CPI DBS-band touchscreen GEN IV klystron power amplifier for satellite uplink communications

This HPA is equipped with an MSDC klystron for high power and high efficiency.

Unmatched Efficiency

Uses less power and produces less heat than any other K-HPA. Features Power Saver and Power Tracker optimizing K-HPA efficiency to meet your operating condition.

New Features and Options

Scopescreen provides a graphical log display. Standard Ethernet provides higher speed connections, can update and coordinate all clock settings, and enables a snapshot feature where user can create a file containing all settings, alarms and faults at a single point in time.

Greater Reliability

Low temperatures are the key to longer lifetimes for klystrons and electronic parts. The CPI power supply design and high efficiency multi-stage depressed collector klystron make these lower temperatures possible.

Useful Displays

Large, high quality, color, graphical display has a wide viewing angle and a sharp appearance. All important functions are clearly displayed, and an event log is included.

Acoustically Quiet

The quietest K-HPA in the market.



CPI GEN IV DBS-Band KPA

FEATURES:

- Motorized channel selector
- Remote control panel
- 65 or 85 MHz instantaneous bandwidth
- Extended frequency range
- Meets international safety standard EN-60215, EMC compatibility 2014/30/EU and harmonic standard EN-61000-3-2
- Power saver improves efficiency

BENEFITS:

- Multi-stage depressed collector results in saved money and more available physical space
- Worldwide 24 hour support, with more than 20 worldwide service centers

