

Title	Value	Notes
Attention	Craig Kief	Who should be contacted if there are questions about the license?
Street Address	2350 Alamo Avenue SE	
City	Albuquerque	
State	New Mexico	
Zip Code	87106	
E-Mail Address	craig.kief@cosmiac.org	
Is this license to be used for providing communication essential to a research project?	Yes. The satellite will be used to collect radiation data that will allow for a better understanding of the ionosphere	
Estimated duration of project (months)	24 Months	

Title	Value
Lab street address	2350 Alamo Avenue SE, Ste 100
Lab city	Kirtland AFB
Lab state	New Mexico
Lab county	Bernalillo
Lab latitude (deg, min, sec)	35° 3' 23.9898"
Lab longitude (deg, min, sec)	-106° 35' 46.4892"

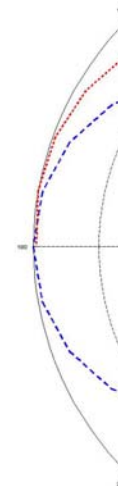
Notes

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Title	Value
Satellite transmitter manufacturer	Astrodev
Satellite transmitter model number	He-100
Is satellite transmitter capable of station identification (Section 5.115)?	Yes
Transmit frequency (MHz)	437.425
3dB bandwidth (kHz)	12
RF power (W)	3
ERP (W)	3
Frequency tolerance (%)	0.002
Type of modulation	GMSK
Antenna gain (dBi)	0
Antenna beamwidth (deg)	360 ISIS antenna
Antenna polarization	linear
Antenna beam pattern	



Duplicate this sheet for each additional transmitter on the satellite



Notes

Yes / No

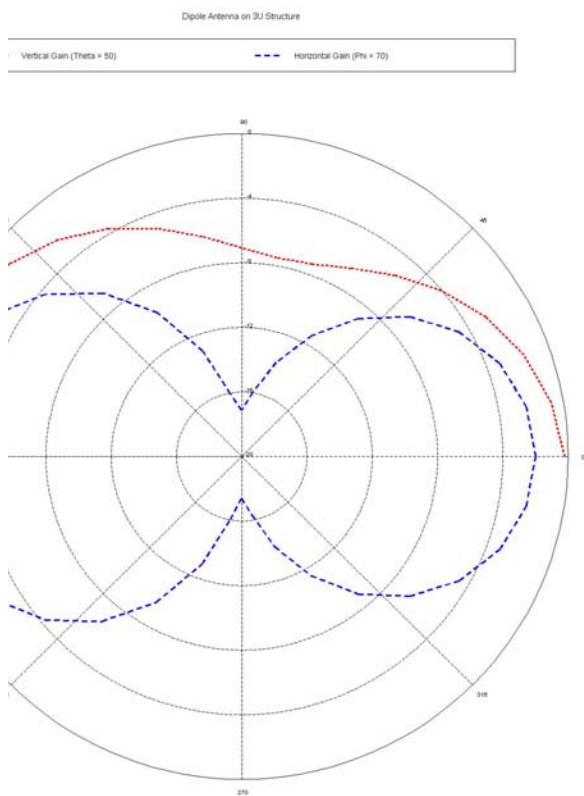
Input to antenna
Effective radiated power

AFSK, GMSK, CW, etc...

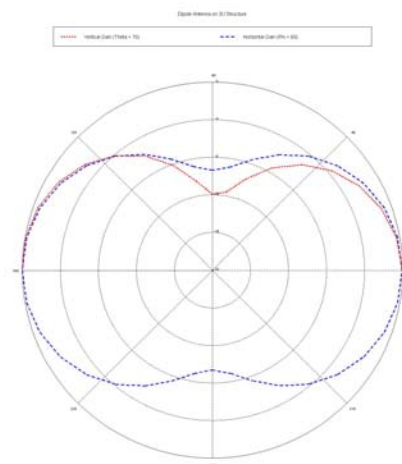
If directional, otherwise 360°

Linear, right hand circular, left hand circular

Please attach a beam pattern plot either as a picture on this sheet or a separate file



Title	Value	Notes
Satellite receiver manufacturer	Astrodev	
Satellite receiver model number	He-100	
Receive frequency (MHz)	145.95	
3dB bandwidth (kHz)	40	
Type of modulation	GMSK	AFSK, GMSK, CW, etc...
Antenna gain (dBi)	0	
Antenna beamwidth (deg)	360	If directional, otherwise 360°
Antenna polarization	linear	Linear, right hand circular, left hand circular
Antenna beam pattern		Please attach a beam pattern plot either as a picture on this sheet or a separate file
Receive system noise temperature (K)	500	



Duplicate this sheet for each additional receiver on the satellite

Title	Value	Notes
Earth station name or callsign	KE5VSH	
Earth station latitude (deg, min, sec)	35° 3' 16.2756"	2350 Alamo Avenue SE, Albuquerque, NM 87106
Earth station longitude (deg, min, sec)	-106° 37' 3.1182"	
Earth station elevation above mean sea level (m)	~ 5,312 ft	
Receive antenna gain (dB)		15 436CP30 antenna
Receive antenna beamwidth (deg)		30
Receive antenna polarization	Left and Right hand circular (selectable)	Linear, vertical, horizontal, right hand circular, left hand circular
Receive antenna azimuth range (deg)		360
Receive antenna minimum elevation (deg)		0
Receive antenna height above terrain (m)		15
Receive antenna beam pattern	shown below	Please attach a beam pattern plot either as a picture on this sheet or a separate file
Receive system noise temperature (K)		500
Are transmit and receive on same antenna?	No	If no, complete information below about transmit antenna
Transmit antenna gain (dB)		14 2MPC22 antenna
Transmit antenna beamwidth (deg)		38
Transmit antenna polarization	Left and Right hand circular (selectable)	Linear, vertical, horizontal, right hand circular, left hand circular
Transmit antenna azimuth range (deg)		360
Transmit antenna minimum elevation (deg)		0
Transmit antenna height above terrain (m)		15
Transmit antenna beam pattern	shown below	Please attach a beam pattern plot either as a picture on this sheet or a separate file

Duplicate this sheet for each additional ground station transmitting to the satellite

