

Digital Microwave Corporation

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DMC W Series System Performance

Transmitter

	DMC 18W	DMC 23W
Power Output (at RF Unit antenna port)		
Standard	+13.0 dBm (20 mW)	+10.5 dBm (11 mW)
With Optional Power Amplifier	+24.5 dBm (178 mW)	+20.5 dBm (112 mW)
Frequency Stability	±0.003%	±0.02%

Receiver

	DMC 18W	DMC 23W
Type	Dual Conversion	Dual Conversion
Sensitivity at 10 ⁻⁶ BER (at RF Unit antenna port)		
Protected and Non-Protected	-77.5 dBm	-74.0 dBm
With Forward Error Correction Option	-80.5 dBm	-77.0 dBm
Unfaded BER	10 ⁻¹⁰ or better	10 ⁻¹⁰ or better
Unfaded BER with FEC	10 ⁻¹² or better	10 ⁻¹² or better
Maximum Input Signal Level at 10 ⁻⁶ BER	-15 dBm	-15 dBm

System Gain (Guaranteed value at RF Unit antenna port, excluding antenna)

	DMC 18W	DMC 23W
10 ⁻⁶ BER		
Standard	90 dB	84.5 dB
With Optional Power Amplifier (PA)	102 dB	94.5 dB
With PA and Forward Error Correction (FEC)	105 dB	97.5 dB

DMC W Series Specifications

General

	DMC 18W	DMC 23W
Operating Frequency*	17.7 - 19.7 GHz	21.2 - 23.6 GHz
Xmt/Rev Spacing	1560 MHz	1200 MHz
RF Channel Spacing	40 MHz	50 MHz
Modulation Type	MSK	MSK
RF Connector	UG-595/U	UG-595/U
Digital Capacity	1 x DS3	1 x DS3
Standard Voice Channel Capacity	672	672
Digital Interface	DSX-3	DSX-3
DS3 Input/Output Connection	75 Ohm BNC	75 Ohm BNC
Line Build-Out (LBO)	Switch-Selectable	Switch-Selectable
Digital Line Code	B3ZS	B3ZS
Modem & RF Unit Interface		
Connector Type	Coaxial Type N	Coaxial Type N
Recommended Coaxial Cable	Belden 9913 or equivalent	Belden 9913 or equivalent
Maximum Separation	1000 Feet	1000 Feet

Environmental

	DMC 18W	DMC 23W
Altitude	Up to 15,000 feet	
Temperature Range		
RF Unit/Antenna	-30°C to +55°C (-22°F to +131°F)	
Modem	0°C to +40°C (+32°F to +104°F)	
Relative Humidity		
RF Unit/Antenna	Up to 100% (all-weather operation)	
Modem	95% at +40°C	

* Consult DMC Sales Representative for Frequency Plan Availability.

Power Requirements

Source	-50 VDC, positive ground
Allowable Input Range	-41 to -56 VDC
Power Consumption (Typical)	
Non-Protected	50 Watts
Protected	75 Watts

Add 20 Watts per T/R for Synchronizer, 10 Watts per T/R for FEC, and 5 Watts for Orderwire Unit.

Mechanical

	Modem	RF Unit
Dimensions (H x W x D)	5.25" x 17.0" x 15.9"	20.0" x 13.0" x 4.5"
Weight		
Non-Protected	18 lbs	38 lbs
Protected	23 lbs	42 lbs

Orderwire and Data Channel

General	
Station Addressing	Up to 800 Stations
Orderwire Ports	
Customer Port Interface	
Telephone Connector	RJ-11 (modular jack)
VF Bandwidth	300 - 3400 Hz
Signaling	Dual Tone Multiple Frequency (DTMF)
Analog Alarm & Expansion Port	
Interface	600 Ω , unbalanced
Connector	5-Pin Screw Terminal
Frequency	300 - 3400 Hz
Level	0 dBm
Digital Data Port Interface	0-9600 bit/s, asynchronous
Interface	RS-232C
Connector	Female Sub-Miniature DB-25 Connector
Power	
Source	Internal to W Series Modem Unit
Power Consumption	5 Watts, Nominal

FCC AND REGULATORY INFORMATION

	DMC 18W	DMC 23W
FCC Identifier		
Standard	DYH6RMDMC18WS-01	DYH6RMDMC23WS-01
With Optional Power Amplifier	DYH6RMDMC18-01	DYH6RMDMC23W-01
FCC Transmitter Code		
Standard	27DT-01	27D6-01
With Optional Power Amplifier	2Y6Q-01	2Y5C-01
Emission Designator	40M0F7W	50M0F7W
FCC Rules	Parts 21 and 94	Parts 21 and 94
Frequency Range	17,700 - 19,700 MHz	21,200 - 23,600 MHz
Maximum Power Output		
Standard	0.050 Watts	0.028 Watts
With Optional Power Amplifier	0.500 Watts	0.282 Watts
Minimum Power Output		
Standard	0.020 Watts	0.011 Watts
With Optional Power Amplifier	0.200 Watts	0.112 Watts
Typical Power Output		
Standard	0.025 Watts	0.014 Watts
With Optional Power Amplifier	0.250 Watts	0.141 Watts

NOTE: FCC Requirements do not allow common carriers (Part 21) and private users (Part 94) to operate in the 8 GHz frequency band.

Regulatory requirements for the 8 GHz frequency band are coordinated by the US Department of Commerce, National Telecommunications and Information Administration (NTIA).