

H60A-400CIJ Satellite Transmitter

Keltec manufactures a wide variety of amplifiers for transportable satellite communications. This is but one of its many applications. For more information on this and other transmitter and amplifier products please contact your local representative or our [Sales Office](#).



1. DESIGN FEATURES

- Hub-Mount Chassis
- Covers C, X and Ku Satcom Bands
- Environmentally Sealed
- Highly Efficient Power Supply and TWT
- Universal Input Power w/ Power Factor Correction
- X Band Linearizer Available for increased Linear Power

2. SHORT FORM SPECIFICATION

2.1 RF Specifications

	C Band	X Band	Ku Band
Frequency band	5.9 to 6.4 GHz	7.9 to 8.4 GHz	14.0 to 14.5 GHz
Sat Power Output	+54.4 dBm	+57.4 dBm	+54.4 dBm
Linear Power (1)	+51.3 dBm	+55.0 dBm	+49.6 dBm
Power Gain	65 dB min	65 dB min	65 dB min
Second harmonic	-3 dBc max	-5 dBc max	-15 dBc max
Gain Slope	0.1 dB/MHz	0.07 dB/MHz	0.07 dB/MHz
Gain Variations	2.5 dB max	2.0 dB max	2.0 dB max

Note

(1) Linear power is defined as the minimum output power achieved at no more than 30 dB spectrum regrowth measured at 1 time the symbol rate from carrier center when operating with an Offset QPSK carrier having a 1.3 SR bandwidth at -30 dB. In this table, X band power assumes the linearizer option is used

The following specifications are valid across all three sub-bands and apply to the standard unit (no linearizer):

Intermodulation

- At -1.5 dB backoff . -13 dBc
- At -3 dB backoff ... -16 dBc
- At -6 dB backoff ... -22 dBc

AM/PM Conversion

- At Rated Power 6°/dB
- At -6 dB backoff ... 3°/dB

Group Delay

- Linear 0.01 nS/MHZ, max
- Parabolic 0.005nS/MHZ², max

Ripple 0.5 nS, pk-to-pk

Residual AM/PM
500 Hz to 10 kHz ... -50 dBc
10 kHz to 500 kHz .. -20 x (logF) dBc
Above 500 kHz -73 dBc

Broad Band Noise -70 dBm/Hz worst case (see [typical plot](#))

Input VSWR 1.75:1 typical
Output VSWR 2.0:1 typical (non operating)
Load VSWR 1.2:1 for specified performance,
2.0:1 for no damage

2.2 Electrical Specifications

Prime Power (single phase)..... 220 VAC, $\pm 15\%$, 47-63 Hz
Prime Power (DC option) 270 +46/-15 VDC
Prime Power (3 phases option) ... 120/208 VAC, three wire, $\pm 15\%$, 47-63 Hz
Input Power 2.0 kVA typical
Power factor (single phase) 0.99 typical
Power Factor (3 phases) 0.92 typical
Protection Via 30.0 A circuit breaker (AC input only)

2.3 Environmental Specifications

Altitude,
non-operating 50,000 feet max
operating 10,000 feet max
Temperature range,
non-operating -40°C to +50 °C
operating -32°C to +50°C
Temperature/Altitude Derating
2°C/1000ft
Humidity up to 100%, condensing
Salt Atmosphere As encountered in coastal regions
Shock/Vibrations Vehicle transport

2.4 Mechanical Specifications

Height 6.75"
Width 12.0"
Depth 27.7"
Weight 55 lbs nominal
AC Power Connector MS27656T15B5P
Remote Control MS27656T15B18S
RF Input Type N female
RF Output WRD 580 gasket flange