Quality Management System - ISO 9001:2015



Frequency	Specification	Model K4D8 Series DBS-Band Gen IV				
Amptifier Power Output¹, min. 1.4 kW (61.46 dBm) 1.4 kW (61.46 dBm) 1.4 kW (61.46 dBm) 1.725 kW (62.21 dBm) 2.0 kW (63.01 dBm) 2.0 kW (63.0	Frequency	17.3 to 18.4 GHz	17.3 to 18.4 GHz 17.3 to 18.1 GHz			
Instantaneous Bandwidth, in,	Klystron Power Output, min.	1.7 kW (62.30 dBm)	1.7 kW (62.3 dBm)	2.1 kW (63.22 dBm)	2.4 kW (63.80 dBm)	2.4 kW (63.8 dBm)
Preset Channels	Amplifier Power Output ¹ , min.	1.4 kW (61.46 dBm)	1.4 kW (61.46 dBm)		2.0 kW (63.01 dBm)	2.0 kW (63.01 dBm)
Output Power Adjustability 0 to ·20 of output with ±0.1 dB typical resolution Gain at Rated Power 75 dB min. Gain Stability 1.0.25 dB/24hr max, at constant drive and temperature Gain Slope at rated power (F0 ± 18) MHz over (F0 ± 18) MHz over (F0 ± 28) MHz over (F0 ± 14) MHz over (F0 ± 18) MHz over (F0 ±	Instantaneous Bandwidth, in.	50 MHz	85 MHz	65 MHz	50 MHz	40 MHz
Gain at Rated Power 75 dB min. 10.25 dB/24hr max, at constant drive and temperature 1.0 dB from 20° C to 40° C; ±2.5 dB max. from 0° to 50° C, at constant drive 2.0 dB from 20° C to 40° C; ±2.5 dB max. from 0° to 50° C, at constant drive 2.0 dB from 20° C to 40° C; ±2.5 dB max. from 0° to 50° C, at constant drive 2.0 dB from 20° C to 40° C; ±2.5 dB max. from 0° to 50° C, at constant drive 2.0 dB from 20° C to 40° C; ±2.5 dB max. from 0° to 50° C, at constant drive 2.0 dB from 20° C to 40° C; ±2.5 dB max. from 0° to 50° C, at constant drive 2.0 dB from 20° C to 40° C; ±2.5 dB max. from 0° to 50° C, at constant drive 2.0 dB from 20° C to 40° C; ±2.5 dB max. from 0° to 50° C to 40° C; ±2.8 MHz 2.0 dB from 20° C (Fo ±10) MHz 2.	Preset Channels	Up to 12 (Up to 50 with digital fast tuner system (DFTS))				
Gain Stability 1.0 dB from 20° C to 40° C; ±2.5 dB max from 0° to 50° C, at constant drive Gain Slope at rated power 0.04 dB/MHz max. over (Fo ±18) MHz over (Fo ±30) MHz	Output Power Adjustability	0 to -20 of output with ±0.1 dB typical resolution				
1.0 dB from 20°C to 40°C; ±2.5 dB max from 0°C to 50°C, at constant drive	Gain at Rated Power	75 dB min.				
Sain Morpe at rated power Over (Fo ± 18) MHz	Gain Stability	± 0.25 dB/24hr max, at constant drive and temperature 1.0 dB from 20°C to 40°C; ± 2.5 dB max from 0° to 50°C, at constant drive				
Over (Fo ± 18) MHz	Gain Slope at rated power					
Residual AM² -50 dBc max, 20 to 400 Hz; -60 dBc max, 400 Hz to 2 kHz; -80 dBc max, 2 kHz to 500 kHz AM/PM Conversion 6° /dB at rated power 6° /dB at rated power 10° dBc with filter, -35 dBc without filter Phase Noise³-3 10 dB below IESS 308 continuous mask; AC fundamental: -42 dBc; Sum of all spurs: -47 dBc Noise Power Density -28 dBc with we equal carriers at total output 7 dB below rated single-carrier output Group Delay In any 36 or 72 MHz band; 0.1 ns/MHz linear max, 0.02 ns/MHz² parabolic max, 2.0 ns pk-pk ripple max. Primary Power² All ratings are ±10%, 47-63 Hz with neutral and ground: 208 VAC or 380 to 415 VAC Power Consumption¹ 8.1 kW ⊗ 0 dB (rated); 6.4 kW e³-4 dB oblowing RF output backoffs with respect to rated (power saver off): 8.1 kW ⊗ 0 dB (rated); 6.4 kW e³-4 dB oblowing RF output backoffs with respect to rated (power saver off): 8.7 pye SMA female RF Output Connection RF Drawer RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron Air Late All SA Dane Supply Drawer: 100 lbs (45.4 kg) 10,000 ft (3000 m) with std. adiabatic derating of 2.5° C/1000 ft or 8.125° C/km, operating; 40,000 ft (12,000 m) non-operating						
AM/PM Conversion 6°/dB at rated power 6'/dB at rated power 7-70 dBc with filter, -35 dBc without filter 8-70 dBc Power Bonsity 6-70 dBc Possband (-60 dBc passband with linearizer) 6-70 dBc Power Bonsity 6-70 dBc Possband (-60 dBc passband with linearizer) 7-70 dBc with two equal carriers at total output 7 dB below rated single-carrier output 7-70 dBc Power Power 9-70 dBc Power 2-70	VSWR					
Harmonic Output¹ -70 dBc with filter, -35 dBc without filter Phase Noise².³ 10 dB below IESS 308 continuous mask; AC fundamental: -42 dBc; Sum of all spurs: -47 dBc Noise Power Density -65 dBc passband (-60 dBc passband with linearizer) Intermodulation -28 dBc with two equal carriers at total output 7 dB below rated single-carrier output Group Delay In any 36 or 72 MHz band: 0.1 ns/MHz linear max, 0.02 ns/MHz² parabolic max, 2.0 ns pk-pk ripple max. Primary Power² All ratings are ±10%, 47-63 Hz with neutral and ground: 208 VAC or 380 to 415 VAC Power Consumption⁴ 8.5 kW max. Typical values for the following RF output backoffs with respect to rated (power saver off): 8.1 kW @ 0 dB (rated); 6.4 kW @ -4 dB 0BO; 5.6 kW @ -7 dB 0BO; 5.2 kW @ -10 dB 0BO; 5.0 kW @ -13 dB 0BO Power Factor 0.95 min. Inrush Current, peak 180% of normal line current peak max. (first half-cyle only) RF Input Connection WR62 with grooved flange RF Power Monitors Type SMA Female Dimensions (W x H x D without fans and handles)	Residual AM ³	-50 dBc max, 20 to 400 Hz; -60 dBc max, 400 Hz to 2 kHz; -80 dBc max, 2 kHz to 500 kHz				
