



# Appendix A

## Modulation Characteristic Measurement

According to FCC part 2.1047 and part 27 subpart C



# 1. Channel Bandwidth = 5 MHz

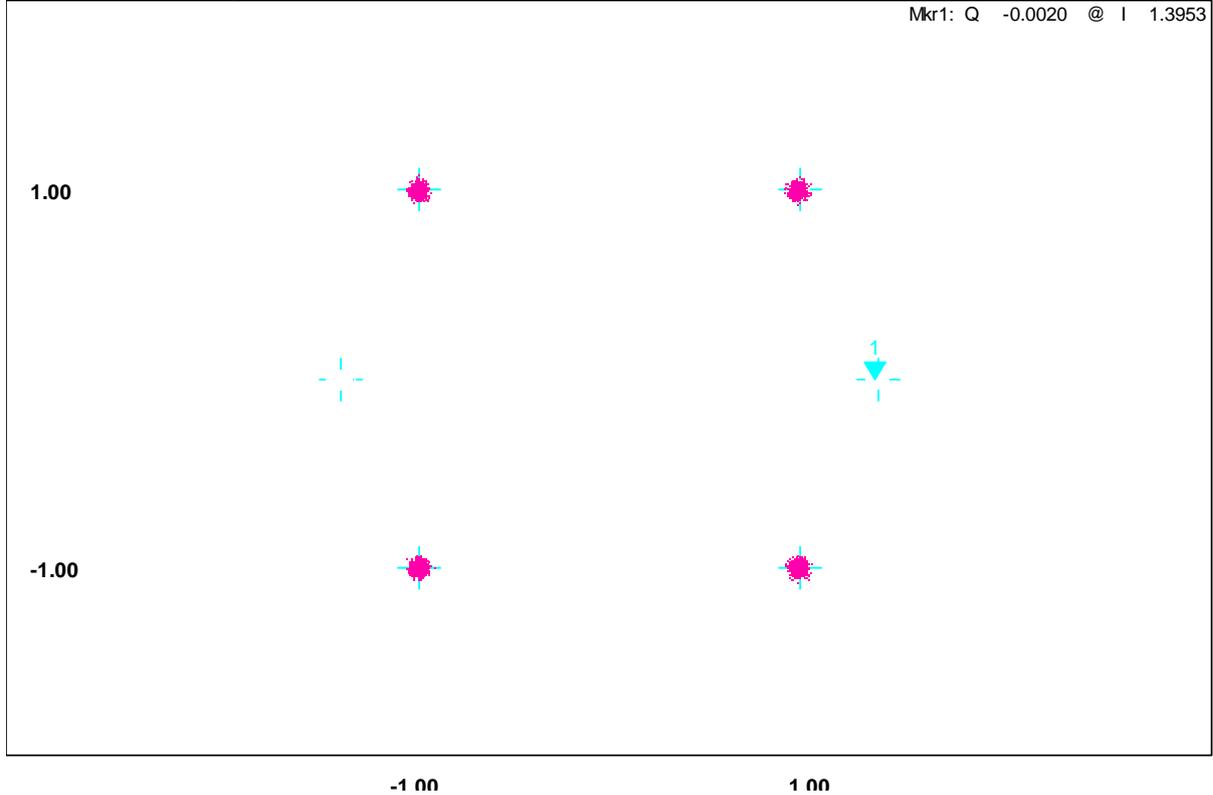
## 1) TM 1

### B

IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.4985 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols

SINGLE TRG: POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:33:39

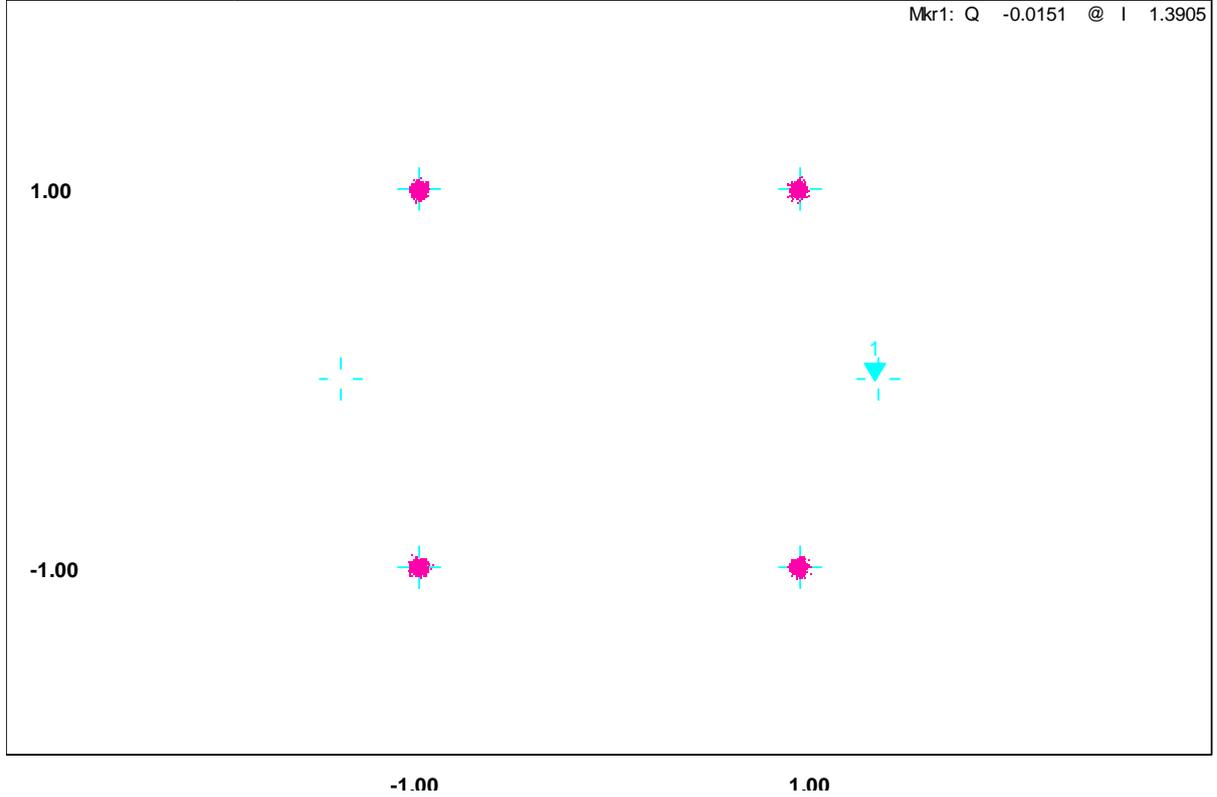


M



IEEE 802.16e-2005 OFDMA			
Frequency/Fs:	2.593 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att:9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols
SINGLE	TRG : POWER	RF	

B Constellation vs Symbol



Measurement Complete

PO

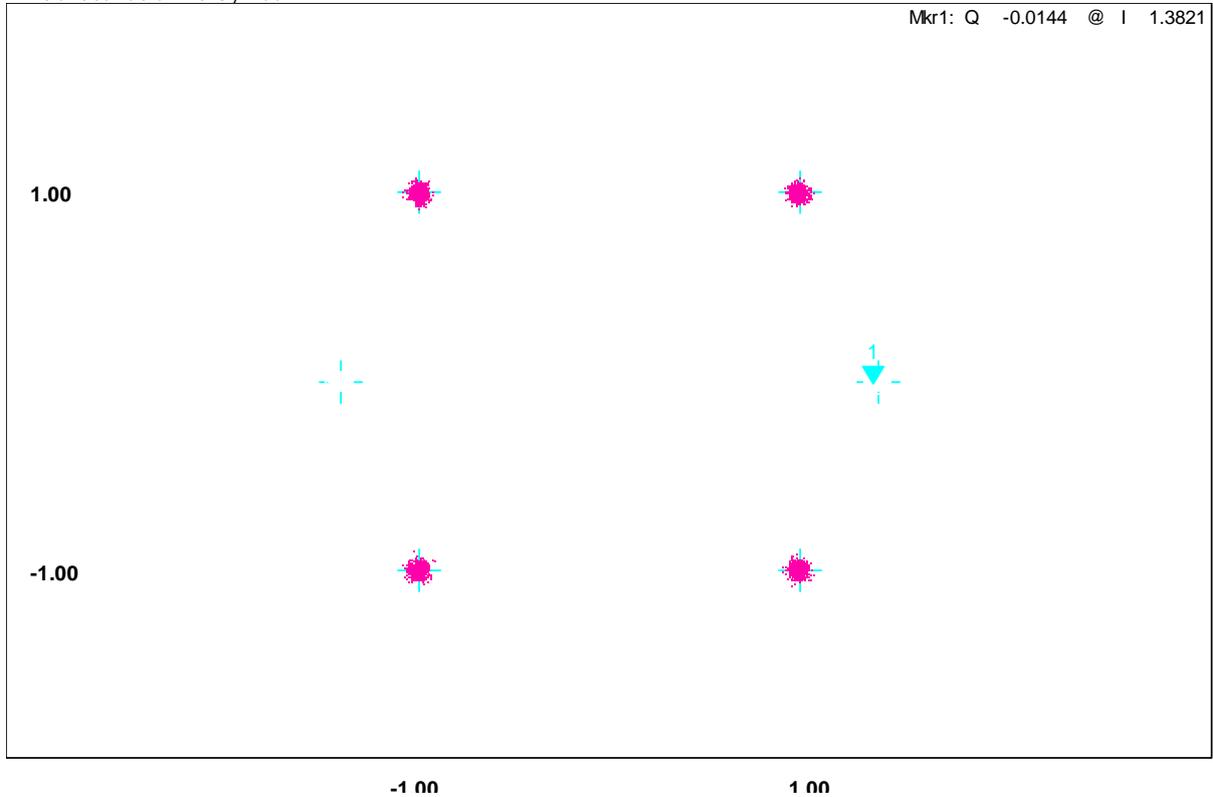
Date: 9.MAR.2011 12:34:00



T

IEEE 802.16e-2005 OFDMA		
Frequency/Fs: 2.6875 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols
SINGLE	TRG : POWER	RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:34:21



