



**GLOBAL LINK**  
CORPORATION LIMITED

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MODEL No: G7

Title:

Drawing No: G7-SPEC-M-02

Customer: Midland

G7 Product Specification

Rev. Date: August 25, 2005



**GLOBAL LINK**  
CORPORATION LIMITED

**G7 (PMR/LPD)**

**Product Specification**

Created by: JBG

Approved by:

Rev. No: 02

For Stage : PP

Release Date : August 25, 2005

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## REVISION SHEET

Rev. Code	Date	Revision	Revised By:
M-01		PP Release	M.R. Han / JBG
M-02		MP Release	M.R. Han / JBG

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## 1. ELECTRICAL SPECIFICATION

### 1.1 TEST CONDITIONS

Unless otherwise noted, all test are performed per the reference paragraph of EIA/TIA-382-A as noted and made under the following conditions:

ITEMS	CONDITION	LIMIT
1	Power Supply Voltage	6.0Vdc
2	Ambient Temperature	25°C ± 5°C
3	Reference Audio Output Load	8Ω Resistive
4	Receiver Test Modulation (PMR)	FM 1.5kHz dev with 1kHz audio
5	Transmitter Antenna Load	50Ω Resistive
6	Control Positions	Volume Control –

### 1.2 POWER SOURCE

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### 1.3 TRANSMITTER (PMR)

This product shall be designed with emission type F3E modulation

	Unit	Normal	Limit
Carrier Frequency Tolerance	Hz	+/-200	+/-800Hz
Maximum TX Current PMR Hi1 @ 6.0Vdc (using equipment 50ohms load)	A		<1.5
Conducted Carrier Power Output @6.0Vdc PMR Hi1 (JS3 Open) PMR Hi2 (JS3 Short) *** use Short cable	W W		<b>&gt;2.5</b> <b>0.2~0.9</b>
Conducted Spurious Emission	dBc	55	50
Radiated Spurious Emission	dBc	55	50
Audio Frequency Response(PMR) 300Hz (AF = 1.5kHz Dev)	dB	-25	-30 to --20
500Hz	dB	-5	-5 to -8
1kHz	dB	0	0
(AF = 0.75kHz Dev) 2kHz	dB		+3 to +8
2.5kHz	dB		+3 to +8
*** use <20Hz/15kHz Filter			
Peak Frequency Deviation AF input = 200mV at Mic input @1kHz audio rate PCBA PMR CH1/JS3 short (Filter<20Hz~15kHz)	+/- kHz		1.7~1.9
TX Hum and Noise (with 50Hz/15kHz Filter) (AF 1kHz @ 1.5kHz Dev.)	dB		>30
TX Distortion (with 50Hz/15kHz Filter) (AF 1kHz @ 1.2kHz Dev.)	%	3	5
VOX Sensitivity (with <20Hz/15kHz Filter) @ AF 1kHz Level 1 Level 2	mV		4.0 ~ 6.0 1.5 ~ 3.0
Mic Sensitivity (AF 1kHz @ 1.5kHz Dev. @ PMR Band)	mV		3~10
VCO Reference Voltage PMR CH1 All PMR channel	Vdc		2.4~2.6 2.4~3.0
Low Battery (@Standby Mode)	Vdc		4.1~4.4
CTCSS Tone Modulation PMR Band (JS3 short) Use <20Hz / 15kHz Filter	kHz	0.5	+/-0.2
CTCSS Frequency Tolerance	%		+/-1.5
Charge Current (12Vdc 200mA Adaptor) @ 60Vdc Battery *** Battery Line/Unit Off	mA		135 ~ 165mA
Call Deviation Use <20Hz / 15kHz Filter	kHz		1.2 ~ 2.2

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## 1.4 RECEIVER (PMR)

