

## APPENDIX B

### FSM measurement data including S-Plane Calculations

Date	
Time	
Frequency (MHz)	18.1
Location	Inside driveway, home of Ian Paul (VK3LJJ)
Slant dist to power line (m)	10

Plane		Received Signal dBm	Field Strength dBuV/metre	Normalised FS dBuV/metre	9kHz FS dBuV/metre
X	RMS	-115	26	-5	34.5
X	Quasi-peak	-103	38	7	46.5
X	Peak	-97	44	13	52.5
Y	RMS	-118	23	-8	31.5
Y	Quasi-peak	-107	34	6	45.5
Y	Peak	-101	41	9	48.5
Z	RMS	-115	26	-5	34.5
Z	Quasi-peak	-103	38	7	46.5
Z	Peak	-99	42	11	50.5
S	RMS	-113.2	27.8	-3.2	36.3
S	Quasi-peak	-101.3	39.7	9.1	48.6
S	Peak	-96.0	45.1	14.0	53.5

Date	14.2 Inside driveway, home of Ian Paul (VK3LJJ) 10
Time	
Frequency (MHz)	
Location	
Slant dist to powerline (m)	

Plane		Received Signal dBm	Field Strength dBuV/metre	Normalised FS dBuV/metre	9kHz FS dBuV/metre
X	RMS	-115	26	-5	34.5
X	Quasi-peak	-107	34	3	42.5
X	Peak	-103	38	7	46.5
Y	RMS	-112	29	-2	37.5
Y	Quasi-peak	-105	36	5	44.5
Y	Peak	-101	40	9	48.5
Z	RMS	-118	23	-8	31.5
Z	Quasi-peak	-109	32	1	40.5
Z	Peak	-104	37	6	45.5
S	RMS	-111.4	29.6	-1.4	38.1
S	Quasi-peak	-104.0	37.0	6.0	45.5
S	Peak	-99.9	41.1	10.1	49.6

Date	14.2 Corner Nelse & Kaye Streets 10
Time	
Frequency (MHz)	
Location	
Slant dist to powerline (m)	

Plane		Received Signal dBm	Field Strength dBuV/metre	Normalised FS dBuV/metre	9kHz FS dBuV/metre
X	RMS	-110	31	0	39.5
X	Quasi- peak	-99	43	11	50.5
X	Peak	-94	47	16	55.5
Y	RMS	-114	27	-4	35.5
Y	Quasi- peak	-105	36	-5	34.5
Y	Peak	-101	41	10	49.5
Z	RMS	-111	30	-1	38.5
Z	Quasi- peak	-99	42	11	50.5
Z	Peak	-94	48	17	56.5
S	RMS	-108.7	32.3	1.3	40.8
S	Quasi- peak	-97.4	44.1	12.5	52.0
S	Peak	-92.5	49.1	18.1	57.7

Date	21.1 Corner Valley Ave & Wermatong Ave 10
Time	
Frequency (MHz)	
Location	
Slant dist to powerline (m)	

Plane		Received Signal dBm	Field Strength dBuV/metre	Normalised FS dBuV/metre	9kHz FS dBuV/metre
X	RMS	-105	36	5	44.5
X	Quasi- peak	-96	45	14	53.5
X	Peak	-92	49	18	57.5
Y	RMS	-114	27	-4	35.5
Y	Quasi- peak	-108	33	2	41.5
Y	Peak	-103	38	7	46.5
Z	RMS	-115	26	-5	34.5
Z	Quasi- peak	-109	32	1	40.5
Z	Peak	-104	37	6	45.5
S	RMS	-104.9	36.1	5.1	44.6
S	Quasi- peak	-96.0	45.0	14.0	53.6
S	Peak	-92.0	49.0	18.0	57.6

Date	18.1 Corner Valley Ave & Wermatong Ave 10
Time	
Frequency (MHz)	
Location	
Slant dist to powerline (m)	