2) TM 2

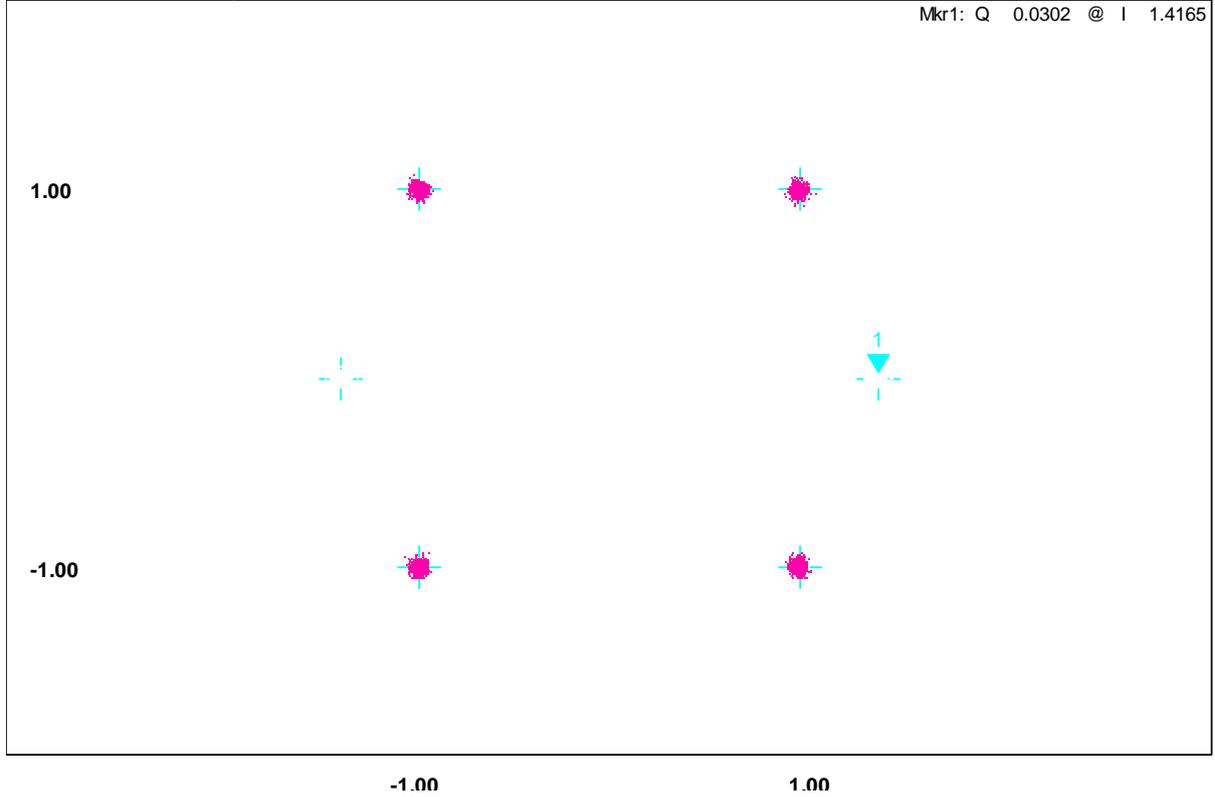
B



IEEE 802.16e-2005 OFDMA		
Frequency/Fs: 2.4985 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

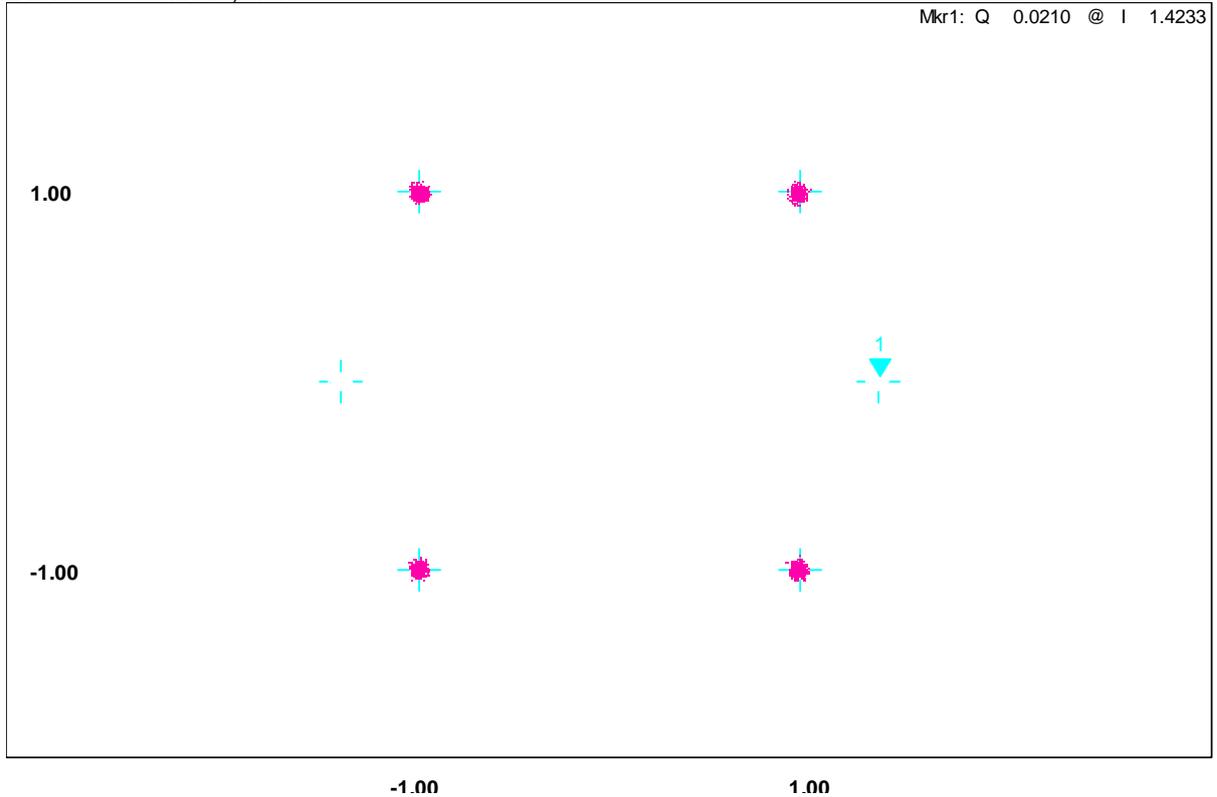
Date: 9.MAR.2011 12:34:42



# M

IEEE 802.16e-2005 OFDMA		
Frequency/Fs: 2.593 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols
SINGLE	TRG: POWER	RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:35:04



