

GMRS8000/9010
PRODUCTION SPECIFICATION

1. GENERAL SPECIFICATION

	Items	Specifications
1	Tx Frequency range	462.550MHz ~ 467.7125MHz
2	Tx VCO Frequency range	Same as item 1
3	RX Frequency range	Same as item1
4	RX VCO Frequency range	441.150MHz ~ 446.3125MHz (Lower Heterodyne)
5	Channel Number Channel Spacing	22CH 25KHz
6	Frequency Control	PLL Synthesizer with Temperature Compensated Crystal Reference
7	IF frequencies	21.4 MHz for 1'st IF 450KHz for 2'nd IF
8	Modulation	FM (F3E emissions)
9	Standard Test Modulation signal	Modulated audio Frequency : 1KHz Test modulation : +/-1.5KHz
10	TX Frequency stability	Max. +/-2.5ppm (-20℃ to +50℃)
11	Nominal test temperature Range	25℃ +/- 5℃
	Extreme operating temperature Range	-20℃ to +50℃
12	Antenna Impedance	50 ohm +/- 25 ohm
13	Power source	5 AAA Alkaline batteries or 5 AAA Ni-HM rechargeable batteries
14	Test Power Supply Voltage	7.5Vdc. +/-0.1Vdc
	Extreme Supply Voltage Range	4.2Vdc to 8.0Vdc
15	Battery life time (Typ. 5/5/90 duty)	Min. 45 Hours
16	Microphone	Self contained Electret
17	Speaker	Self contained 16 ohm

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2. DETAILED SPECIFICATION

A. RECEIVER SECTIONS

* Normal test condition *

	TYP.	LIMIT
1. MAXIMUM USABLE SENSITIVITY * 1KHz +/-1.5KHz DEV. * REF. CHANNEL 1 & 8	-124dBm	<-120dBm
2. 20dB QUIETING SENSITIVITY * 1KHz +/-1.5KHz DEV. * REF. CHANNEL 1 & 8, 12dB SINADDER	-118dBm	<-116dBm
3. ADJACENT CHANNEL TWO SIGNAL SELECTIVITY & SENSITIZATION * +/- 1 CHANNEL SPACING		>50dB
4. INTER-MODULATION SPURIOUS RESPONSE ATTENUATION		>50dB
5. SPURIOUS EMISSIONS * CONDUCTIVE CONNECTION		<-53dBm
6. RECEIVE FREQUENCY RESPONSE * REF. 1KHz +/-1.5KHz DEV. 250Hz 3KHz	-18.0dB -12.0dB	+/-2.0dB +/-3.0dB
7. AUDIO OUTPUT LEVEL * REF. 1KHz +/-1.5KHz DEV. * (No LOAD) * Volume Max.	1.8V	>1.3V
8. AUDIO OUTPUT DISTORTION * REF. 1KHz +/-1.5KHz DEV. * (No LOAD)		<5%
9. MAX. S/N RATIO * REF. 1KHz +/-1.5KHz DEV. * (No LOAD)	36 dB	>30dB
10. RX VCO REF. VOLTAGE * REF. CHANNEL 1 * REF. CHANNEL 8	1.7V 1.7V	+/-0.3V +/-0.3V
11. SQUELCH THRESHOLD * REF. 1KHz +/-1.5KHz DEV.*	9dBsinadder	-3dB - +3dB
16. CURRENT CONSUMPTION * Un-squelched Volume Max. * Squelched * Power Off	200mA 35mA 50uA	+/-40mA <40mA <100uA

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B. TRANSMITTER SECTIONS

	TYP	LIMIT
1. TRANSMITTER FREQUENCY TOL. * REF. CHANNEL 1		<+/-200Hz
2. TRANSMITTER RF POWER * REQUIRED CONDUCTIVE CONNECTION * REF. CHANNEL 1 * At 6Vdc	Hi Power 3.2W Low Power 0.5W	
3. TRANSMITTER OCCUPIED BANDWIDTH * REQUIRED CONDUCTIVE CONNECTION * REF. CHANNEL 1 @12.5KHz		<-50dBC
4. TRANSMITTER SPURIOUS * REQUIRED CONDUCTIVE CONNECTION * REF. CHANNEL 8		<-50dBC
5. MODULATION SENSITIVITY * REF. 1KHz AUDIO * CHANNEL 1 , @+/-1.5KHz	8mV	+/-2mV
6. MODULATION LIMITING * REF. 1KHz AUDIO, CHANNEL 1 * (INPUT AUDIO ; 200mVrms)	+/-2.1KHz	+/-0.1KHz
7. CTCSS CODE DEVIATION * CH 1 * CH38	0.4KHz 0.4KHz	+/-0.1KHz +/-0.1KHz
8. MODULATION AUDIO DISTORTION * REF. 1KHz AUDIO +/-1.5KHz	3%	<5%
8.TX AUDIO FREQUENCY RESPONSE * REF. 1KHz AUDIO, CHANNEL 1 * (INPUT AUDIO ; 3mVrms) 250Hz 3KHz 6KHz	-31.0dB +6.0dB -16.0dB	+/-3.0dB +/-3.0dB +/-3.0dB
9. TX MODUALTION S/N * REF. 1KHz AUDIO, CHANNEL 1 * (REF. INPUT AUDIO ; 12mVrms)		>30dB
10. TX VCO REF. VOLTAGE * CHANNEL 1 * CHANNEL 14	1.5V 2.5V	+/-0.3V +/-0.3V
11. CURRENT CONSUMPTION * Hi Power mode	1200mA	+/-100mA