Plane		Received Signal dBm	Field Strength dBuV/metre	Normalised FS dBuV/metre	9kHz FS dBuV/metre
X	RMS	-105	36	5	44.5
X	Quasi-peak	-95	46	15	54.5
X	Peak	-91	50	19	58.5
Y	RMS	-113	28	-3	36.5
Y	Quasi-peak	-103	38	7	46.5
Y	Peak	-97	44	13	52.5
Z	RMS				
Z	Quasi-peak				
Z	Peak				
S	RMS	0.0	36.1	5.3	44.8
S	Quasi-peak	0.0	46.1	15.1	54.6
S	Peak	0.0	50.1	19.1	58.7

Date	14.2 Corner Valley Ave & Wermatong Ave 10
Time	
Frequency (MHz)	
Location	
Slant dist to powerline (m)	

Plane		Received Signal dBm	Field Strength dBuV/metre	Normalised FS dBuV/metre	9kHz FS dBuV/metre
X	RMS	-109	32	1	40.5
X	Quasi-peak	-96	46	15	54.5
X	Peak	-91	50	19	58.5

Y	RMS	-105	36	5	44.5
Y	Quasi-peak	-94	47	16	55.5
Y	Peak	-91	50	19	58.5
Z	RMS	-115	26	-5	34.5
Z	Quasi-peak	-107	34	3	42.5
Z	Peak	-104	37	6	45.5
S	RMS	-104.7	36.3	5.3	44.9
S	Quasi-peak	-93.3	48.1	17.1	56.6
S	Peak	-89.5	51.5	20.5	60.1

Date	10.1 Corner Valley Ave & Wermatong Ave 10
Time	
Frequency (MHz)	
Location	
Slant dist to powerline (m)	

Plane		Received Signal dBm	Field Strength dBuV/metre	Normalised FS dBuV/metre	9kHz FS dBuV/metre
X	RMS	-120	21	-10	29.5
X	Quasi-peak	-113	29	-3	36.5
X	Peak	-109	33	-2	37.5
Y	RMS	-117	24	-7	32.5
Y	Quasi-peak	-110	32	1	40.5
Y	Peak	-106	36	5	44.5
Z	RMS				
Z	Quasi-peak				
Z	Peak				
S	RMS	0.0	24.5	0.1	39.6
S	Quasi-peak	0.0	32.5	2.3	41.8
S	Peak	0.0	36.5	5.3	44.8

Date	7.1 Corner Valley Ave & Wermatong Ave 10
Time	
Frequency (MHz)	
Location	
Slant dist to powerline (m)	

Plane		Received Signal dBm	Field Strength dBuV/metre	Normalised FS dBuV/metre	9kHz FS dBuV/metre
X	RMS	-109	33	2	41.5
X	Quasi-peak	-100	41	10	49.5
X	Peak	-96	46	15	54.5
Y	RMS	-109	33	2	41.5
Y	Quasi-peak	-101	41	10	49.5
Y	Peak	-96	45	14	53.5
Z	RMS				
Z	Quasi-peak				
Z	Peak				
S	RMS	0.0	34.5	3.9	43.4
S	Quasi-peak	0.0	42.5	11.5	51.1
S	Peak	0.0	47.1	16.1	55.6

## Explanation of terms

<b>X, Y, Z</b>	Measurements taken for each antenna orientation	
<b>S</b>	Calculated S-Plane field strength	
<b>Received signal dBm</b>	Received power from loop antenna in Decibels with respect to one milliwatt in 50 Ohms	This is a recording of the signal voltage at the terminals of the loop antenna. It is significantly lower than what would be expected at the terminals of a real-world amateur radio antenna exposed to the same field strength.
<b>Field Strength dBuV/meter</b>	Field strength in decibels	This is a recording of the actual radio field strength, calculated from the measured received power from the loop and the antenna factor.
<b>Normalised FS dBuV/meter</b>	Field strength in decibels with respect to one microvolt per meter.	
<b>9kHz FS dBuV/meter</b>	Field strength in decibels with respect to one microvolt per meter extrapolated to a 9KHz receiver bandwidth	9kHz is the bandwidth specified for EMC measurements below 30MHz.