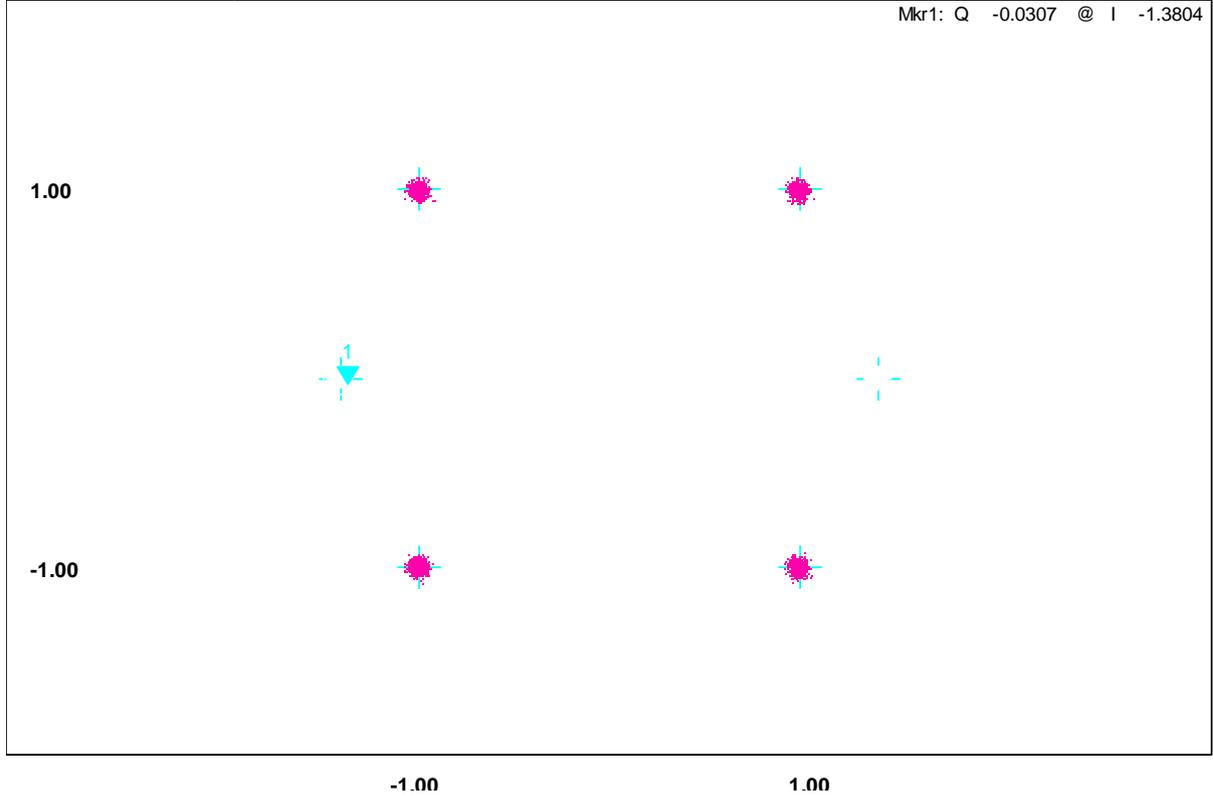
T



IEEE 802.16e-2005 OFDMA		
Frequency/Fs: 2.6875 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:35:25

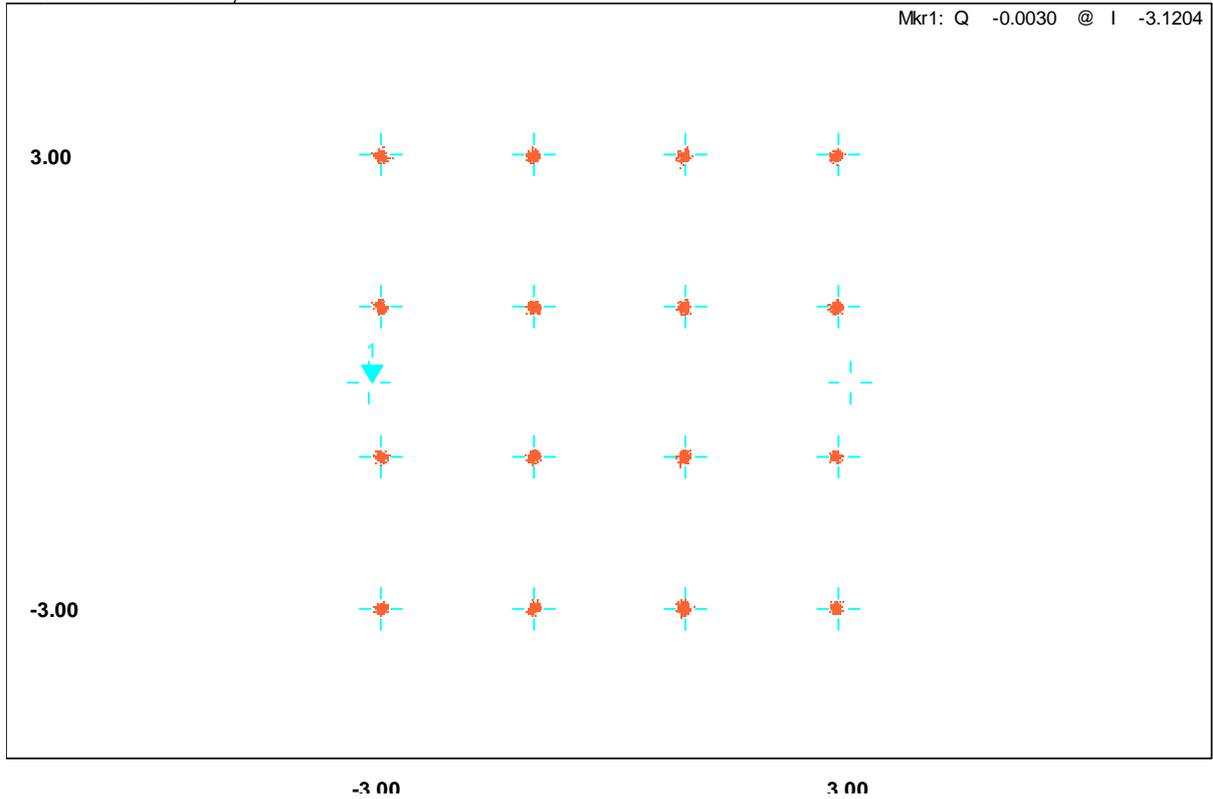


### 3) TM 3

## B

IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.4985 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols
SINGLE	TRG : POWER	RF	

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:35:46



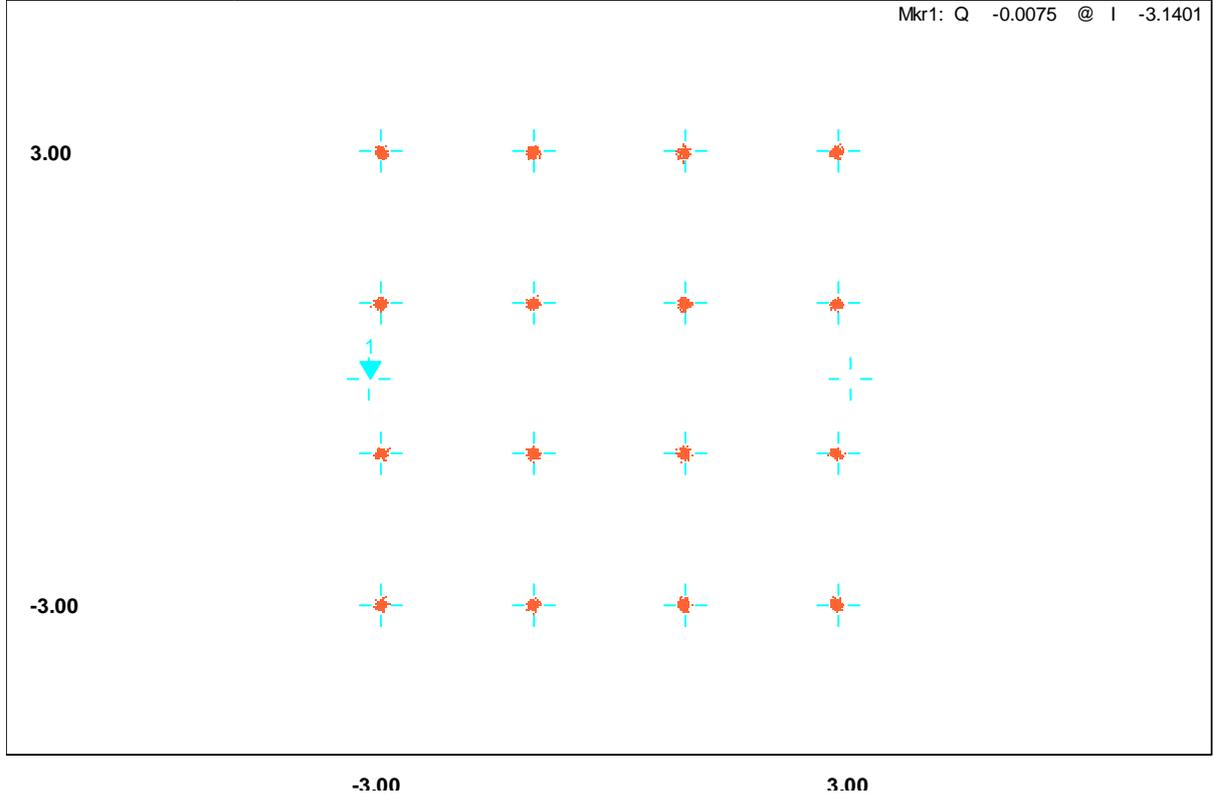
M



IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.593 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:36:07





