



**AWMT-Ka-0/40
Ka-BAND
TRANSCEIVER**

INTRODUCTION

AWMT-Ka[®] is ADVANTECH's new 0dBm hub-mount up/down converter operating in the Ka-band. The built-in microprocessor controller provides for external monitoring and control of the operating parameters, and for the redundancy control.

MONITOR AND CONTROL

An onboard microprocessor monitors and controls all operational parameters and system status of the AWMT-Ka30. This powerful M&C system enables the user to locally and remotely control functions such as output power and transmit/receive channel frequencies. The M&C system also controls a sophisticated digital temperature compensation system, ensuring the highest gain stability over temperature and frequency of any transceiver package available.

FEATURES

- Easy to install and operate
- Compact light weight design
- Weatherproof package
- RX/TX Temperature Gain compensated
- RX/TX 20 dB attenuation setting
- 125 kHz step
- High stable phase-locked converters
- Superior phase noise
- Running with internal reference in absent of external 10 MHz reference
- Built-in image reject filter (50 dB)
- Remote Monitor & Control (RS485)
- Discrete alarms
- Alarm LED display for TX and RX
- RX/TX Mute
- 90 –264 VAC input
- Shut down protection against thermal runaway and TX out-of-lock conditions
- Remote Control Panel, suitable for indoor rack mounting to provide permanent monitoring and control capabilities. It might be used for both configuration standalone and redundancy

APPLICATIONS

The AWMT-Ka is designed to operate in the Ka-band (30 - 31 GHz Transmit and 20.2 - 21.2 GHz Receive) with an IF frequency of 70 MHz. The unit is self-contained and is intended for mounting outdoors, near the hub of an antenna.

Accessories

Remote Control Panel



SPECIFICATION

Transmit**Power**
0 dBm**P1dB min.**
+10 dBm**Gain min.**
40 dB
At max. gain
setting**IF input**Frequency range 70 ± 18 MHz
Input Level -30 to -10 dBm
Input Connector Type N female
Connector Impedance 50 Ω
Input VSWR 1.3: 1 max. at 50 Ω**RF output**Frequency range 30.00-31.050 GHz
Output connector WR28
Output power (P1dB) + 10 dBm min.
Connector Impedance 50 Ω
Output VSWR 1.3:1 max.**Gain specification**Attenuator range 20 dB
Attenuator step size 0.1 dB
Gain flatness 2.0 dB P-P max. 36 MHzGain stability ±1.5 dB max. -40°C to +55°C
Intermodulation Product (IMD3) -26 dBc (2 carriers each at 6 dB
back-off from P1dB)

Spurious. -55 dBc max.

Synthesizer step size 125 kHz

Frequency stability-30°C to +55°C +/-2 x 10⁻⁸ / dayAging +/-1 x 10⁻⁷ / year**Phase noise**Offset frequency Phase noise
100Hz -63 dBc/Hz max.
1000 Hz -73 dBc/Hz max.
10 KHz -83 dBc/Hz max.
>100 KHz -93 dBc/Hz max.**Monitor & Control**Serial port (RS-485) MS3112E10-6P
Serial port (RS-232) MS3112E10-6P**Receive****RF Input**RF Input Frequency 20.2 - 21.2
RF Input Interface WR42
Input VSWR 1.3: 1 max at 50 Ω**IF Output**Frequency range 70 ± 18 MHz
Output Level +10 dBm at P1dB
Output Connector Type N female
Connector Impedance 50 Ω
Output VSWR 1.3: 1 max at 50 Ω**Gain specification**Gain 40 dB min.
Maximum input level -30 dBm
Attenuator range 20 dB
Attenuator step size 0.1 dB
Gain flatness 2.0 dB P-P max. 36 MHz band

Gain stability ±3.0 dB max. -40°C to +55°C

Noise Figure 10 dB

Spurious -55 dBc

Image Rejection 60 dB

Synthesizer step size 125 kHz

Frequency stability-40°C to +55°C +/-2 x 10⁻⁸ / dayAging +/-1 x 10⁻⁷ / year**Phase Noise**Offset frequency Phase noise
100Hz -63 dBc/Hz max.
1000 Hz -73 dBc/Hz max.
10 KHz -83 dBc/Hz max.
>100 KHz -93 dBc/Hz max.**External reference (option)**External ref. connector 10 MHz
type N

Outline