Phase Noise ²⁻³ 10 dB below IESS 308 continuous mask; AC fundamental: -42 dBc; Sum of all spurs: -47 dBc Noise Power Density -65 dBc passband (-60 dBc passband with linearizer) Intermodulation -28 dBc with two equal carriers at total output 7 dB below rated single-carrier output Group Delay In any 36 or 72 MHz band: 0.1 ns/MHz linear max, 0.02 ns/MHz² parabolic max, 2.0 ns pk-pk ripple max. Primary Power² All ratings are ±10%, 47-63 Hz with neutral and ground: 208 VAC or 380 to 415 VAC 8.5 KW max. Typical values for the following RF output backoffs with respect to rated (power saver off): 8.1 kW @ 0 dB (rated); 6.4 kW @ -4 dB 0BO; 5.6 kW @ -7 dB 0BO; 5.2 kW @ -10 dB 0BO; 5.0 kW @ -13 dB 0BO Power Factor 0.95 min. Inrush Current, peak 180% of normal line current peak max. (first half-cyle only) RF Input Connection Type SMA female WR62 with grooved flange RF Output Connection WR62 with grooved flange RF Power Monitors Dimensions RF Drawer PS Drawer RF Drawer PS Drawer RF Drawer: 220 lbs w / klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss 5,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	AM/PM Conversion	6°/dB at rated power	6°/dB at rated power		6°/dB at rated power	
Noise Power Density Intermodulation -28 dBc with two equal carriers at total output 7 dB below rated single-carrier output Group Delay In any 36 or 72 MHz band: 0.1 ns/MHz linear max, 0.02 ns/MHz² parabolic max, 2.0 ns pk-pk ripple max. Primary Power¹ All ratings are ±10%, 47-63 Hz with neutral and ground: 208 VAC or 380 to 415 VAC Power Consumption¹ 8.5 kW max. Typical values for the following RF output backoffs with respect to rated (power saver off): 8.1 kW @ 0 dB (rated); 6.4 kW @ -4 dB OBO; 5.6 kW @ -7 dB OBO; 5.2 kW @ -10 dB OBO; 5.0 kW @ -13 dB OBO Power Factor 0.95 min. Inrush Current, peak 180% of normal line current peak max. (first half-cyle only) RF Input Connection Type SMA female RF Output Connection WR62 with grooved flange RF Power Monitors Invest May 19 x 17.5 x 28 in. (483 x 445 x 711 mm) Py Drawer PS Drawer PS Drawer PS Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss Heat Loss Into Room 1,500 W max. Ambient Temperature -10 °C to +50 °C operating; -54 °C to +71 °C non-operating Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5 °C/1000 ft or 8.125 °C/km, operating; 40,000 ft (12,000 m) non-operating	Harmonic Output ¹	-70 dBc with filter, -35 dBc without filter				
Intermodulation -28 dBc with two equal carriers at total output 7 dB below rated single-carrier output Group Delay In any 36 or 72 MHz band: 0.1 ns/MHz linear max, 0.02 ns/MHz² parabolic max, 2.0 ns pk-pk ripple max. Primary Power² All ratings are ±10%, 47-63 Hz with neutral and ground: 208 VAC or 380 to 415 VAC Power Consumption¹ 8.5 kW max. Typical values for the following RF output backoffs with respect to rated (power saver off): 8.1 kW @ 0 dB (rated); 6.4 kW @ -4 dB OBO; 5.6 kW @ -7 dB OBO; 5.2 kW @ -10 dB OBO; 5.0 kW @ -13 dB OBO Power Factor Inrush Current, peak 180% of normal line current peak max. (first half-cyle only) RF Input Connection Type SMA female RF Output Connection RF Drawer RF Drawer PS Drawer RF Drawer PS Drawer RF Drawer PS Drawer RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss Heat Loss Into Room Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Altitude -10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Phase Noise ^{2, 3}	10 dB below IESS 308 continuous mask; AC fundamental: -42 dBc; Sum of all spurs: -47 dBc				
In any 36 or 72 MHz band: 0.1 ns/MHz linear max, 0.02 ns/MHz² parabolic max, 2.0 ns pk-pk ripple max.	Noise Power Density	-65 dBc passband (-60 dBc passband with linearizer)				
Primary Power ² All ratings are ±10%, 47-63 Hz with neutral and ground: 208 VAC or 380 to 415 VAC Power Consumption ⁴ 8.5 kW max. Typical values for the following RF output backoffs with respect to rated (power saver off): 8.1 kW @ 0 dB (rated); 6.4 kW @ -4 dB OBO; 5.6 kW @ -7 dB OBO; 5.2 kW @ -10 dB OBO; 5.0 kW @ -13 dB OBO Power Factor 0.95 min. Inrush Current, peak 180% of normal line current peak max. (first half-cyle only) RF Input Connection RF Output Connection WR62 with grooved flange RF Power Monitors Type SMA Female (W x H x D without fans and handles) 19 x 17.5 x 28 in. (483 x 445 x 711 mm) 19 x 8.75 x 24 in. (483 x 223 x 610 mm) Weight RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss Heat Loss Into Room 1,500 W max. Ambient Temperature Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Intermodulation	-28 dBc with two equal carriers at total output 7 dB below rated single-carrier output				
Power Consumption ⁴ 8.5 kW max. Typical values for the following RF output backoffs with respect to rated (power saver off): 8.1 kW @ 0 dB (rated); 6.4 kW @ -4 dB OBO; 5.6 kW @ -7 dB OBO; 5.2 kW @ -10 dB OBO; 5.0 kW @ -13 dB OBO Power Factor 0.95 min. Inrush Current, peak 180% of normal line current peak max. (first half-cyle only) RF Input Connection Type SMA female RF Output Connection RF Power Monitors Type SMA Female Output Connection RF Drawer PS Drawer RF Drawer PS Drawer Weight RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Group Delay	In any 36 or 72 MHz band: 0.1 ns/MHz linear max, 0.02 ns/MHz² parabolic max, 2.0 ns pk-pk ripple max.				