4) TM 4

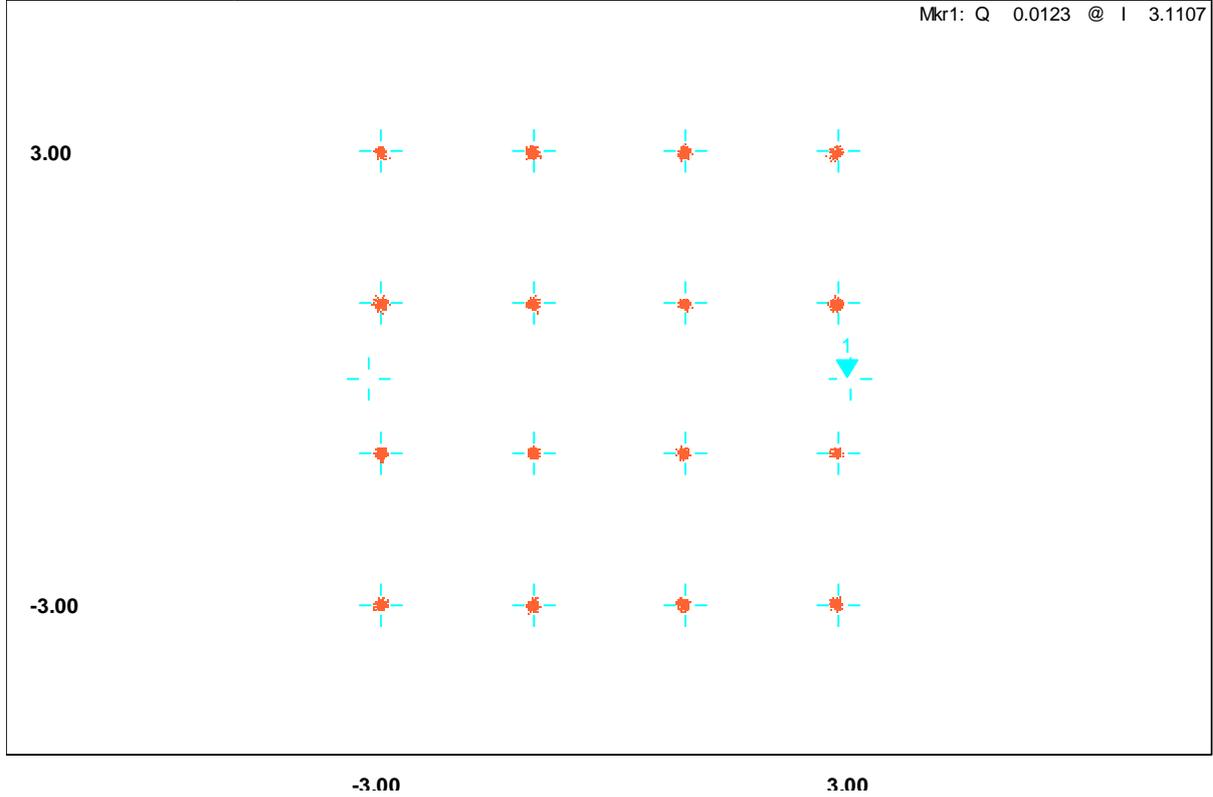
B



IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.4985 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:36:49

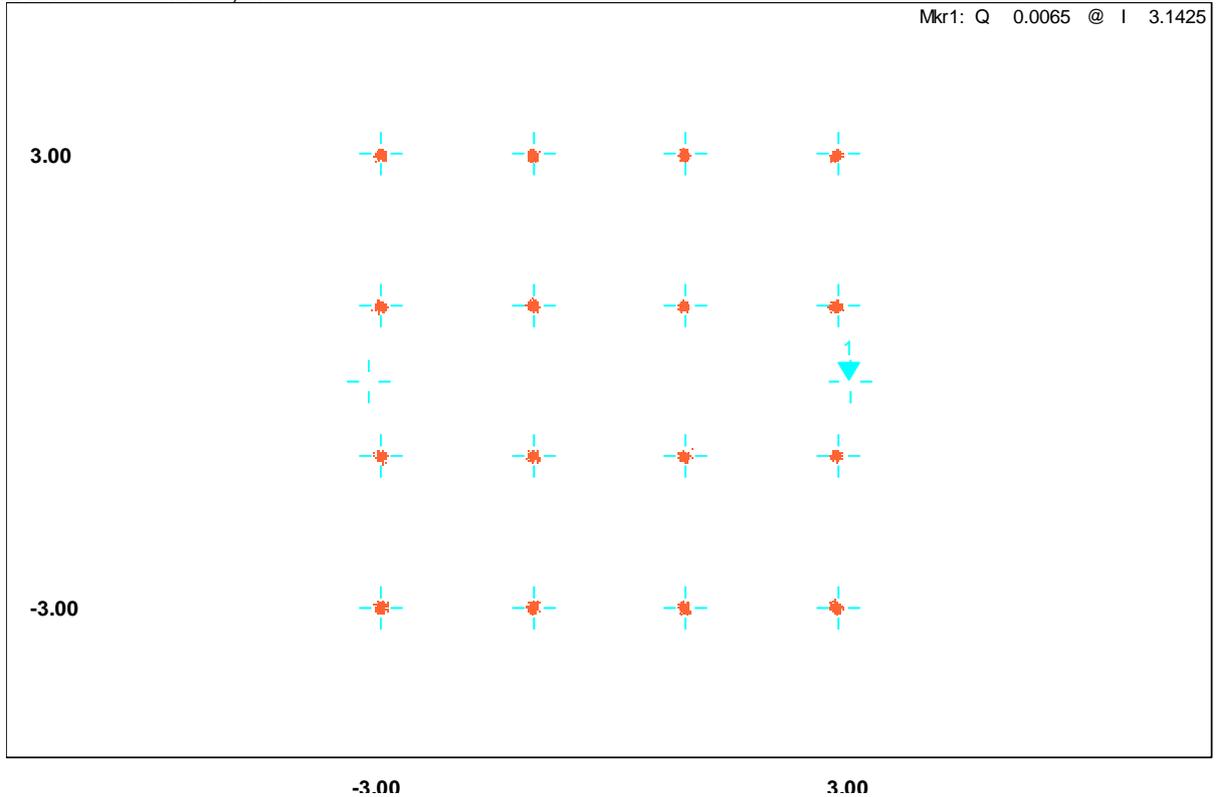


# M

IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.593 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801	
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols	

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:37:10

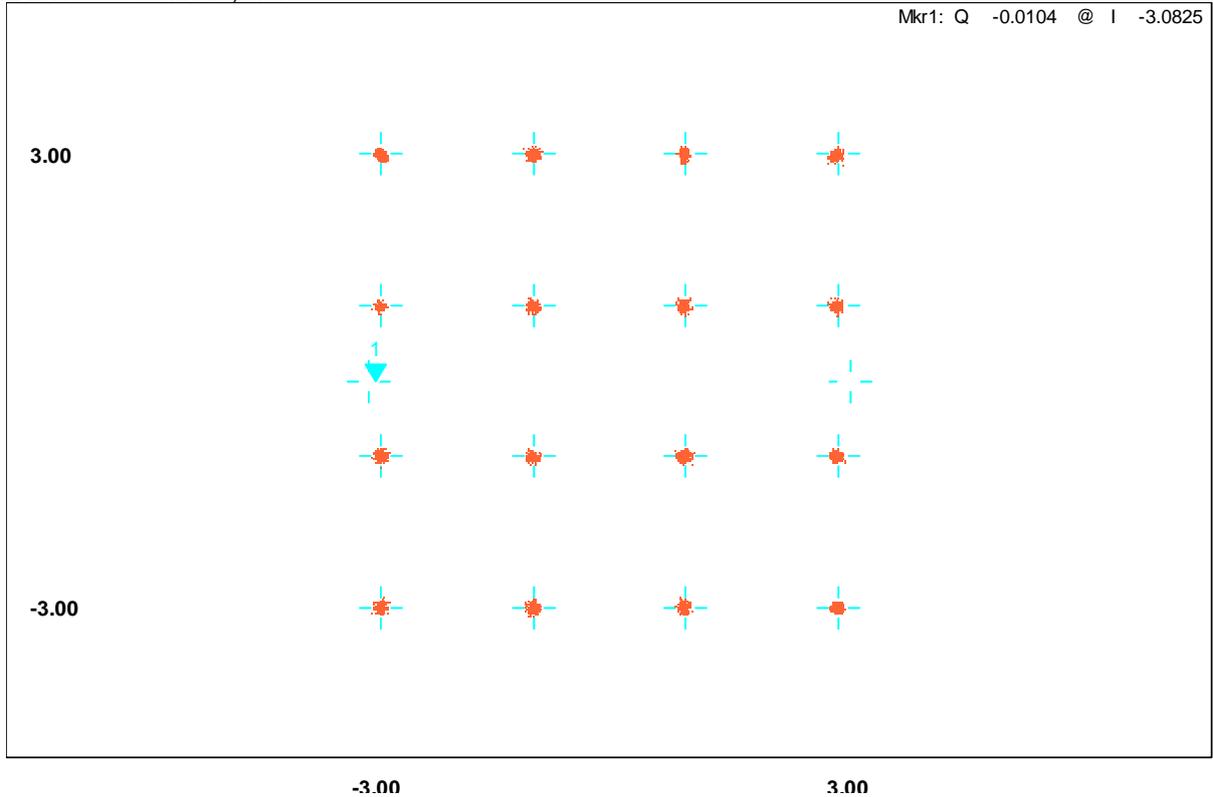


# T

IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.6875 GHz / 5.6 MHz	Signal Lvl. Setting/Ext. Att: 9.2 dBm / 15.2 dB	Capture Time/No.Samples: 3 ms / 16801	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 15 Symbols

