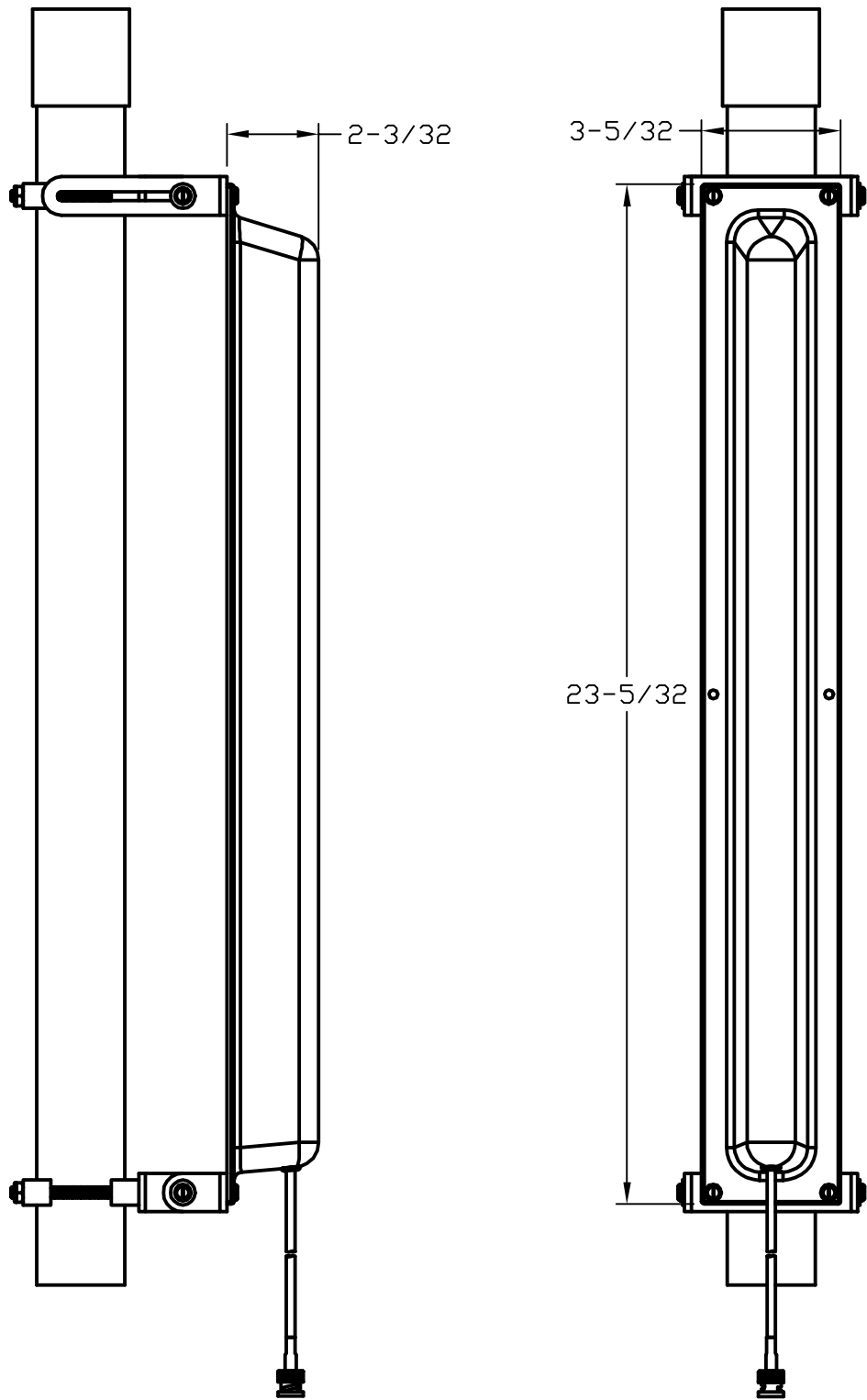




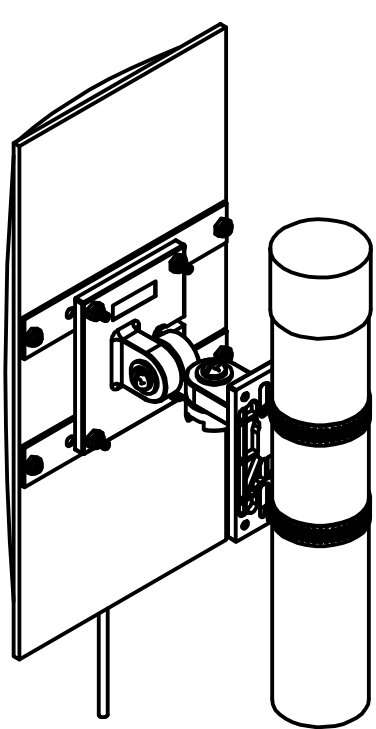
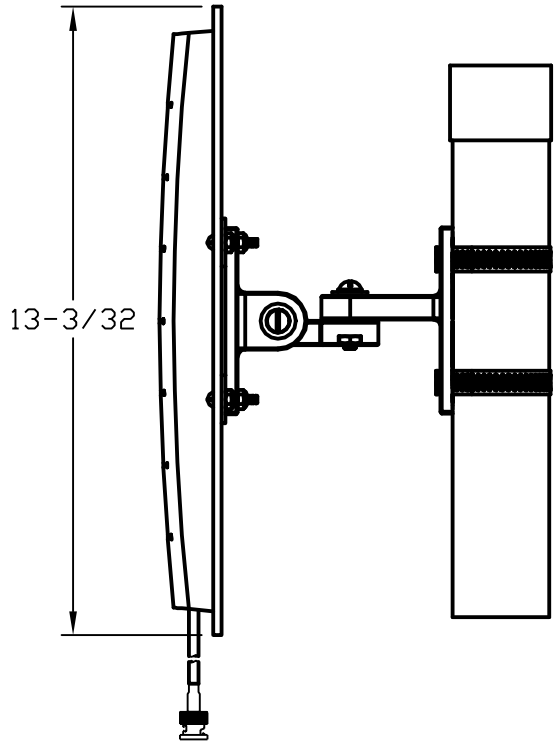
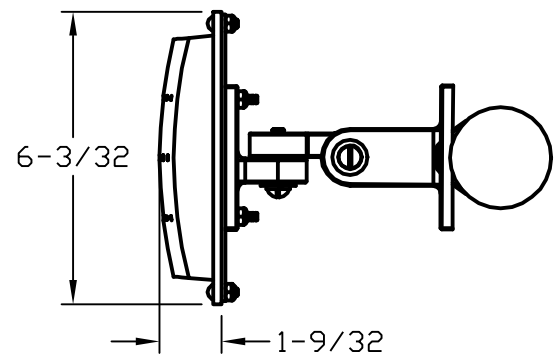
REVISION			
LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	10-15-02	SWJ
AB	ADDED MOUNTING HARDWARE & SYMBOL	12-24-02	AMA
PART NUMBER (ECR#1092)			

Parameter	Performance
Model Number	SR24120DS96RBN
Symbol Part Number	ML-2499-11PNA2-01
Frequency	2400-2500 MHz
Gain	11 dBi
Polarization	Linear, Vertical
VSWR	1.7:1 Typ.
Elevation Plane 3 dB Beamwidth	13°
Azimuth Plane 3 dB Beamwidth	120°
Front to Back Ratio	18 dB
Pigtail	96"
RF Connector	Reverse BNC
Power	50 W
Weight	1.5 lb

