

Appendix A Measured Data

This appendix contains the measured data that was recorded for each radios laboratory tests and the I/S ratios that were calculated using that data. A summary pass/fail table is shown below in Table A-1. The recorded data on each test is presented in the following tables: Table A-2 Sensitivity tests, Table A-3 Adjacent Channel Interference tests, Table A-4 Co-Channel interference Tests, Table A-5 Intermodulation Interference Tests, and Tables A-6 and A-7 Blocking Tests. Radio L has data entries for local and distance mode operation. The power of the unwanted signals is measured at the RF input of the test radios for all tests.

Table A-1

Radio	IEC Test				
	5.5.3 Sensitivity	5.5.4 Co-Channel Rejection	5.5.5 Adjacent Channel Selectivity	5.5.7 Intermodulation Response	5.5.8 Blocking
A	pass	fail	fail	pass	fail
B	pass	fail	pass	pass	fail
E	pass	fail	fail	fail	fail
F	pass	fail	pass	pass	fail
G	pass	pass	fail	fail	fail
H	pass	pass	fail	pass	fail
I	pass	pass	fail	pass	fail
K	pass	pass	pass	fail	fail
L Distance	pass	pass	fail	pass	fail
Local	pass	pass	fail	pass	pass

IEC 5.5.3 Sensitivity

The IEC sensitivity requirement is 1FV at the RF input of the radio that would produce a 20 dB SINAD. This equates to a power level of -107 dBm at the RF input of the test radio.

Table A-2
Sensitivity Test Measured Data

radio	Sensitivity (dBm)	pass/fail
A	-113	pass
B	-120	pass
E	-115	pass
F	-116	pass
G	-116	pass
H	-114	pass
I	-116	pass
K	-116	pass
L Distance	-117	pass
Local	-107	pass

IEC 5.5.5 Adjacent Channel Selectivity

The IEC requirement for adjacent channel selectivity is 70 dB, calculated as the level of the unwanted signal to the level of the wanted signal which degrades the receiver SINAD from 20 to 14 dB.

Table A-3
Adjacent channel Interference Test Measured Data

radio	Sensitivity (dBm)	-25 kHz Off-tuned interferer (dBm)	I/S (dB)	+25 kHz Off-tuned Interferer (dBm)	I/S (dB)	pass/fail
A	-113	-45	68	-44	69	fail
B	-120	-47	73	-44	76	pass
E	-115	-48	67	-49	66	fail
F	-116	-38	78	-39	77	pass
G	-116	-58	58	-57	59	fail
H	-114	-47	67	-44	70	fail
I	-116	-47	69	-46	70	fail
K	-116	-45	71	-44	72	pass
L Distance	-117	-68	49	-67	50	fail
Local	-107	-59	48	-58	49	fail

IEC 5.5.4 Co-Channel Rejection Ratio

The IEC requirement for the Co-Channel rejection ratio -10 to 0 dB, calculated as the level of the unwanted signal to the level of the wanted signal which degrades the receiver SINAD from 20 to 14 dB.

Table A-4
Co-Channel Test Measured Data

radio	Sensitivity (dBm)	Interferer (dBm)	I/S (dB)	pass/fail
A	-113	-124	-11	fail
B	-120	-131	-11	fail
E	-115	-127	-12	fail
F	-116	-130	-14	fail
G	-116	-125	-9	pass
H	-114	-122	-8	pass
I	-116	-124	-8	pass
K	-116	-125	-9	pass
L Distance	-117	-124	-7	pass
Local	-107	-115	-8	pass

IEC 5.5.7 Intermodulation Rejection Ratio

The IEC requirement for intermodulation rejection ratio is 68 dB, calculated as the ratio of the unwanted signal to the level of the wanted signal which degrades the receiver SINAD from 20 to 14 dB.

Table A-5
Intermodulation Test Measured Data

radio	S, (dBm)	I ₁ and I ₂ (dBm)	I/S ratio (dB)	pass/fail
A	-113	-46	67	fail
B	-120	-48	72	pass
E	-115	-52	63	fail
F	-116	-39	77	pass
G	-116	-55	61	fail
H	-114	-42	72	pass
I	-116	-50	66	fail
K	-116	-54	62	fail
L Distance	-117	-34	83	pass
Local	-107	-26	81	pass

IEC 5.5.8 Blocking Test

The IEC requirement for blocking is 90 dBV (emf), with the unwanted signal at -10 to -1 MHz off-tuned and -1 to 10 MHz off-tuned from the wanted signal that would degrade the SINAD from 20 to 14 dB. This equates to a signal level of -23 dBm at the RF input of the test radio.

Table A-6
Blocking Test Measured Data

radio	I (dBm)				pass/fail
	-10 MHz	-5 MHz	-2 MHz	-1 MHz	
A	-14	-14	-23	-23	pass
B	-19	-20	-29	-29	fail
E	-16	-16	-24	-25	fail
F	-24	-19	-22	-22	fail
G	-18	-19	-26	-28	fail
H	-14	-14	-29	-23	fail
I	-16	-20	-24	-24	fail
K	-16	-17	-26	-26	fail
L Distance	-19	-19	-24	-23	fail
Local	-5	-5	-14	-14	pass

Table A-7
Blocking Test Measured Data

radio	I (dBm)				pass/fail
	+10 MHz	+5 MHz	+2 MHz	+1 MHz	
A	-19	-21	-24	-24	fail
B	-19	-19	-25	-28	fail
E	-17	-24	-24	-25	fail
F	-15	-15	-22	-22	pass
G	-19	-27	-28	-28	fail
H	-14	-14	-21	-19	pass
I	-18	-20	-24	-24	fail
K	-16	-19	-24	-24	fail
L Distance	-16	-17	-24	-24	fail
Local	-4	-4	-12	-14	pass