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:37:31



## 2. Channel Bandwidth = 10 MHz

### 1) TM 1

#### B

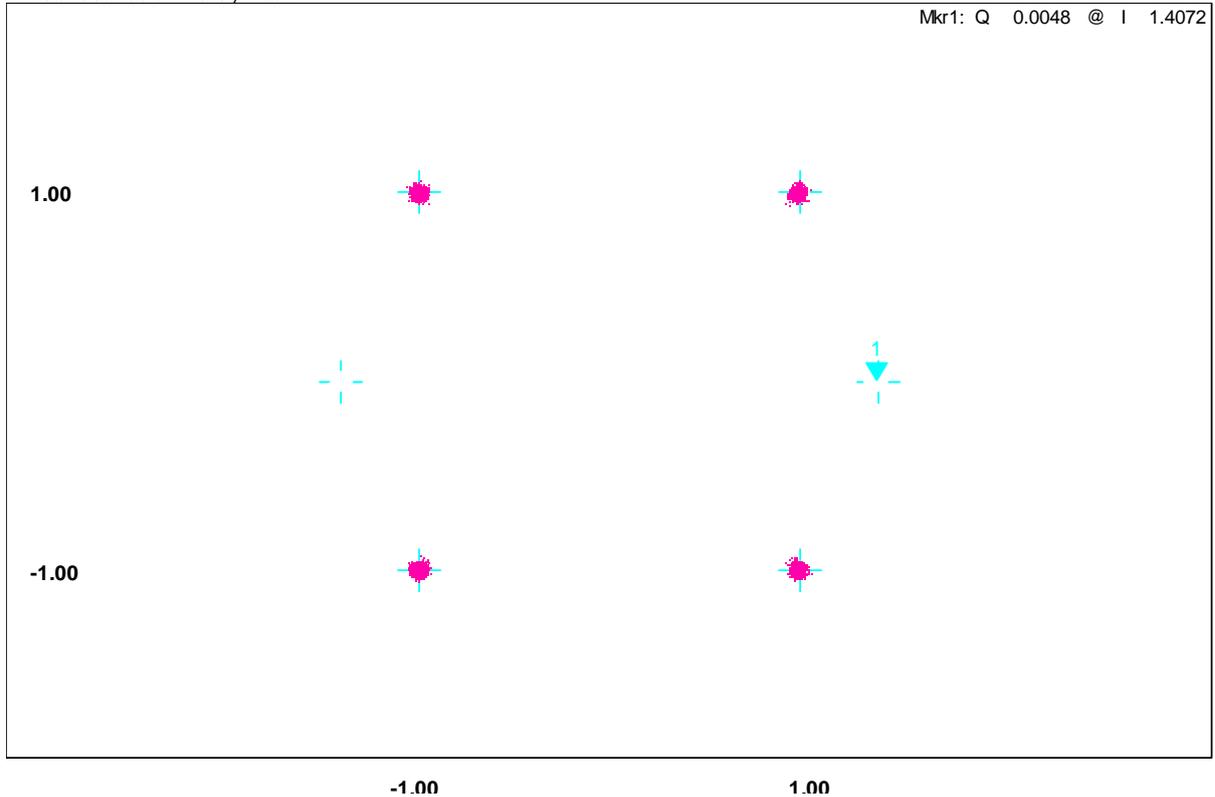
IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.501 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001	
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols	

SINGLE

TRG: POWER

RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:17:21

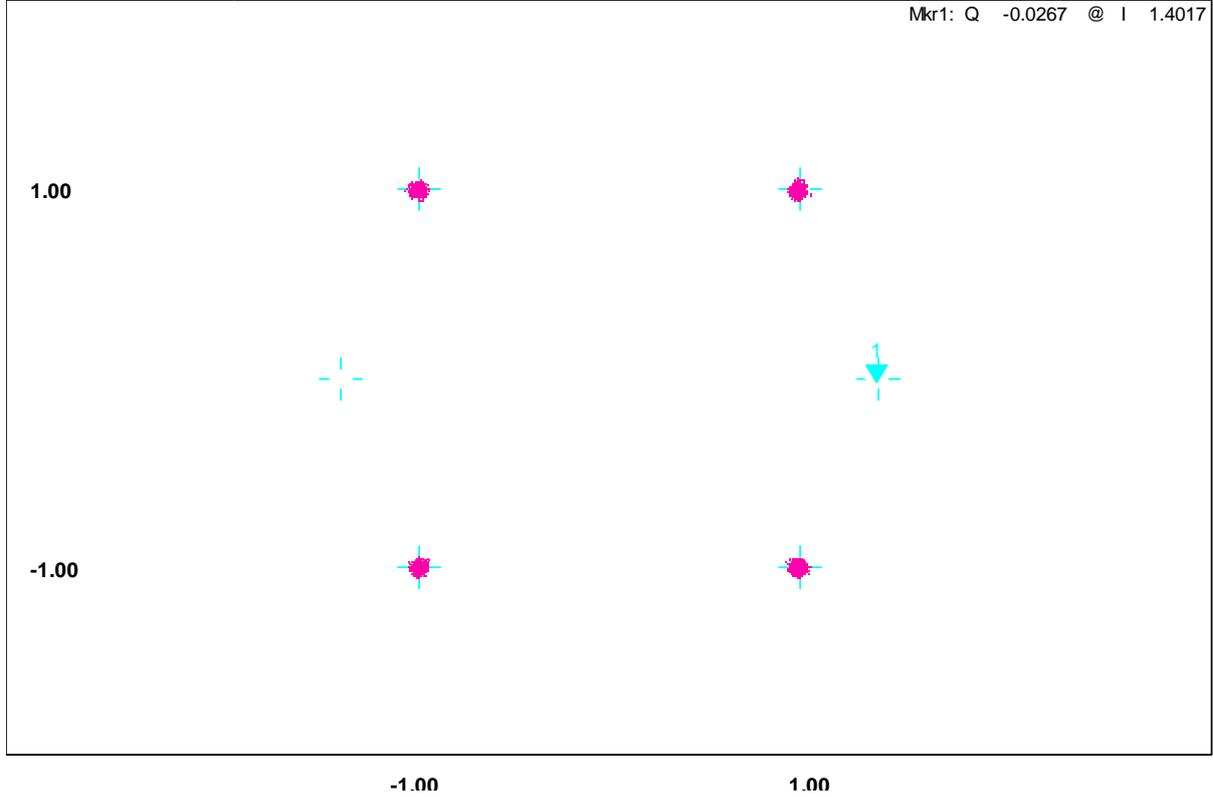


M



IEEE 802.16e-2005 OFDMA		
Frequency/Fs: 2.593 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols
SINGLE	TRG : POWER	RF

B Constellation vs Symbol



Measurement Complete

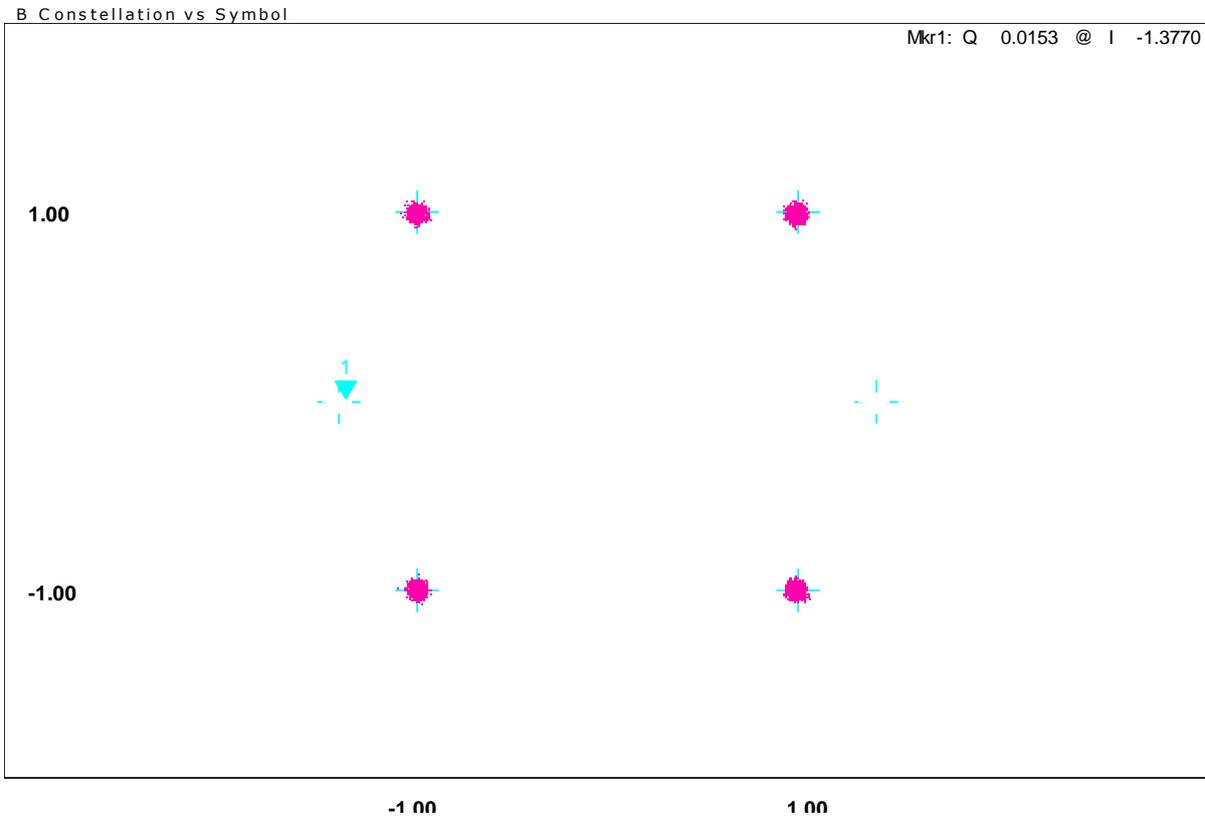
PO

Date: 9.MAR.2011 12:17:43



T

IEEE 802.16e-2005 OFDMA		
Frequency/Fs: 2.685 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols
SINGLE	TRG : POWER	RF