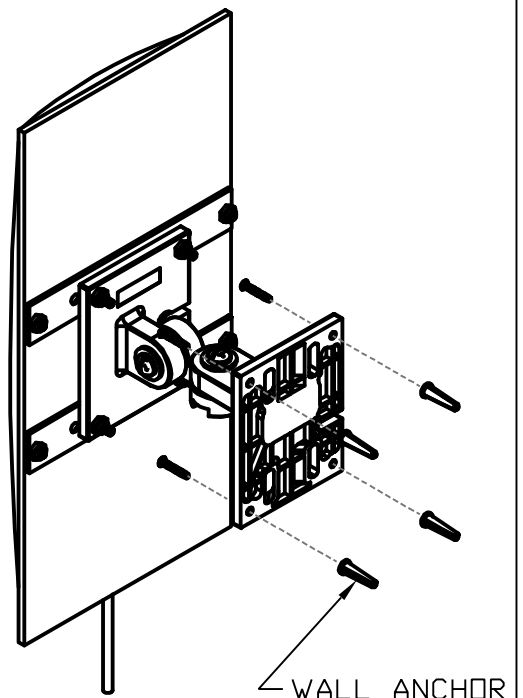
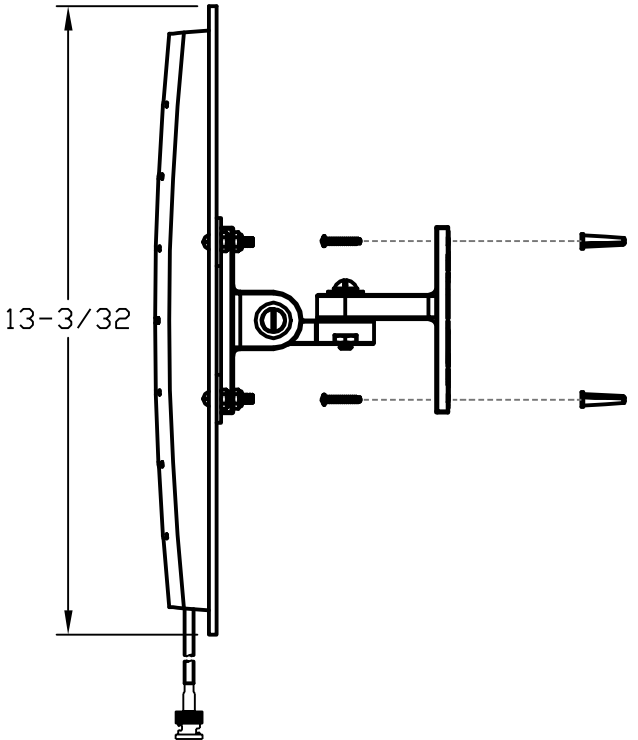
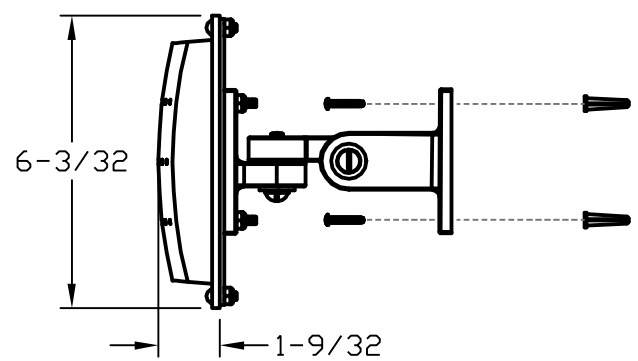
MOUNTING HARDWARE

QTY	Description	
8	#10-24 X 1/2" SS MS	
4	#10 SS FLAT WASHER	
8	#10-24 SS/NYLON HEX NUT	
4	1/4-20 SS/NYLON HEX NUT	
4	1/4-20 X 3-1/2" SS HH	
1	TILT MOUNT BRACKET #3	
2	TILT MOUNT BRACKET #1	
1	TILT MOUNT BRACKET #2	
4	V-BLOCK	

MATERIAL:	DRAWN S JOHNSON	DATE 10-15-02	CUSHCRAFT 48 PERIMETER ROAD MANCHESTER NH. 03108	
	ENGINEER B MATTIS	DATE 10-18-02		
DO NOT SCALE DRAWING	ENGINEERING MGR A ALEVY	DATE 10-18-02	TITLE: SR24120DS96RBN MOUNTING & OUTLINE	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: ANGLES ± 0.5° FRACTIONS ± 1/64" .XX ± 0.010" .XXX ± 0.005"	FINISH:	DRAWING NO. SR24120DS96RBNMO		REV AB
		SCALE 1:4	SIZE B	SHEET 1 OF 1



MAST MOUNT
CONFIGURATION



WALL MOUNT
CONFIGURATION

REVISION			
LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	10-14-02	SWJ
AB	ADDED MOUNTING HARDWARE & SYMBOL	12-23-02	AMA
PART NUMBER (ECR#1092)			

