Specification Sheet

MOTOTRBO™

DGM™ 6100 / DGM™ 6100+ Mobile Radios

Shift into Digital.

The next-generation professional two-way radio communications solution is here, with more performance, productivity and value—thanks to digital technology that delivers increased capacity and spectrum efficiency, integrated data communications and enhanced voice communications.

MOTOTRBO offers you a private, standards-based, cost-effective solution that can be tailored to meet your unique coverage and feature needs.

This versatile portfolio provides a complete system of portable radios, mobile radios, repeaters, accessories and data applications—a complete solution.

Key Features

Mobile radios available in Alphanumeric Display, GPS and Non-GPS models.

Uses Time-Division Multiple-Access (TDMA) digital technology which doubles the number of users you can have on a single licensed 12.5 kHz channel.

Integrates voice and data to increase operational efficiency.

Supports applications including MOTOTRBO Text Messaging Services and MOTOTRBO Location Services.

Four programmable buttons for easy access to favorite features.

Customizable button tops for easy user understanding.

Emergency button alerts supervisor or dispatcher in emergency situations.

Multi-colored LED indicators for clear, visible feedback of calling, scanning and monitoring features.

Enhanced privacy

Ability to roam in IP Site Connect System

Support for up to 1,000 channels

GPS models can transmit location using the Location Services application.

Allows an easy migration from analog to digital with the ability to operate in both modes.

Meets U.S. Military Standards 810 C, D, E, and F, and Motorola standards for durability and reliability.

Utilizes the IMPRES Audio System for enhanced audio functionality.

Compact and ergonomically friendly microphone.

Enhanced call management features include call alert, emergency, remote monitor, push-to-talk ID, radio check, private call, radio disable.

Send short free-form (requires keypad microphone) and quick text messaging via menu and programmable buttons.

GENERAL	VHF	UHF	
		BAND I	BAND II
Channel Capacity	1,000		
Typical RF Output			
Low Power	1-25 W	1-25 W	1-40 W
High Power	25-45 W	25-40 W	(1-25 W above 512 MHz)
Frequency	136 - 174 MHz	403-470 MHz	450-527 MHz
Dimensions (HxWxL)	2.01 x 6.89 x 8.11 in (51 x 175 x 206 mm)		
Weight	4.0 lbs. (1.8 kg)		
Current Drain:	0.81 A max		
Standby	2 A max		
Rx @ Rated Audio	1-25 W: 11.0 A max		
Transmit	25-40 W: 14.5 A max		
FCC ID	ABZ99FT3083	ABZ99FT4081	ABZ99FT4083
	ABZ99FT3082	ABZ99FT4080	

RECEIVER	VHF	UHF	
		BAND I	BAND II
Frequencies	136 - 174 MHz	403-470 MHz	450-527 MHz
Channel Spacing	12.5 kHz / 25 kHz		
Frequency Stability	+/- 1.5 ppm (without GPS)		
(-30° C, +60° C, +25° C)	+/- 0.5 ppm (with GPS)		
Analog Sensitivity (12dB SINAD)	0.3 uV		
	0.22 uV (typical)		
Digital Sensitivity	5% BER: 0.3 uV		
Intermodulation (TIA603C)	78 dB	75 dB	
Adjacent Channel Selectivity			
TIA603	65 dB @ 12.5 kHz, 80 dB @ 25 kHz		
TIA603C	50 dB @ 12.5 kHz, 80 dB @ 25 kHz		
Spurious Rejection (TIA603C)	75 dB		
Rated Audio	3 W (Internal)		
	7.5 W (External - 8 ohms)		
	13 W (External - 4 ohms)		
Audio Distortion @ Rated Audio	3% (typical)		
Hum and Noise	-40 dB @ 12.5 kHz		
	-45 dB @ 25 kHz		
Audio Response	TIA603C		
Conducted Spurious Emission (TIA603C)	-57 dBm		

TRANSMITTER	VHF	UHF	
		BAND I	BAND II
Frequencies	136 - 174 MHz	403-470 MHz	450-527 MHz
Channel Spacing	12.5 kHz / 25 kHz		
Frequency Stability	+/- 1.5 ppm (without GPS)		
(-30° C, +60° C, +25° C)	+/- 0.5 ppm (with GPS)		
Power Output			
Low Power	1-25 W	1-25 W	1-40 W
High Power	25-45 W	25-40 W	(1-25 W above 512 MHz)
Modulation Limiting	+/- 2.5 kHz @ 12.5 kHz		
	+/- 5.0 kHz @ 25 kHz		
FM Hum and Noise	-40 dB @ 12.5 kHz		
	-45 dB @ 25 kHz		
Conducted / Radiated Emission	-36 dBm < 1 GHz		
	-30 dBm > 1 GHz		
Adjacent Channel Power (TIA603C)	60 dB @ 12.5 kHz		
	70 dB @ 25 kHz		
Audio Response	TIA603C		
Audio Distortion	3%		
FM Modulation	12.5 kHz: 11K0F3E		
	25 kHz: 16K0FE		
4FSK Digital Modulation	12.5 kHz Data Only: 7K60FXD		
	12.5 kHz Data & Voice: 7K60FXE		
Digital Vocoder Type	AMBE++		
Digital Protocol	ETSI-TS102 361-1		

GPS

Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength).

TTFF (Time to First Fix) Cold Start	< 1 minute
TTFF (Time to First Fix) Hot Start	< 10 seconds
Horizontal Accuracy	< 10 meters

Quality / Reliability

Motorola Accelerated Life Test

Military Standards MIL-SPECS 810 C, D, E, F

Backed by a two-year Standard Warranty

MILITARY STANDARDS

Applicable MIL-STD	810C		810D		810E		810F	
	Methods	Procedures	Methods	Procedures	Methods	Procedures	Methods	Procedures
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A, II/A1	501.4	I/Hot, II/Hot
Low Temperature	502.1	I	502.2	I/C3,II/C1	502.3	I/C3,II/C1	502.4	I/C3,II/C1
Temperature Shock	503.1	-	503.2	I/A1C3	503.3	I/A1C3	503.4	I
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I
Rain	506.1	I, II	506.2	I, III	506.3	I, II	506.4	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	-
Salt Fog	509.1	-	509.2	-	509.3	I	509.4	I
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I
Blowing Sand	-	-	510.2	II	510.3	II	510.4	II
Immersion	512.1	I	512.2	I	512.3	I	512.4	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV

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Specifications subject to change without notice. All specifications shown are typical.