Measurement Complete

PO

Date: 9.MAR.2011 12:18:04



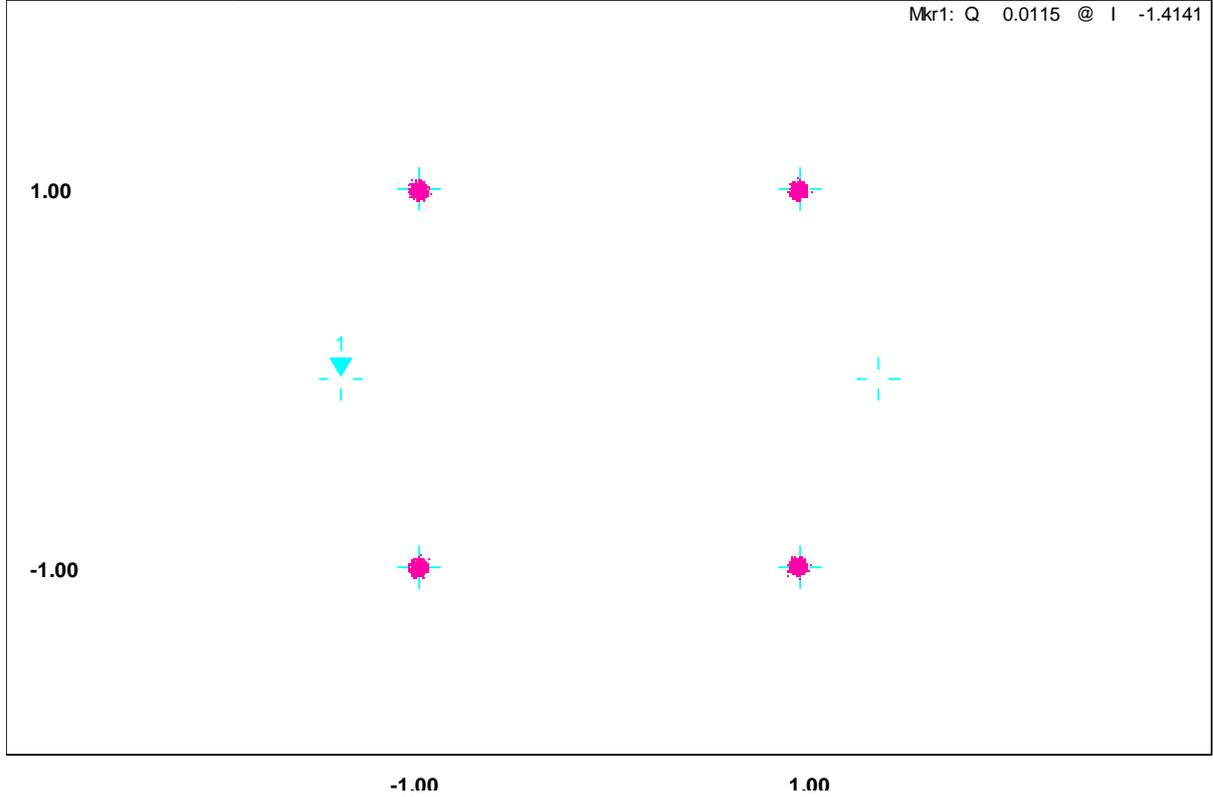
2) TM 2

B



IEEE 802.16e-2005 OFDMA		
Frequency/Fs: 2.501 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols
SINGLE	TRG : POWER	RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:18:25

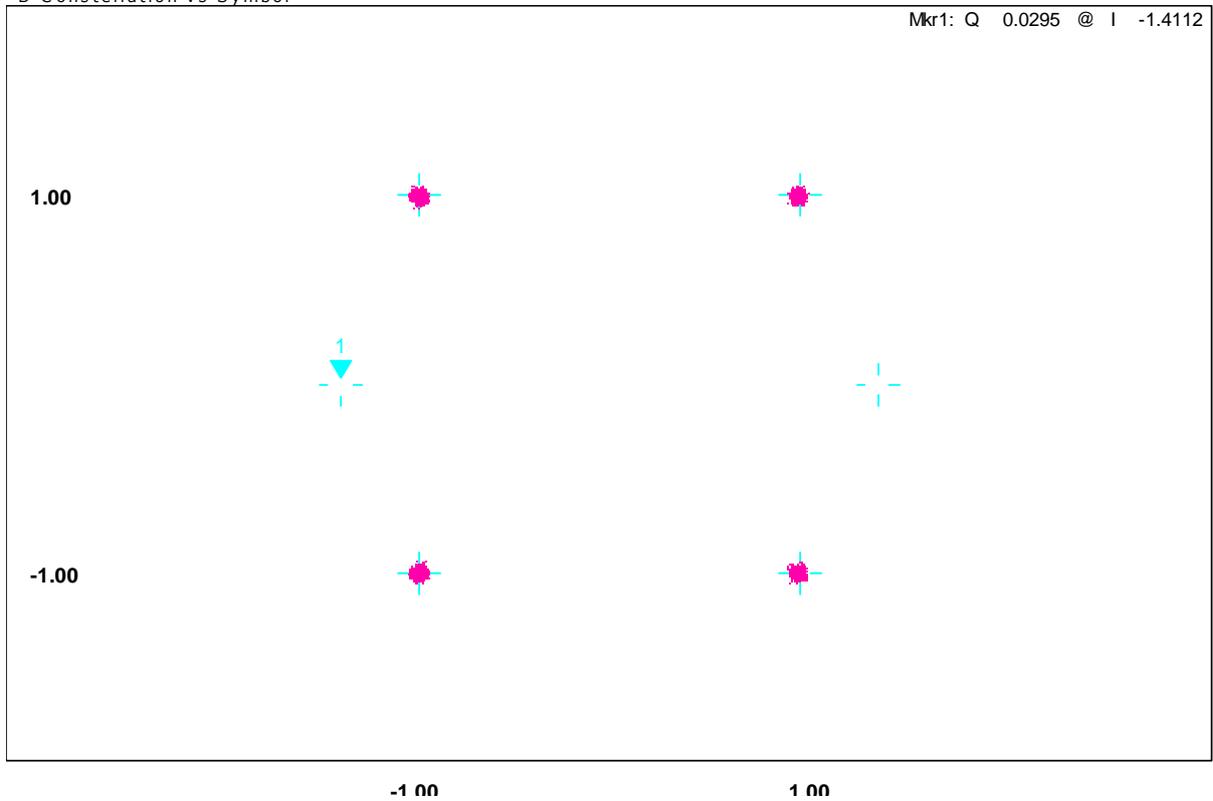


# M

IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.593 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:18:47



