACE

<b>Advanced Monitor &amp; Control</b>	Ethernet Web Page Based, SNMP, RS232/485, FSK (opt.)
<b>ALARMS</b>	PLL LOCK, HPA, VSWR, MUTE, TX
<b>Stealth PLin Operation Mode</b>	LED Shut-Off



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