

X-BAND TRANSCEIVER 250 W TO 400 W AWMT-4000X® series



Transmit Path			
Power (W)	250	300	400
P1dB min. (dBm)	+ 53	+ 54	+ 55
Gain min @ max. gain set (dB)	74	75	76
Power Consumption	1800	2100	2800

Unit Weight	50 Kg (110lbs)
Dimensions (L x W x H)	35.27" x 16.00" x 14.09" (85.59 x 40.64 x 35.79 cm)

Transmit Path			
IF Input		RF Output	
Frequency range	70 ± 18 MHz 140 ± 36 MHz (optional)	Frequency range	7.9 - 8.4 GHz
Input Connector	Type N female	Output connector	CPR 112
Input Return Loss	18 dB / 50 Ω	Output Return	20dB (18 dB for coaxial output)
Gain Specification		Third order IMD (2 tones 5 MHz apart)	-25 dBc max at 3dB total back-off from rated P1dB
Gain control range	20 dB (0.1 dB step size)	Spurious (in band)	-55 dBc max
Gain flatness	3.0 dB p-p max over 36 MHz	Noise Power Density	-70 dBm/Hz max in TX band -110 dBm/Hz max in 7.25 – 7.75 GHz in RX band
Gain stability	3.0 dB p-p max over temp range		

Receive Path			
RF Input		Gain Specification	
RF Input Frequency	7.25 - 7.75 GHz	Gain (LNB+ Receiver)	80 dB @ max gain set
RF Input Interface	CPR-112	Gain control range	20 dB (0.1 dB step size)
Input VSWR	2.5:1 1.3:1 with input isolator	Gain flatness	±2.5 dB max over full RF band
IF Output		Gain stability	±3.0 dB max over temp. range
Frequency range	70 ± 18 MHz 140 ± 36 MHz (optional)	Spurious	-55 dBc
Output Level	+10 dBm	Image Rejection	50 dB
Output Connector		LNA Parameters	
Output Connector	Type N female / 50 Ω	Noise Temperature	55°K without input isolator 65°K with input isolator
Output Return Loss	18 dB/ 50 Ω	Output Interface	Type N female 50 Ω
		Gain	60 dB
		DC power	12÷18V DC (via coaxial cable)
		LNB Parameters (optional)	
		LNB type	Phase lock to 10 MHz ref. (from Transceiver via coax. cable)
		Noise Temperature	90°K
		L-band Output Frequency	950-1450 MHz
		L-band Output Interface	Type N female 50 Ω
		Conversion Gain	60 dB
		DC power	12÷18V DC (via coaxial cable)

Common Parameters (Tx & Rx)			
Synthesizer step size	1 MHz (option 125 KHz)	Environmental	
Frequency Stability		Cooling	Forced Air
-40°C to +55°C	±2 x 10 ⁻⁸	Operational	-30°C to +55°C standard (-40°C to +55°C option)
Aging	±1 x 10 ⁻⁷ /year	Storage	-55°C to +85°C
Phase Noise	(With internal 10MHz reference)	Humidity	Up to 100% condensing
Offset frequency	Phase noise (max)	Altitude	3,000 m AMSL (derated 2°C/300m)
100 Hz	-65 dBc/Hz	Power Requirements	
1000 Hz	-73 dBc/Hz	AC input voltage	220 VAC (47-63 Hz)
10 KHz	-83 dBc/Hz	AC Connector	MS3102R20-19P
100 KHz	-100 dBc/Hz	Mechanical	
Monitor & Control		Packaging	Weatherproof for outdoor use
Serial port (RS-485)	MS3112E10-6P		
Serial port (RS-232)	MS3112E10-6P		
Redundancy Port	MS3112E16-26P		
Discrete Port	MS3112E12-10P		

PB-WT230-01 Rev.03 issued on 03/01/007 Specifications are subject to change without notice

CE An ISO9001 2000 Company



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