8.1 kW @ 0 dB (rated); 6.4 kW @ -4 dB OBO; 5.6 kW @ -7 dB OBO; 5.0 kW @ -10 dB OBO; 5.0 kW @ -13 dB OBO Power Factor 0.95 min. Inrush Current, peak 180% of normal line current peak max. (first half-cyle only) RF Input Connection Type SMA female RF Output Connection RF Power Monitors Type SMA Female Dimensions RF Drawer PS Drawer PS Drawer Weight RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss Heat Loss Into Room Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Primary Power ²	All ratings are ±10%, 47-63 Hz with neutral and ground: 208 VAC or 380 to 415 VAC				
Inrush Current, peak 180% of normal line current peak max. (first half-cyle only) RF Input Connection RF Output Connection RF Power Monitors Type SMA Female Investigating the provided flange RF Power Monitors RF Drawer PS Drawer RF Drawer PS Drawer RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss 5,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Power Consumption ⁴					
RF Input Connection RF Output Connection RF Power Monitors RF Drawer PS Drawer PS Drawer PS Drawer RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss F,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Power Factor	0.95 min.				
RF Output Connection WR62 with grooved flange RF Power Monitors Type SMA Female Dimensions RF Drawer PS Drawer PS Drawer PS Drawer PS Drawer RF Drawer PS Drawer PS Drawer RF Drawer PS Drawer PS Drawer PS Drawer Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss F,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Inrush Current, peak	180% of normal line current peak max. (first half-cyle only)				
RF Power Monitors Type SMA Female Dimensions RF Drawer PS Drawe	RF Input Connection	Type SMA female				
Dimensions RF Drawer PS Drawer PS Drawer PS Drawer RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss 5,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	RF Output Connection	WR62 with grooved flange				
RF Drawer PS Drawer 19 x 17.5 x 28 in. (483 x 445 x 711 mm) 19 x 8.75 x 24 in. (483 x 223 x 610 mm) Weight RF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg) Cooling Forced air with integral blower and fans; separate klystron collector cooling path Air Flow Rate, Klystron 200 cfm at sea level Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss 5,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	RF Power Monitors	Type SMA Female				
WeightRF Drawer: 220 lbs w/ klystron (100 kg); Power Supply Drawer: 100 lbs (45.4 kg)CoolingForced air with integral blower and fans; separate klystron collector cooling pathAir Flow Rate, Klystron200 cfm at sea levelAcoustic Noise68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option)Klystron Heat Loss5,000 W max.Heat Loss Into Room1,500 W max.Ambient Temperature-10°C to +50°C operating; -54°C to +71°C non-operatingRelative Humidity95% non-condensingAltitude10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	RF Drawer	19 x 17.5 x 28 in. (483 x 445 x 711 mm)				
Air Flow Rate, Klystron Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss 5,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Weight					
Air Flow Rate, Klystron Acoustic Noise 68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option) Klystron Heat Loss 5,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Cooling					
Klystron Heat Loss 5,000 W max. Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Air Flow Rate, Klystron	200 cfm at sea level				
Heat Loss Into Room 1,500 W max. Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Acoustic Noise	68 dBA nominal, as measured 3 ft from front of equipment (noice reduced with variable fan speed control option)				
Ambient Temperature -10°C to +50°C operating; -54°C to +71°C non-operating Relative Humidity 95% non-condensing Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Klystron Heat Loss	5,000 W max.				
Relative Humidity 95% non-condensing 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Heat Loss Into Room	1,500 W max.				
Altitude 10,000 ft (3000 m) with std. adiabatic derating of 2.5°C/1000 ft or 8.125°C/km, operating; 40,000 ft (12,000 m) non-operating	Ambient Temperature		-10°C to +50°C	operating; -54°C to +71	°C non-operating	
40,000 ft (12,000 m) non-operating	Relative Humidity			95% non-condensing		
Shock and Vibration As normally encountered in satellite earth stations and shipping	Altitude	10,000 ft				perating;
	Shock and Vibration		As normally encoun	tered in satellite earth s	tations and shipping	

Note 1. Harmonic filter can be removed as an option. Add 0.25 dB to amplifier output for units ordered without harmonic filter.

Note 2. Prime power AC line unbalance not to exceed 3%. Excess imbalance may cause an increase in residual RF noise (AM, FM, and PM). Phase noise increase is typically 2.5 dB / % imbalance. Note 3. AC current harmonic content: less than 20%, primarily fifth and seventh harmonics. Harmonics must be considered when choosing UPS sources.

Note 4. Lower power consumption can be achieved if power saver (included as standard) is employed when operating below rated output power.

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