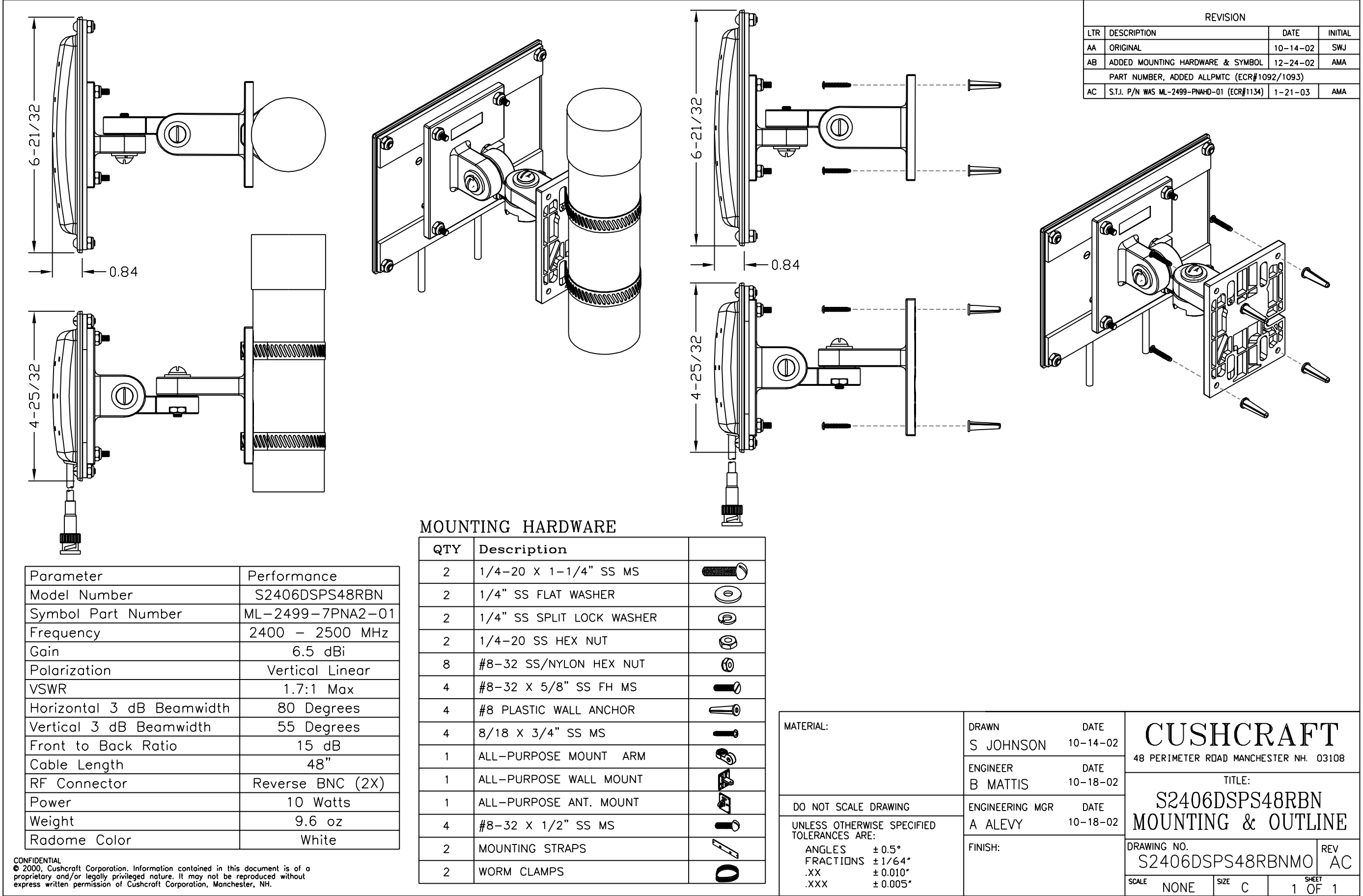
Parameter	Performance
Model No.	S24012PS96RBN
Symbol Part Number	ML-2499-12PNA2-01
Frequency	2400-2500 MHz
Gain	12 dBi
Polarization	Vertical Linear
VSWR	1.7:1 Typ.
Azimuth Plane 3 dB Beamwidth	65°
Elevation Plane 3 dB Beamwidth	25°
Front to Back Ratio	25 dB
Cable Length	96"
RF Connector	Reverse BNC
Power	50 Watts
Weight	1.6 lb

