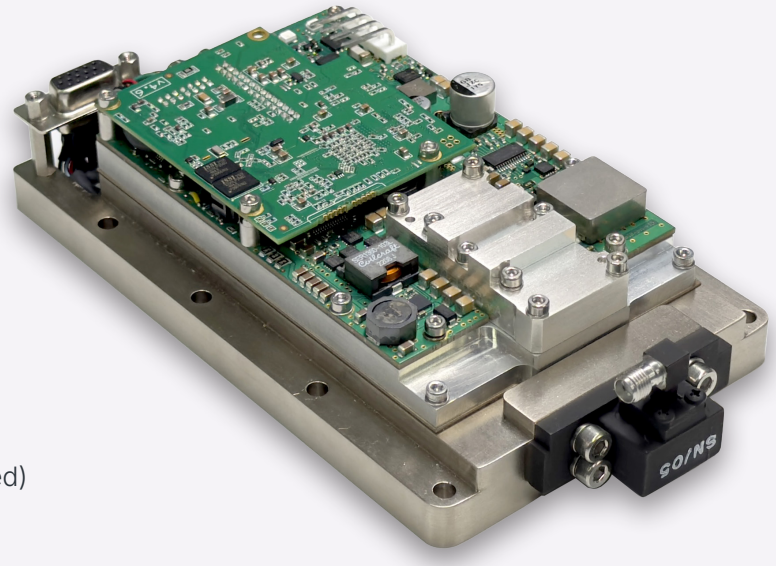
ASKU(S,D)-20

Formerly known as AFSKU(S,D)-20

20W Fanless Slim Ku-Band BUC for specific applications

FEATURES:

- Hyper-Light Package Design Only 1.8 lbs
- Extreme Stability, Reliability and Performance
- High Temperature Mode - up to + 70°C
- Built-in HPA Overdrive Circuit Protection with over-temp shut down
- Built-in Optimized Linearization to specific power
- Built-in Anti Vibration Technology
- Built-in DC Input Noise Suppression Filter
- Extreme GaN Linearity and Efficiency
- Exceeds ALL IESS-308/309 Phase Noise Standards
- Triple protection sealed waveguide output
- Fan-less Design (Customer cooling baseplate required)
- Built-in Internal Reject Filter
- 3-Year Warranty



DESIGN OVERVIEW:

The "SLIM FAN-LESS" series with non-IP rated housing Extended (13.75 - 14.5 GHz), Standard (14.0 - 14.5 GHz) and Dual (13.75 - 14.5 GHz | 14.0 - 14.5 GHz) frequency Ku-Band BUCs are the next generation of the World's Most efficient and compact size BUCs in the industry, weighing only 1.8 lbs (0.82 lbs) and handling output power of 20W (min) at the Extended Ku-Band frequencies.

PERFORMANCE SPECIFICATIONS

Operating RF Frequency	ASKS 14.0 - 14.5 GHz ASKU 13.75 -14.5 GHz ASKD 13.75 -14.5 | 14.0 - 14.5 GHz
Operating IF frequency	950 - 1450 MHz | 950 - 1700 MHz
Local Oscillator	13.05 GHz | 12.80 GHz
Rated Output Power PSAT **Linear Power SR @-26 dBc PLIN**	20W 43.0 dBm 16W 42.0 dBm
IMD3 (two tones) 3 dB Back Off	-25 dBc max. 2 signal 5 MHz apart at P-LINEAR
Spectral Regrowth at P-LINEAR (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2 dB back-off from rated power)	-30 dBc
10 MHz External Ref. (Internal High Stability Optional)	10 MHz Ref. Level: 0 dBm +/- 5 dBm Internal Ref. Stability +/- 0.1 ppm

SPURIOUS & PHASE NOISE

In-Band/Out-band Spurious	-55 dBc max.	
Group Delay	Ripple 1 nsec point to point max.	
AM/PM Conversion	1.0°/dB max. at 3 dB output backoff	
Noise Power Density (TX)	-85 dBm/Hz	
Noise Power Density (RX)	-135 dBm/Hz (10.95 - 12.75 GHz)	
Phase Noise (Up Converter)|(Ext. Ref.)	-55 dBc/Hz @ 10 Hz -65 dBc/Hz @ 100 Hz -75 dBc/Hz @ 1 kHz -85 dBc/Hz @ 10 kHz -95 dBc/Hz @ 100 kHz	-115 dBc/Hz -135 dBc/Hz -150 dBc/Hz -155 dBc/Hz -160 dBc/Hz

