



Norsat
International Inc.

Innovative Communication Solutions

SSPA

KU-BAND 100W

ATOMSKU100



NORSAT ATOM SERIES SSPAS

Compared to equivalent products, ATOM series SSPAs are:

- Up to 68% smaller and lighter
- Up to 60% more power efficient
- More flexible with RF and configuration options

The Norsat ATOM series of solid state power amplifiers (SSPA) are among the smallest, lightest, and most energy efficient transmitters available. The high efficiency of ATOM reduces power consumption significantly, delivering considerable operational cost savings over the lifetime of the device.

Another innovative communication solution from Norsat.

OPTIONS

The following items are standard:

White paint, N-Type input connector, WR-75 waveguide output, Fan cooling, DC Power.

Available options include:

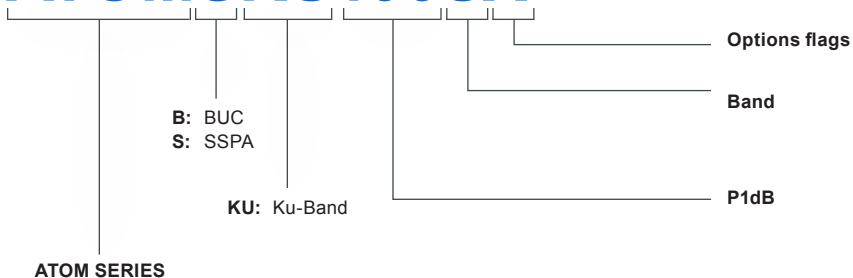
Baseplate Cooling, EMI/EMC Filter, Surge+Protect Filter, Fast Switching, 3 Phase AC, SMA Input Connector, WR-62 Waveguide Output

Accessories:

Power Supply, Bracket, Waveguides, Cables, Adaptors.

HOW TO ORDER

ATOMSKU100SX



See <http://www.norsat.com/atom-options> for details

S - Standard
E - Extended
B - Selectable Band: Custom from 12.25 to 18.0 GHz

025 - 25W
040 - 40W
050 - 50W
100 - 100W



Norsat
International Inc.

N
+1

sat.com
www.norsat.com

KU-BAND 100W SSPA-ATOMSKU100

RF SPECIFICATIONS

Frequency Band (GHz)	13.0 -13.75	13.75-14.5	14.5 - 15.0	15.0 - 16.0	16.0 - 16.5	16.5 - 17.5
<i>*For Wideband units, specifications are only guaranteed for one band.</i>						
Rated Power Output (P1dB)	80W	100W	100W	80W	72W	40W
Rated Power Output (Psat)	95W	120W	120W	95W	85W	48W
Noise Figure in-band	18 dB	18 dB	18 dB	18 dB	18 dB	18 dB
Fwd Monitor (15 dB Range) @ CF	± 1.0 dB	± 1.0 dB	± 1.0 dB	± 1.0 dB	± 1.0 dB	± 1.0 dB
Gain (min)	50 dB	50 dB	50 dB	46 dB	45 dB	40 dB
Gain variation over operating band	8 dB max p-p	6 dB max p-p	6 dB max p-p	7 dB max p-p	7 dB max p-p	10 dB max p-p
Gain variation over any 40 MHz	2 dB max p-p	1.5 dB max p-p	1.5 dB max p-p	2 dB max p-p	3 dB max p-p	3 dB max p-p
Gain variation over temperature	3 dB max p-p	3 dB max p-p	3 dB max p-p	3 dB max p-p	3 dB max p-p	3 dB max p-p
Gain variation over time	0.5 dB/day	0.5 dB/day	0.5 dB/day	0.5 dB/day	0.5 dB/day	0.5 dB/day
Input VSWR	1.5:1	1.5:1	1.5:1	1.5:1	2.0:1	2.0:1
Output VSWR	2.0:1	2.0:1	2.0:1	2.0:1	2.3:1	2.3:1
w/optional output isolator (derate power by 0.4 dBm)	1.4:1	1.4:1	1.4:1	1.4:1	1.4:1	1.4:1
Spurious	-60 dBc	-60 dBc	-60 dBc	-60 dBc	-60 dBc	-60 dBc
AM/PM Conversion @2dB below rated power	2.5°/dB	2.5°/dB	2.5°/dB	2.5°/dB	2.5°/dB	2.5°/dB
2nd Harmonic @ 3dB below rated power	-45 dBc	-45 dBc	-45 dBc	-45 dBc	-45 dBc	-45 dBc
3rd order IMD @ 3dB max. backoff from rated power	-25 dBc	-25 dBc	-25 dBc	-25 dBc	-25 dBc	-25 dBc

POWER

Input voltage	20 – 56 VDC
Power Consumption with fans	532W @ Psat 475W @ P1dB 410W @ 3dB backoff from P1dB 375W @ Quiescent (no signal input) 60W muted
Power Connector	AMPHENOL 10-194922P 4 Pins

ENVIRONMENTAL & PHYSICAL

Operating Temperature with fans	-40° to +60°C (-40° to +140° F)
Storage Temperature	-54° to +80°C (-65° to 176° F)
Outline dimensions	297 x 135 x 169 mm (11.7 x 5.3 x 6.4")
Weight	7 kg (15.3 lbs)
Humidity	100% condensing
Altitude	24 384 m (80 000 ft)

INTERFACES

RF Input connector	N-Type
RF Output connector	WR-75 (WR-62 above 15.5 GHz)

MONITOR & CONTROL

M&C Interface	RS-485
M&C Connector	MIL-26482 Series 1 Receptacle, Shell Size 12, 10 Pins
Mute Control	Fully configurable (mute enable: high or low, mute default: enabled or disabled)
Low	0.0 - 0.8V
High	3.0 - 5.0V
Thermal Shutdown Temperature	90°C (Accuracy ± 3°C)

MECHANICAL DIAGRAM