MOUNTING HARDWARE

QTY	Description	
2	1/4-20 X 1-1/4" SS MS	
2	1/4" SS FLAT WASHER	
2	1/4" SS SPLIT LOCK WASHER	
2	1/4-20 SS HEX NUT	
8	#8-32 SS/NYLON HEX NUT	
4	#8-32 X 5/8" SS FH MS	
4	#8 PLASTIC WALL ANCHOR	
4	8/18 X 3/4" SS MS	
1	ALL-PURPOSE MOUNT ARM	
1	ALL-PURPOSE WALL MOUNT	
1	ALL-PURPOSE ANT. MOUNT	
4	#8-32 X 1/2" SS MS	
2	MOUNTING STRAPS	
2	WORM CLAMPS	

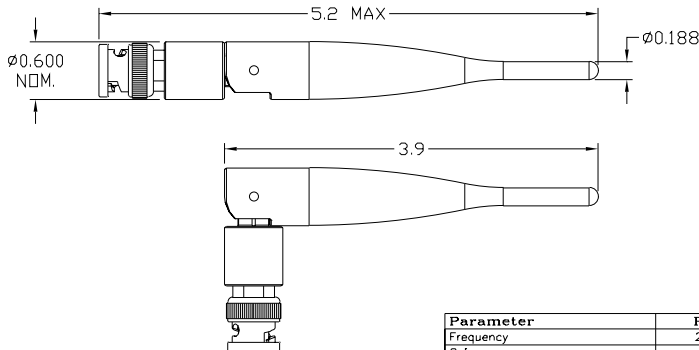
MATERIAL:	DRAWN S JOHNSON	DATE 10-14-02	CUSHCRAFT 48 PERIMETER ROAD MANCHESTER NH. 03108	
	ENGINEER B MATTIS	DATE 10-18-02		
DO NOT SCALE DRAWING	ENGINEERING MGR A ALEVY	DATE 10-18-02	TITLE: S24012PS96RBN MOUNTING & OUTLINE	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: ANGLES ± 0.5° FRACTIONS ± 1/64" .XX ± 0.010" .XXX ± 0.005"	FINISH:	DRAWING NO. S24012PS96RBNMO		REV AB
		SCALE 1:4	SIZE B	SHEET 1 OF 1

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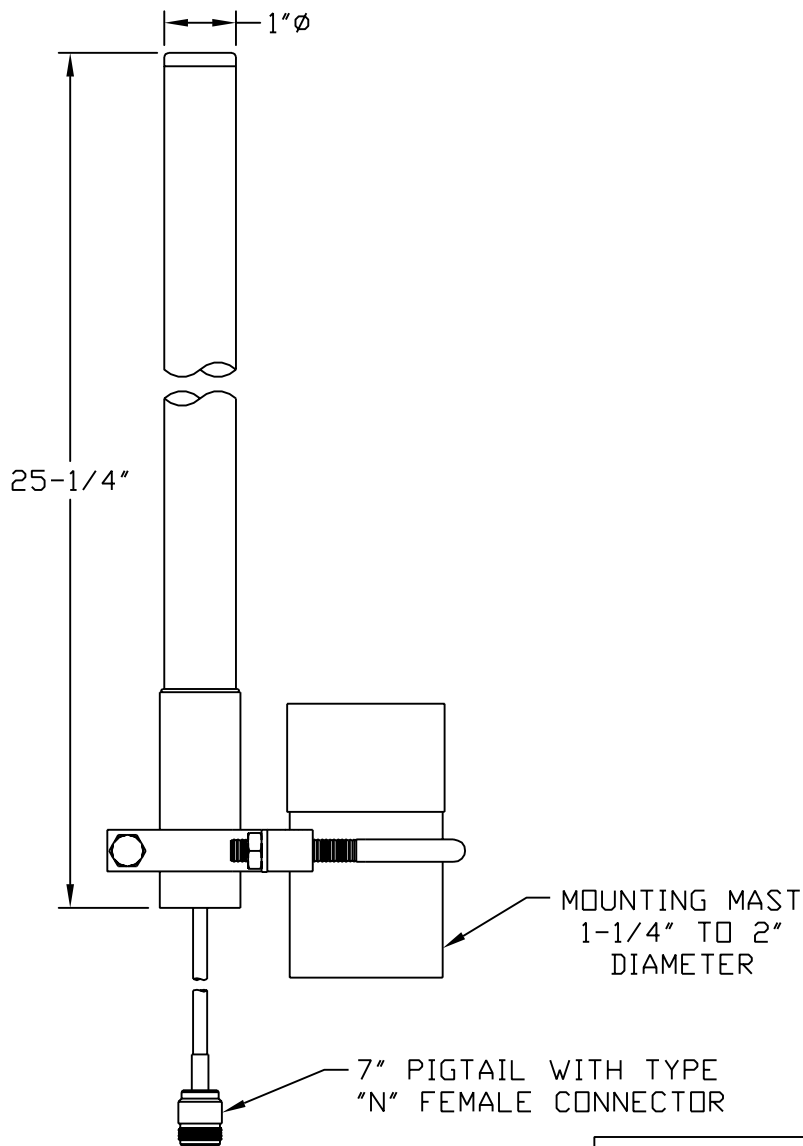
REVISION			
LTR	DESCRIPTION	DATE	INITIAL
A	ORIGINAL	8-21-01	SWJ