POWER CONSUMPTION

20W 43.0 dBm PSAT	100W
16W 42.0 dBm PLIN	75W

COMPLIANCE INFORMATION

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

PROTECTION

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

ENVIROMENT SPECIFICATIONS

Environmental MIL-STD Vibration MIL-STD	Compliant with MIL-STD810E MIL-STD810F, Method 514.5 C-2 Transport
Operating Temperature Range	- 40° C to + 70° C
Storage Temperature Range	- 60° C to + 85° C
Humidity	100% Condensing
Shock	20 g peak, 11 msec, 1/2 sine
Altitude	50,000 ft, 15,240 m
Cooling	Customer Supplied Mounted Cooling Baseplate

GAIN

Gain (Temperature Compensated)	66 dB (min) 70 dB (typ.)
TX Gain Flatness	± 0.75 dB max. over 40 MHz
TX Gain variation 50 MHz	± 0.5 dB
TX Gain variation 500 MHz	± 1.5 dB

PART NUMBERING SYSTEM

AS - "SLIM FAN-LESS" MODEL SERIES
KU - Universal Ku-Band 13.75 - 14.50 GHz
KS - Standard Ku-Band 14.0 - 14.50 GHz
KL - Low Ku-Band 12.75 - 13.25 GHz
KD - Dual Ku-Band 13.75 - 14.50 GHz | 14.0 - 14.50 GHz
16 | 20 | 25 | 30 | 40 | 50 - Rated Power in Linear Watts
N | F - 50 Ohm or 75 Ohm IF Input Connector Type
M - Full M&C Option RS232/485, SNMP, Ethernet
R - 10 MHz Ref. Auto Sense | Internal Reference
K - FSK Option
U - Universal Mounting Bracket
J - Weatherproof DC/RJ45 Cable Dongle
C xxxx - Custom RAL Color Code
L - Custom Language
P - Custom Part number
B - Custom Label
G - Custom Logo
T - Redundancy Ready
H - High Gain (+79 dB - 82 dB)
W - Weatherproof Pelican Style Case
O - Other Custom Option
X - Custom Cable

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Amkom Design Group Inc.

INPUT|OUTPUT INTERFACE

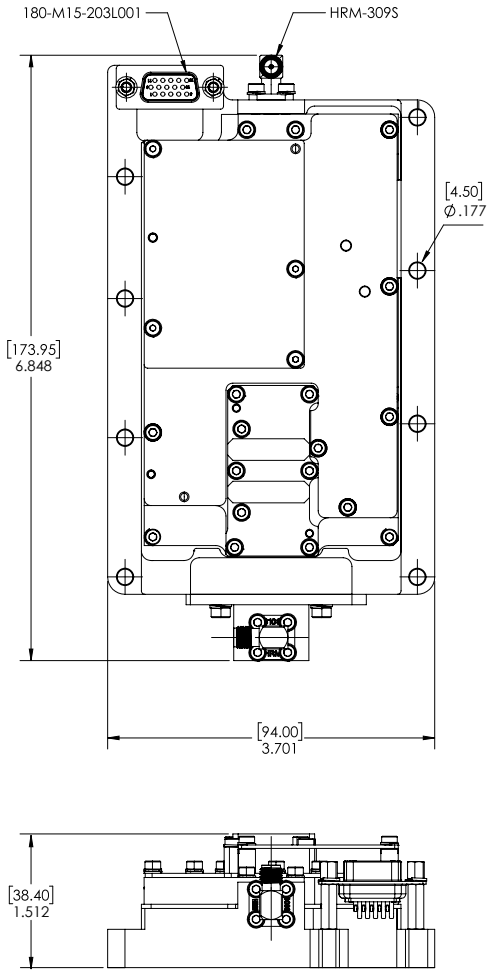
IF Connector	SMA
Universal Prime Power via IF or MS/M&C Connector (7.0 A Current Limit Protection Through Coax)	+ 22-55 VDC
Output VSWR	1.3:1
Output Interface	SMA
Input VSWR	1.5:1
RX Rejection	Internal RX Reject Filter

M&C INTERFACE

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

MECHANICAL SPECIFICATIONS

Dimensions	6" x 3.7 × 1.51" (152 × 94 × 38.4 mm) Without Connectors
Weight	1.8 lbs (0.82 kg)



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