



SSPA

KU-BAND 25W

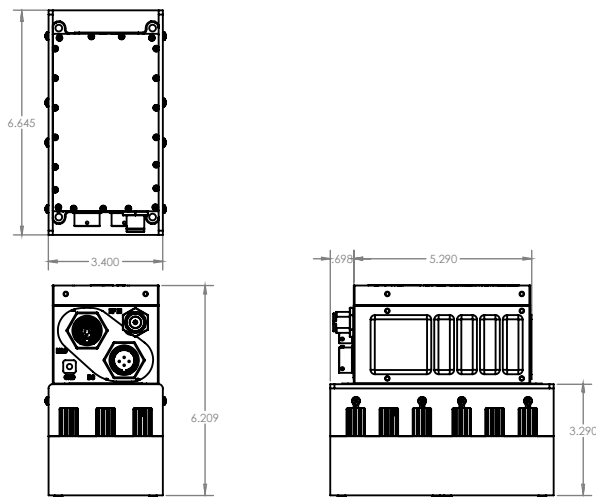
SSPA-ATOMKU025



NORSAT ATOM SERIES SSPAS

Norsat microwave products are renowned for their high quality, excellent reliability, and innovation. The ATOM series of solid state power amplifiers (SSPA) are the smallest, lightest, and most energy efficient transmitters available today. ATOM series SSPAs have been deployed globally for new and replacement applications that demand high performance transmission with a compact footprint. 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.

MECHANICAL DIAGRAM



Measurements in inches

KEY FEATURES

- Up to 90% smaller than equivalent SSPAs
- Up to 85% lighter than competing products
- Ultra efficient, consuming up to 60% less power than similar units: 123W (@25W RF out) typical
- Extremely flexible technology with versions for any frequency band from 12.6 GHz to 18.5 GHz; useful for unusual or non-standard bands
- Excellent performance over entire 13-17.5 GHz band (peak performance at 13.75-14.5 GHz)
- Forward Power Monitor
- Gain vs. Temp. compensation
- Integrated heat-pipe baseplate
- Fully environmentally sealed

✓ **Smallest size**

✓ **Lightest weight**

✓ **Highest efficiency**



KU-BAND 25W SSPA-ATOMKU025

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 |
| Rated Power Output (P1dB) | 20W | 25W | 25W | 20W | 16W | 10W |
| Noise Figure in-band | 12 dB | 12 dB | 12 dB | 12 dB | 12 dB | 12 dB |
| F & R Monitor (15 dB Range) @ CF | ± 0.25 dB | ± 0.25 dB | ± 0.25 dB | ± 0.25 dB | ± 0.25 dB | ± 0.25 dB |
| Gain (min) | 53 dB | 56 dB | 50 dB | 46 dB | 45 dB | 40 dB |
| Gain variation over 1GHz | 8 dB max | 5 dB max | 6 dB max | 7 dB max | 7 dB max | 10 dB max |
| Gain variation over any 40 MHz | 2 dB max | 2 dB max | 2 dB max | 3 dB max | 3 dB max | 3 dB max |
| Gain variation over temperature | 3 dB max | 3 dB max | 3 dB max | 3 dB max | 3 dB max | 3 dB max |
| 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 w/optional output isolator (derate power by 0.4 dBm) | 2.0:1 1.4:1 | 2.0:1 1.4:1 | 2.0:1 1.4:1 | 2.0:1 1.4:1 | 2.3:1 1.4:1 | 2.3:1 1.4:1 |
| Spurious @ rated power | -5 dBc | -5 dBc | -5 dBc | -5 dBc | -5 dBc | -5 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 |

MONITOR & CONTROL

| | |
|---|--|
| Discrete Mute Control Voltage ranges | |
| Low | 0 -0.8 V |
| High | 3.0 - 5.0 V |
| Fully programmable | |
| Mute enable can be high or low | |
| Mute default can be enabled or disabled | |
| Thermal shutdown control threshold | +85°C |
| Temperature Monitor Accuracy | ± 3°C |
| Monitor/Control Connector | MIL-26482 Series 1 receptacle Shell size 12, 10 pins |

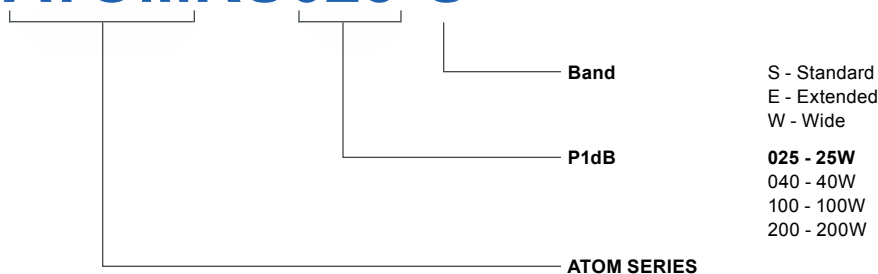
POWER

| | |
|--|--|
| Input power with integrated power supply | 18 - 56 VDC |
| Power Consumption @ 25W out | 136 Watts |
| @ 3dB backoff | 118 Watts |
| Power Connector | MIL-26482 Series 1 receptacle Shell size 12, 4 pins |

Optional AC Power

HOW TO ORDER

SSPA-ATOMKU025-S



ENVIRONMENTAL & PHYSICAL

| | |
|---|---|
| Operating Temperature in SSPA bottom surface | -40° to +70°C (-40° to +158° F) |
| Storage Temperature | -54° to +105°C (-65° to 221° F) |
| Outline dimensions With integrated power supply | 133.4 L x 80.0 W x 82.6 H mm (5.25" x 3.15" x 3.25") |
| With supply & fan cooling | 168.9 L x 86.4 W x 157.7 H mm (6.65" x 3.4" x 6.21") |
| Weight With integrated power supply | 1.36 kg (3.0 lbs) |
| With supply & fan cooling | 2.04 kg (4.5 lbs) |
| Humidity | 100% condensing |
| RF Input connector | N-Type |
| RF Output connector | WR-75 (WR-62 above 15.5 GHz) |



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