Parameter	Performance
Frequency	2400-2500 MHz
Gain	2 dBi Nom.
Polarization	Linear
VSWR	1.5:1
RF Connector	Reversed Polarized BNC
Power	2 Watts
Color	Black
Pivot Lock Position	0°, 90°
Material	Housing to be manufactured from injection molded plastic

MATERIAL:	DRAWN S JOHNSON	DATE 8-21-01	CUSHCRAFT 48 PERIMETER ROAD MANCHESTER NH. 03108	
	ENGINEER	DATE		
	DO NOT SCALE DRAWING	ENGINEERING MGR	DATE	TITLE: OMNI ANTENNA 2 dBi, 2400-2500 MHz
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: ANGLES $\pm 0.5^\circ$ FRACTIONS $\pm 1/64"$.XX $\pm 0.010"$.XXX $\pm 0.005"$	FINISH:		DRAWING NO. E03727	REV A
	SCALE 1:1	SIZE A	SHEET 1 OF 1	

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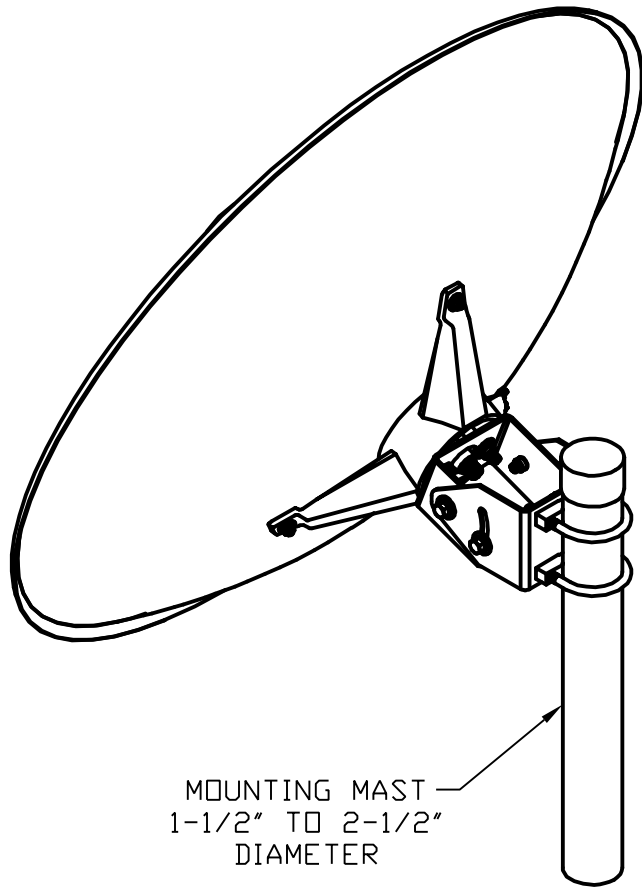
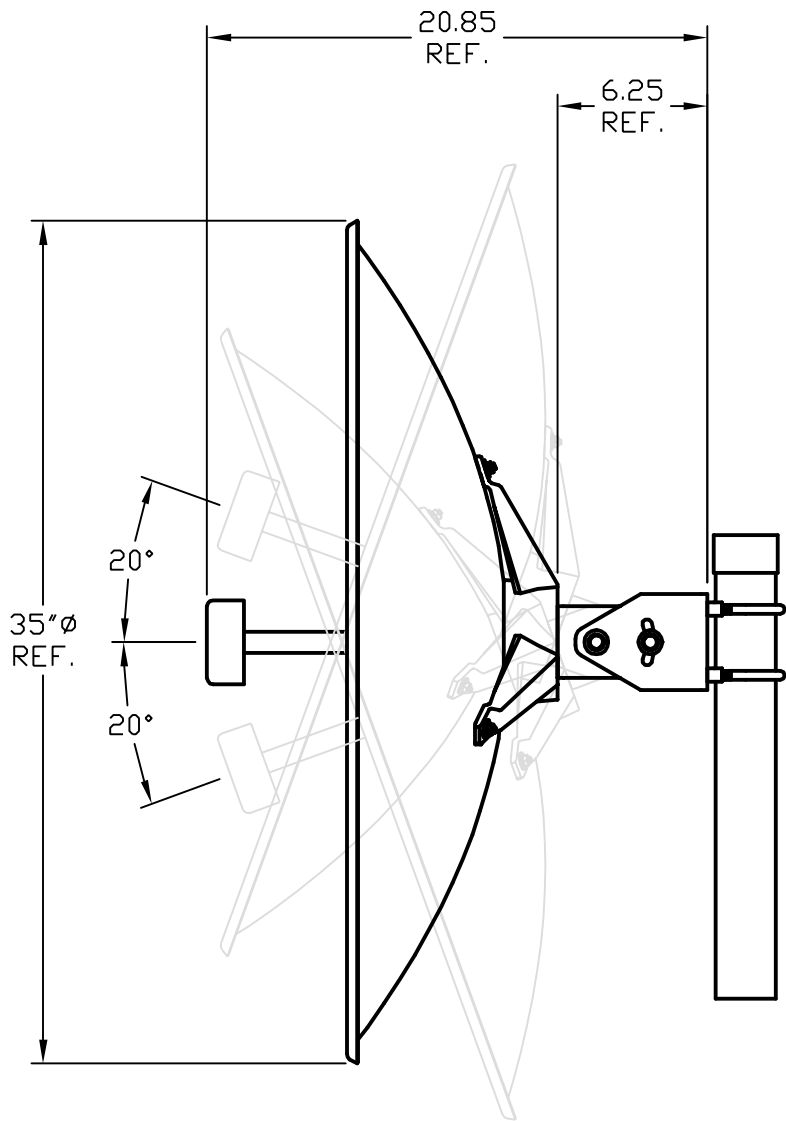
REVISION			
LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	10-14-02	SWJ
AB	ADDED MOUNTING HARDWARE & SYMBOL	12-23-02	AMA
PART NUMBER (ECR#1092)			