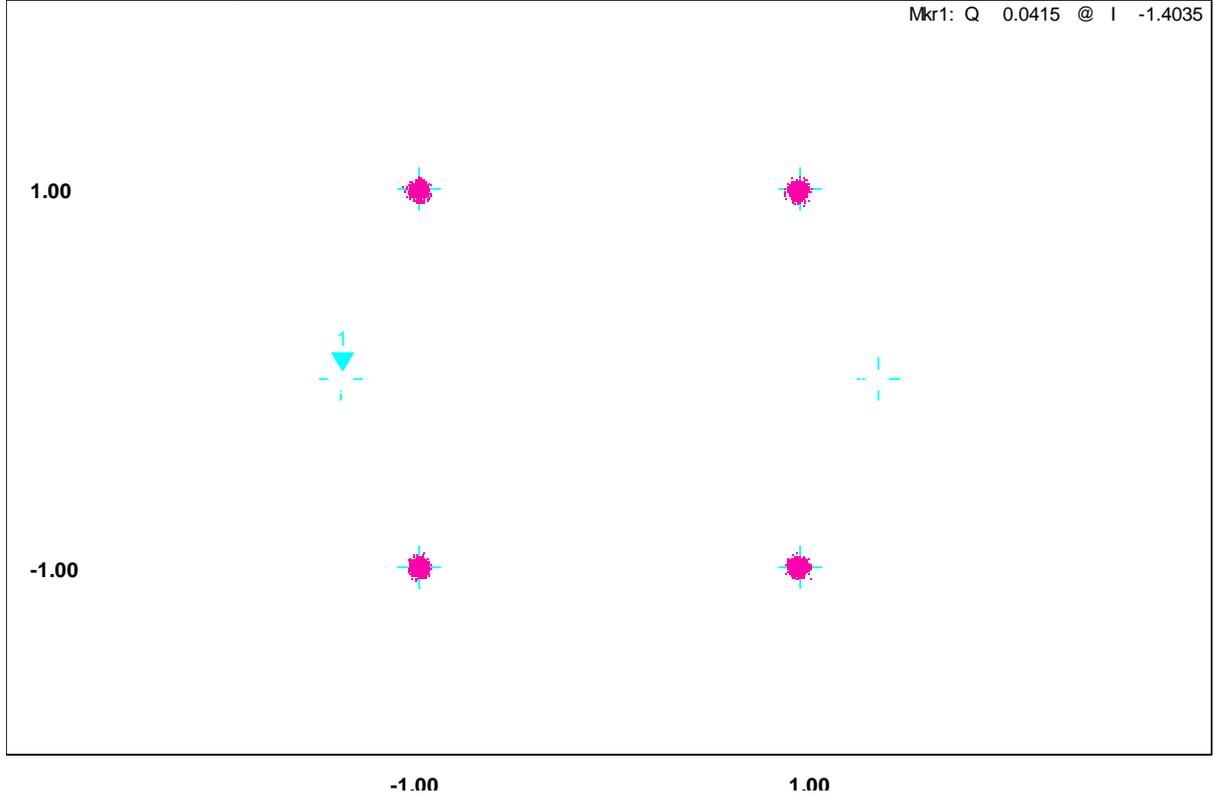
T



IEEE 802.16e-2005 OFDMA		
Frequency/Fs: 2.685 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001
Seg=0, UL-PUSC, ID=A 1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:19:09



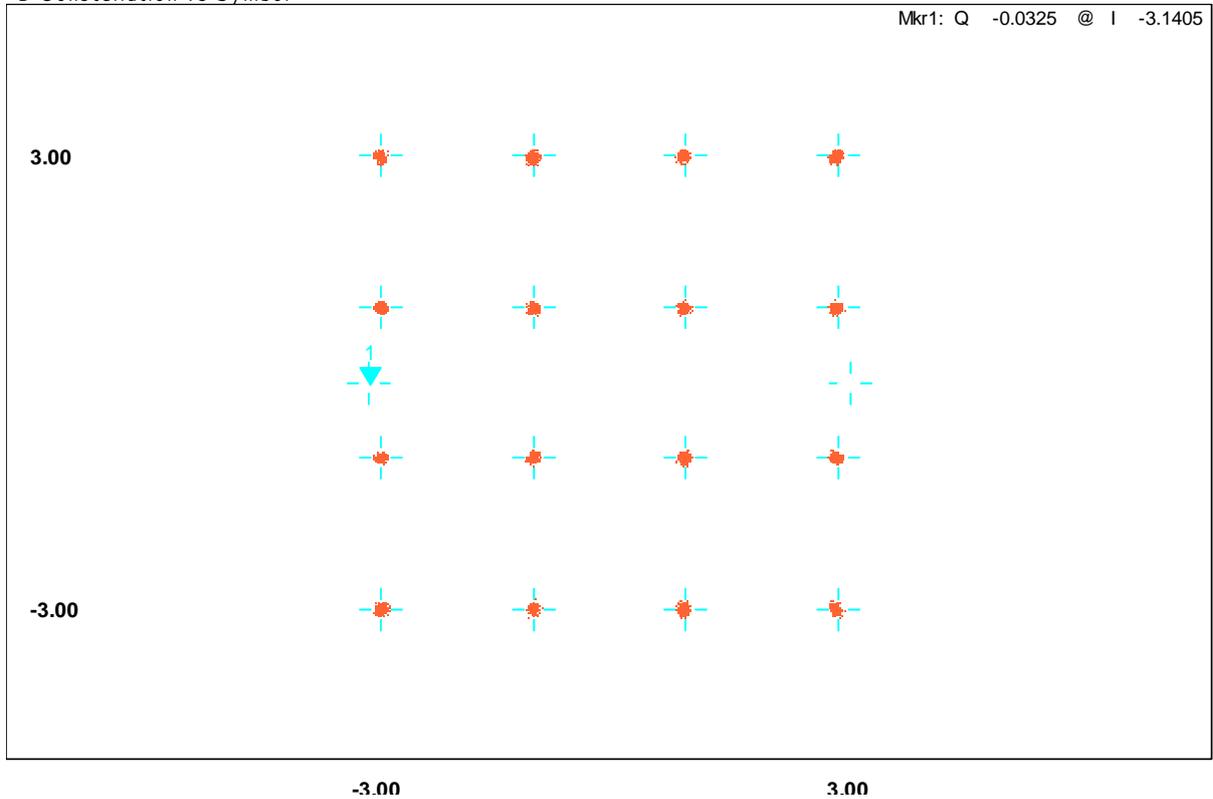
### 3) TM 3

### B

IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.501 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols

SINGLE TRG: POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:19:30

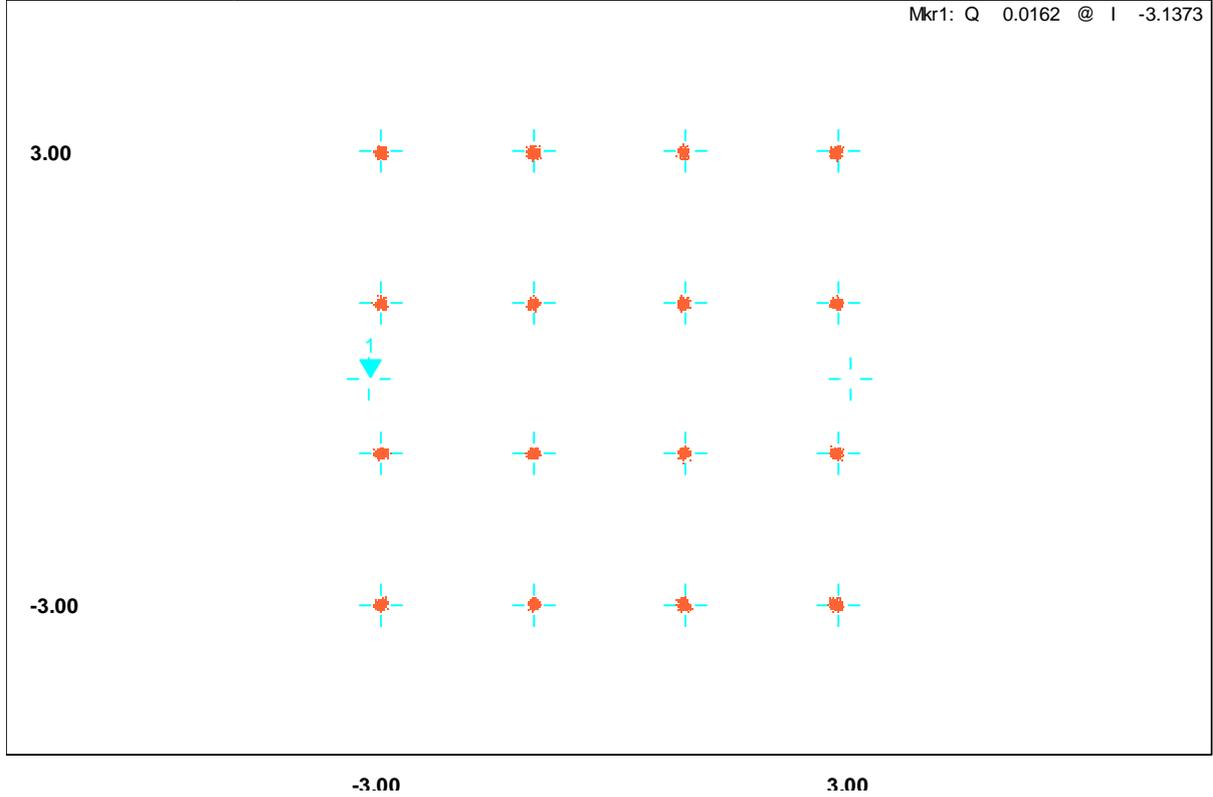


M



IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.593 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols
SINGLE	TRG : POWER	RF	