	Unit	Normal	Limit
Receiver Sensitivity (12dB Sinad) PMR (1.5kHz Modulation)	-dBm		-120
20dB Quieting Sensitivity	-dBm		
Squelch Sensitivity (SINAD) ****RX ON	dB Sinad		6~18
Audio Output <i>Max Audio (w/o load)</i>	Vrms		>1.3
Hum & Noise Ratio (Un-squelched) *** use wideband filter	dB		>35
Standby Current (Squelched)	mA		N/A
RX Current Consumption (Un-squelched) @ Max Vol. w/ 8ohms Speaker Load / No LED	mA		<150
Audio Frequency Response (AF=1.5kHz Dev @) 500Hz 1kHz 3kHz	dB dB dB	+3 0 0	+/-3 0 -12 ~ -20
Audio Distortion @ 50mW	%	3	5
In Band Conducted RX Spurious	dBm	-60	-53
Spurious Rejection Ratio RX Spurious	dB	N/A	N/A
Image Rejection Ratio 1 <sup>st</sup> IF 2 <sup>nd</sup> IF	dB dB	N/A N/A	N/A N/A
Adjacent Channel Rejection +12.5kHz -12.5kHz	dB dB	60 60	50 50
Inter Modulation Distortion (+/-2,4 CH)	dB	60	50
CTCSS Code Sensitivity	kHz		>0.05
VCO Reference Voltage PMR CH1 ~ CH8	Vdc		2.4~3.0
Leakage Current	uA	50	<100

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### 1.3 TRANSMITTER (LPD)

This product shall be designed with emission type F3E modulation

	Unit	Normal	Limit
Carrier Frequency Tolerance	Hz	+/-200	+/-800Hz
Maximum TX Current @ 6.0Vdc (using equipment 50ohms load)	A		<1.3
Conducted Carrier Power Output @6.0Vdc *** use Short cable (w/ Shieldplate)	mW		0.5~50
Conducted Spurious Emission	dBc	55	50
Radiated Spurious Emission	dBc	55	50
Audio Frequency Response(PMR) 300Hz (AF = 2.2kHz Dev)	dB	-25	-30 to --20
500Hz	dB	-5	-5 to -8
1kHz	dB	0	0
(AF = 1.5kHz Dev) 2kHz	dB		+3 to +8
2.5kHz	dB		+3 to +8
*** use <20Hz/15kHz Filter			
Peak Frequency Deviation AF input = 200mV at Mic input @1kHz audio rate PCBA LPD CH1/JS3 short (Filter<20Hz~15kHz)	+/- kHz		3.3~4.5
TX Hum and Noise (with 50Hz/15kHz Filter) (AF 1kHz @ 2.2kHz Dev.)	dB		>30
TX Distortion (with 50Hz/15kHz Filter) (AF 1kHz @ 2.0kHz Dev.)	%	3	5
VOX Sensitivity (with <20Hz/15kHz Filter) @ AF 1kHz	mV		4.0 ~ 6.0
Level 1			1.5 ~ 3.0
Level 2			
Mic Sensitivity (AF 1kHz @ 2.2kHz Dev. @ PMR Band)	mV		3~10
VCO Reference Voltage LPD CH1~69	Vdc		0.8~3.0
CTCSS Tone Modulation LPD Band (JS3 short) Use <20Hz / 15kHz Filter	kHz		0.7 ~ 1.2
CTCSS Frequency Tolerance	%		+/-1.5

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## 1.4 RECEIVER (LPD)

	Unit	Normal	Limit
Receiver Sensitivity (12dB Sinad) LPD (3.0kHz Modulation)	-dBm		-120
20dB Quieting Sensitivity	-dBm		
Squelch Sensitivity (SINAD) ****RX ON	dB Sinad		6~18
Audio Output <i>Max Audio (w/o load)</i>	Vrms		>1.4
Hum & Noise Ratio (Un-squelched) *** use wideband filter	dB		>35
Standby Current (Squelched)	mA		N/A
RX Current Consumption (Un-squelched) @ Max Vol. w/ 8ohms Speaker Load / No LED	mA		<150
Audio Frequency Response (AF=3.0kHz Dev @) 500Hz 1kHz 3kHz	dB dB dB	+3 0 0	+/-3 0 -12 ~ -20
Audio Distortion @ 50mW	%	3	7
In Band Conducted RX Spurious	dBm	-60	-53
Spurious Rejection Ratio RX Spurious	dB	N/A	N/A
Image Rejection Ratio 1 <sup>st</sup> IF 2 <sup>nd</sup> IF	dB dB	N/A N/A	N/A N/A
Adjacent Channel Rejection +12.5kHz -12.5kHz	dB dB	60 60	50 50
Inter Modulation Distortion (+/-2,4 CH)	dB	60	50
CTCSS Code Sensitivity	kHz		>0.05
VCO Reference Voltage LPD CH1~ CH69	Vdc		0.8~3.0
Leakage Current	uA	50	<100