SpacePath StellarMini™ 80W DBS-Band Antenna Mount TWTA

The STA3408 range of DBS amplifiers from Spacepath Communications provide over 75W of Rated Output Power in compact, lightweight rugged weatherproof enclosure. The advance cooling techniques enable the unit to operate in extreme environmental conditions.

The units can be deployed globally, are easy to integrate and user friendly. A serial RS422/485 interface is included as standard with comprehensive monitoring and control.

Options

- Integral BUC that can be supplied as a Standard Wide Band or Dual Band version with selectable LO allowing the entire DBS frequency range to be covered by one unit.
- Lineariser enabling the unit to provide over 43W Linear power

Features

- Lightweight and compact
- Wide Operating temperature range –40°C to +60°C
- Intuitive Monitoring & Control through RS422/RS485
- Weatherproof antenna mount construction allows exposed mounting
- Redundant control – contains control and drive circuits for 1:1 redundancy
- Wide input supply 90V to 264V AC
- Wide range of accessories including: controllers, waveguide networks, cable assemblies, ducting adaptor and cowl

RF Performance				
Frequency Range - Standard		**DB2:** 17.30 – 18.40 GHz		
Frequency Range - with BUC Option*		**DB1:**	**DB2:**	**DB3:**
	Output	17.30 – 18.10 GHz	17.30 – 18.40 GHz	18.10 – 18.40 GHz
	Input	950 - 1750 MHz	950 - 2050 MHz	1150 - 1450 MHz
	LO	16.35 GHz	16.35 GHz	16.95 GHz
External Reference - with BUC Option*	Frequency	10 MHz		
	Level	0 ± 5dBm		
	Impedance	50 Ω		
Output Power	TWT Flange (min)	**DB1 & DB2:** 85 W (49.3 dBm) **DB3:** 67 W (49.3 dBm)		
	HPA Rated Output (min)	**DB1 & DB2:** 76 W (48.8 dBm) **DB3:** 60 W (47.8 dBm)		
Gain at Rated Power		≥ 70 dB		
Small Signal Gain		≥ 75 dB		
Gain Flatness - Full Band		**DB1 & DB2:** 4 dB p-p **DB3:** 3 dB p-p		
Gain Flatness - 36 MHz		1 dB p-p		
Gain Stability vs. Time		± 0.5 dB max / 24hrs @ constant drive and temperature		
Gain Stability vs. Temperature		± 2.0 dB max / 24hrs @ constant drive and frequency		
Gain Control		25 dB min		
Inter-modulations (IMD) 25dBc, 2 equal carriers, 10MHz apart, Total OPBO		No Linearizer: Prated -8 dB With Linearizer: Prated -3 dB		
Spectral Re-growth (SR) -30dBc, 1 symbol rate from carrier (QPSK)		No Linearizer: Prated -6 dB With Linearizer: Prated -2 dB		
Noise power	Transmit band	70 dBW/4 kHz		
	Receive band	130 dBW/4 kHz		
Spurious		≤ -65 dBc		
Harmonic		≤ -60 dBc		
Phase Noise		Standard - 10dB below IESS phase noise profile With Internal BUC - Meets IESS phase noise profile ≤ -50 dBc max, AC fundamental ≤ -47 dBc max, Sum of all spurs		
Input VSWR (Return Loss)		1.3:1 (1.6:1 With Internal BUC)		
Output VSWR (Return Loss)		1.3:1		

***Internal BUC Option:** The Internal BUC is available as single LO versions covering the bands DB1, DB2 & DB3 or a Dual Band version with selectable LO for DB1 & DB3.

Electrical	
Prime Power	Single Phase, Line-Neutral or Line-Line
AC Input Voltage	90 - 264 Vac
Power Requirement	660 VA typical at Prated
Power factor	0.95 minimum

Physical	
Dimensions (request outline)	34.8cm deep x 18.3 cm width x 14.7 cm height
Weight	9.0kg (19.8 lbs)
Cooling	Integral forced-air
RF Input	N-Type 50Ω (Female)
RF Output	PBR140 with 6-32 UNC 2B threaded holes
RF Sample port	N-Type 50Ω (Female)
AC Input	Amphenol T3110-000
Control Interface	62GB-12E-18-32-PN

Environmental	
Temperature - Operating	-40°C - +55°C (derate 2°C/300m above sea level)
Temperature - Storage	-40°C - +85°C
Humidity	Up to 100%
Altitude	Operating: 4.5 km (15,000 ft) max. Non-Operating: 12 km (40,000 ft) max.
Vibration/Shock	BS EN 60721-3-2 Level 2M3

Controls		
Control	Off Standby Transmit RF inhibit LO Select (Optional with BUC)	High Power Alarm Set Low Power Alarm Set Auto Redundancy Control RF Switch Control Gain Control (when fitted)
Remote Status/Monitor	Off Standby Transmit Fault Summary Redundancy Fault Reflected Power External interlock TWT Too Hot Mean/Peak Helix Current	Low/High Power Alarm Output Power Monitor Reflected Power Monitor TWT Temperature Helix Current Monitor Helix Voltage Collector Voltages Heater Voltage Elapsed Hours
Interfaces	RS422/485	

Specifications are subject to change without notice

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