



Tech-Vision Communications Ltd.

"We envision technologies."

Sample Specification	
TITLE	900 MHz RF Specification

Model	9022ID
Customer	ALCO
Version	3
Date	18-04-2001
Total pages	6
Prepared by	John Ng
Approved by	



Sample Specification	
TITLE	900 MHz RF Specification

MEASUREMENT CONDITIONS

GENERAL

Audio test frequency	1 kHz	(unless specified)
Telephone line impedance	600 Ω	(unless specified)
Temperature	25 •C	$\pm$ 3 •C

CHANNEL FREQUENCY

Channel	H/S Tx (MHz)	H/S LO (MHz)	B/U Tx (MHz)	B/U LO (MHz)
1	925.70	891.90	902.60	936.40
2	925.75	891.95	902.65	936.45
3	925.80	892.00	902.70	936.50
4	925.85	892.05	902.75	936.55
5	925.90	892.10	902.80	936.60
6	925.95	892.15	902.85	936.65
7	926.00	892.20	902.90	936.70
8	926.05	892.25	902.95	936.75
9	926.10	892.30	903.00	936.80
10	926.15	892.35	903.05	936.85
11	926.20	892.40	903.10	936.90
12	926.25	892.45	903.15	936.95
13	926.30	892.50	903.20	937.00
14	926.35	892.55	903.25	937.05
15	926.40	892.60	903.30	937.10
16	926.45	892.65	903.35	937.15
17	926.50	892.70	903.40	937.20
18	926.55	892.75	903.45	937.25
19	926.60	892.80	903.50	937.30
20	926.65	892.85	903.55	937.35
21	926.70	892.90	903.60	937.40
22	926.75	892.95	903.65	937.45
23	926.80	893.00	903.70	937.50
24	926.85	893.05	903.75	937.55
25	926.90	893.10	903.80	937.60
26	926.95	893.15	903.85	937.65
27	927.00	893.20	903.90	937.70
28	927.05	893.25	903.95	937.75
29	927.10	893.30	904.00	937.80



Sample Specification	
TITLE	900 MHz RF Specification

30	927.15	893.35	904.05	937.85
31	927.20	893.40	904.10	937.90
32	927.25	893.45	904.15	937.95
33	927.30	893.50	904.20	938.00
34	927.35	893.55	904.25	938.05
35	927.40	893.60	904.30	938.10
36	927.45	893.65	904.35	938.15
37	927.50	893.70	904.40	938.20
38	927.55	893.75	904.45	938.25
39	927.60	893.80	904.50	938.30
40	927.65	893.85	904.55	938.35



Sample Specification	
TITLE	900 MHz RF Specification

RF Part

1. Base Receiver

	Description	Unit	Nominal	Limit
1.1	Usable Sensitivity (12 dB SINAD)	dBm	-110dBm	-108dBm
1.2	Quieting Sensitivity (40 dB SINAD)	dBm	-105dBm	-103dBm
1.3	Usable 6 dB Bandwidth	±KHz	+/-75	≥+/-60
1.4	Audio Output @ 30 KHz Deviation	mV	180	± 40
1.5	Audio Distortion	%	1	• 3
1.8	S/N Ratio with AF filter 300Hz ~ 3.4kHz	dB	50	• 45
1.9	SINAD with AF filter 300Hz ~ 3.4kHz	dB	40	• 35
1.10	Adjacent channel rejection (+ ch)	dB	40	• 35
1.11	Adjacent channel rejection (- ch)	dB	40	• 35
1.12	Image rejection	dB	50	• 45
1.14	Co-channel rejection	dB	-4	-15 • Co • 0
1.15	Frequency tolerance	± Hz	± 1000	± 5000
1.16	Freq. Response ref. to 1kHz 300 Hz	mV	100	± 20
	@ ±30 KHz Dev. 3 KHz	mV	200	± 40
	Digital Code Sensitivity (DEV = 60 kHz)	dBm	-108dBm	-104dBm
	Digital Code Deviation Sensitivity (RF = 1mV)	KHz	55	• 45
	Noise Detect (SINAD)	dB	12	±3



Sample Specification	
TITLE	900 MHz RF Specification

2. Base Transmitter

	Description	Unit	Nominal	Limit
2.1	R F Output (Direct 50 ohm Test point)	dBm	-4	± 2
2.2	Transmit Frequency Tolerance	KHz	0	5
2.3	Freq. Deviation (5mV at TX_Audio) 1KHz Audio	KHz	35	±5
2.4	Transmit Audio Distortion (30 KHz Dev)	%	1	• 3
2.6	Transmit Audio S/N (No de-emphasis)	dB	35	• 30
2.7	Audio Freq. Response ref. to 1K 300Hz (200mV at T/R)	mV	45mV	± 5
2.8	3KHz	mV	35mV	± 5
2.10	Digital Code Deviation	KHz	60	• 50
2.11	Transmit Spurious			
	2 nd Harmonic	dBm	-50	-46
	3 rd Harmonic	dBm	-58	-46

Remote RF

2. Remote Receiver

	Description	Unit	Nominal	Limit
3.1	Usable Sensitivity (20 dB SINAD CCITT Filter)	dBm	-110dBm	-108dBm
3.2	Quieting Sensitivity (40 dB SINAD)	dBm	-105dBm	-103dBm
3.3	Usable 6 dB Bandwidth	KHz	150	• 120
3.5	Audio Distortion (30 KHz Deviation)	%	0.8	• 1.5
3.6	Max. S/N Ratio	dB	60	• 50
3.7	Audio Output at (1kHz @ 30 kHz Dev.)			
	Level 2	mV	60	±10
3.9	Adjacent channel rejection (+ ch)	dB	40	• 35
3.10	Adjacent channel rejection (- ch)	dB	40	• 35
3.11	Image rejection	dB	45	• 40
3.13	Freq. Tolerance	kHz	± 0	± 5
3.14	Frequency Response ref. to 1K 300 Hz	mV	52	± 10
	(30KHz Deviation) 3 kHz	mV	56	± 10
3.16	Digital Code Sensitivity (DEV = 75 Hz)	dBm	-108dBm	-105dBm
3.17	Code Deviation Sensitivity	KHz	55	• 45
3.18	Noise Detect (SINAD)	dB	12	± 3



Sample Specification	
TITLE	900 MHz RF Specification

--	--	--	--	--

4. Remote Transmitter

	Description	Unit	Nominal	Limit
4.1	R F Output (Direct 50 ohm)	dBm	-4	±2
4.2	Transmit Freq. Tolerance	KHz	± 0	± 5
4.3	Freq. Deviation (10mV at MIC Point)	KHz	27	± 3
4.4	Trans. audio dist. (No de-emphasis)	%	1	• 3
4.5	Max. modulation Capability (150mV i/p)	KHz	70	± 10
4.6	Transmit Audio S/N (SINAD)	dB	35	• 30
4.8	Digital Code Deviation	KHz	65	• 50
4.9	Audio Freq. Res. ref. to 1KHz 300 Hz	mV	60	± 10
	@ 25KHz Deviation 3 KHz	dB	60	± 10

Power Drain

	Description	Unit	Nominal	Limit
7.1	Receiver Current	mA	38	• 45
7.2	Transmit + Receiver + Compander Current	mA	70	• 80