AMKU(S,D)-20W(NA)

GaAs + GaN Technology

AC POWERED OUTDOOR 20W Ku-Band BUCs

FEATURES:

- Hyper-Light Package Design Only 5.3lbs (2.4kg)
- Extreme Stability, Reliability and Performance
- Built-in HPA Overdrive Circuit Protection
- Built-in Optimized Linearization
- Built-in Ultra Receive Band Reject Filter
- 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
- Field Replaceable IP68 Rated Fans
- AC Power 85-260VAC
- Fully Assembled, and Rigorously Tested in the USA
- 3 Year Warranty

DESIGN OVERVIEW:

The "MINI BRICK" series Extended (13.75 - 14.5GHz), Standard (14.0 - 14.5GHz) and Dual(13.75 - 14.5GHz | 14.0 - 14.5GHz) Frequency 20W Ku-Band BUCs are the next generation of the AC Powered feed-horn & boom-arm mountable BUCs, at only at 5.3lbs (2.4kg) and working at high temp up to 70°C.

PERFORMANCE SPECIFICATIONS

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

COMPLIANCE INFORMATION

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

SPURIOUS & PHASE NOISE

In-Band/Out-band Spurious	-60dBc max.	
Group Delay	Ripple 1 nsec point to po	pint max.
AM/PM Conversion	1.0°/dB max. at 3 dB output backoff	
Noise Power Density (TX)	-85dBm/Hz	
Noise Power Density (RX)	-155dBm/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	-115dBc/Hz -135dBc/Hz -150dBc/Hz -155dBc/Hz -160dBc/Hz

POWER CONSUMPTION

20W 43.0 dBm PSAT	115W
16W 42.0 dBm PLIN	95W

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
Operating Temperature Range	- 40° C to + 70°C
Storage Temperature Range	- 60°C to + 85°C
Fan Rating / Field Replaceable	IP68, Ultra long life
Humidity	100% Condensing, IP67 Rated
Shock	20 g peak, 11 msec, 1/2 sine
Altitude	21,500ft, 6,500m
Built-in Receive Reject Filter	Suppression by +60dB (min)

GAIN

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

PART NUMBERING SYSTEM

AM- "MINI BRICK" 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 - Rated Power in Watts N | F - 50 Ohm or 75 Ohm IF Input Connector Type M - M&C RS232/485, Ethernet, Telnet & SNMP A - AC Power 85-260VAC (increases size and weight) 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 (+79dB 82dB)
- W Weatherproof Pelican Style Case
- O Other Custom Option
- X- Custom Cable



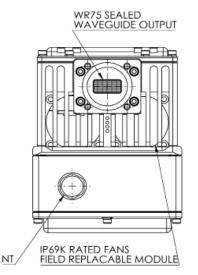
Visit Product Page

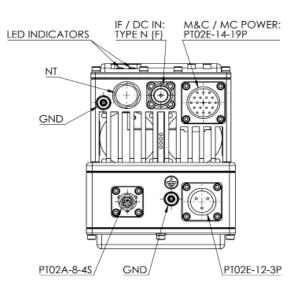
INPUT|OUTPUT INTERFACE

IF Connector	N-type (50 Ohm) F-type (75 Ohm)
Universal Prime Power via 3pin Power Connector Aphenol PT02E-12-3P, Current Protection	+ 85-260 VAC
Output VSWR	1.3:1
Output Interface	WR75 Grooved
Input VSWR	1.5:1
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 Silenced fans

MECHANICAL SPECIFICATIONS

Weight (DC Powered)	5.3lbs (2.4kg)
Dimensions (DC Powered)	mm) Without Connectors
Dimensions (DC Powered)	6.73"x3.94"x 5.09" (171×100×129.3





© 2023 Amkom Design Group Inc.. All rights reserved. All Amkom Design Group Inc. logos and trademarks are the property of their respective owners. Specifications are subject to change without notice. Although every effort has been made to verify the accuracy of the information contained in this document, Amkom Design Group Inc., its officers, employees, and agents disclaim all liability (except for any liability which by law cannot be excluded), for any error, inaccuracy in, or omission from the information contained in this document or any loss or damage suffered by any person directly or indirectly through relying on this information.