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:19:51





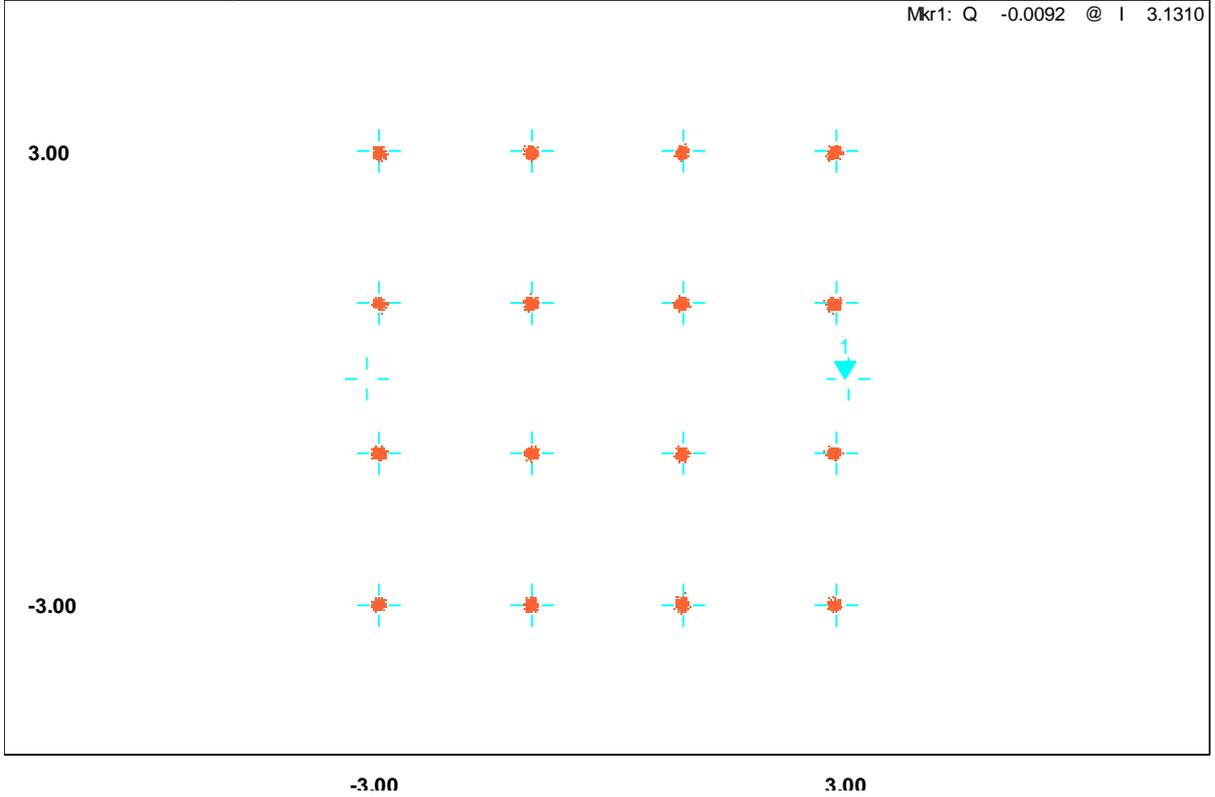
4) TM 4

B



IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.501 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols
SINGLE	TRG : POWER	RF	

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:20:34

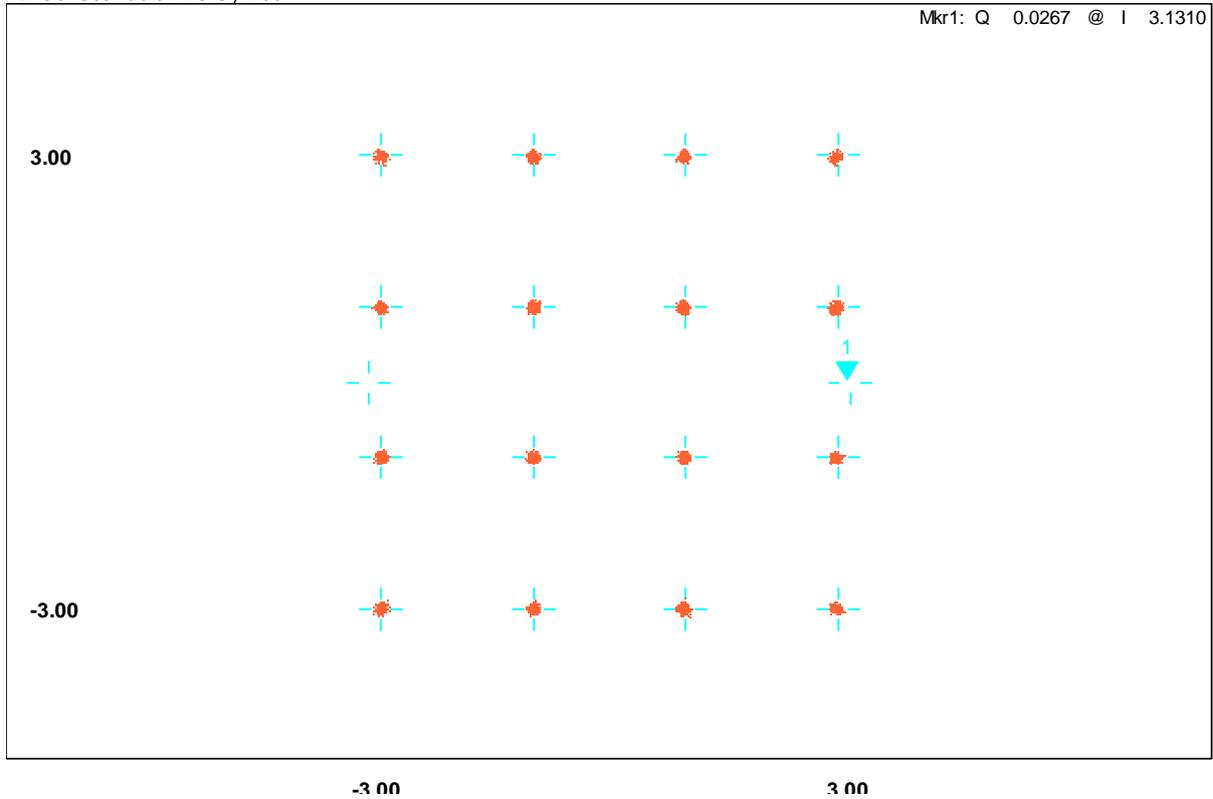


# M

IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.593 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 9.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols

SINGLE TRG : POWER RF

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:20:57

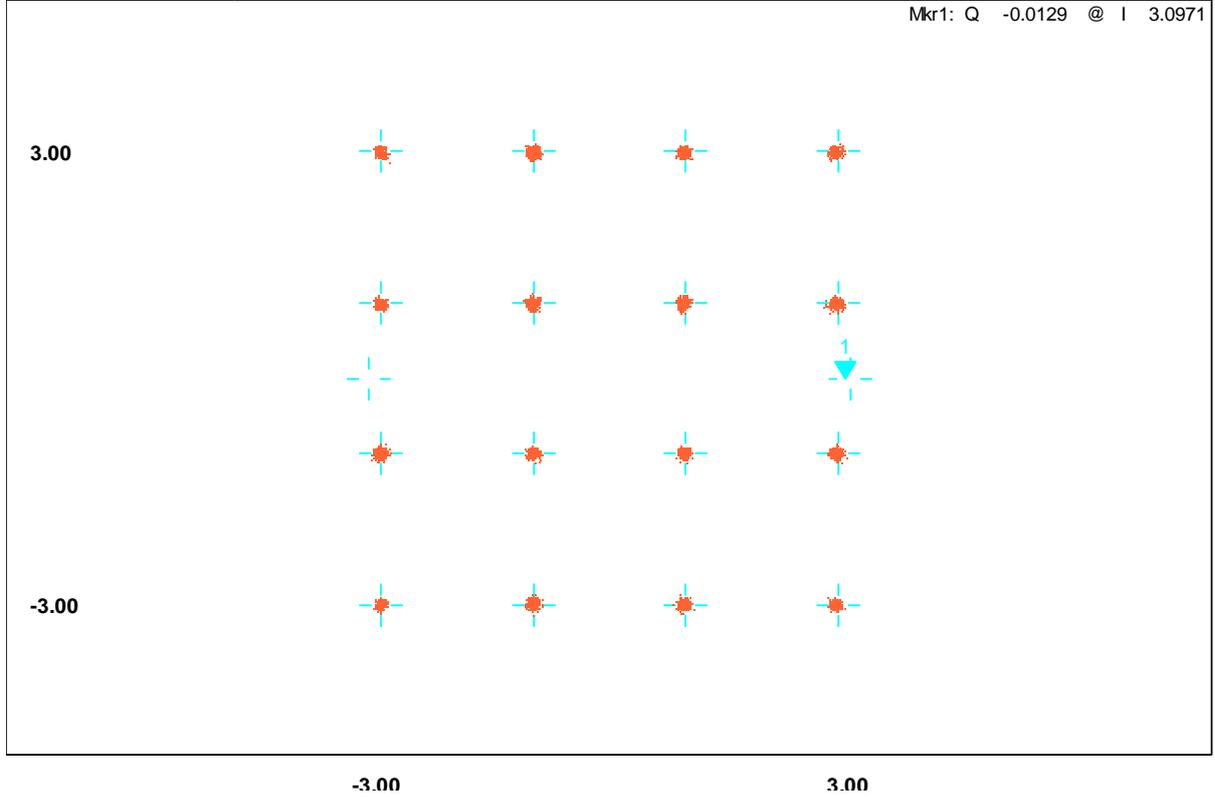


T



IEEE 802.16e-2005 OFDMA			
Frequency/Fs: 2.685 GHz / 11.2 MHz	Signal Lvl. Setting/Ext. Att: 7.1 dBm / 15.2 dB	Capture Time/No.Samples: 2.5 ms / 28001	
Seg=0, UL-PUSC, ID=A	1/1 (1)	Meas Setup: 1 TX x 1 RX	Zone Offset / Len: 0 / 12 Symbols
SINGLE	TRG : POWER	RF	

B Constellation vs Symbol



Measurement Complete

PO

Date: 9.MAR.2011 12:21:18