Parameter	Performance
Model Number	S2406BPS7NF
Symbol Part Number	ML-2499-BMMA1-01
Frequency	2400-2500 MHz
Gain	7 dBi
Polarization	Linear Vertical
VSWR	1.5:1
Elevation Plane 3 dB Beamwidth	12 Degrees
Pigtail	7" Cable
RF Connector	Type N Female
Power	50 Watts
Weight	0.5 Lb

MOUNTING HARDWARE

QTY	Description	
1	1/4 SS SPLIT LOCK WASHER	
1	1/4-20 SS HEX NUT	
1	1/4-20 X 3/4" SS HH	
2	5/16 SS SPLIT LOCK WASHER	
2	5/16-18 SS HEX NUT	
1	5/16-18 U-BOLT	
1	V-CLAMP	

MATERIAL:	DRAWN S JOHNSON	DATE 10-14-02	CUSHCRAFT 48 PERIMETER ROAD MANCHESTER NH. 03108	
	ENGINEER B MATTIS	DATE 10-18-02		
	DO NOT SCALE DRAWING	ENGINEERING MGR A ALEVY	DATE 10-18-02	TITLE: S2406BPS7NF MOUNTING & OUTLINE
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		FINISH:	DRAWING NO. S2406BPS7NFM0	REV AB
ANGLES ± 0.5° FRACTIONS ± 1/64" .XX ± 0.010" .XXX ± 0.005"			SCALE NONE	SIZE A
			SHEET 1 OF 1	



Parameter	Performance
Model Number	S24024PDSNF
Symbol Part Number	ML-2499-BPDA1-01
Frequency	2.40-2.50 GHz
Gain	23.5 dBi Min
Polarization	Linear, Vertical or Horizontal
VSWR	1.5:1 Max
HPBW, E-Plane	10°
HPBW, H-Plane	10°
Front to Back Ratio	35 dB
RF Power	50 W
RF Connector	N Female
Weight W/Mounting Hardware	13 lb
Wind Survival	120 mph (193 kph)

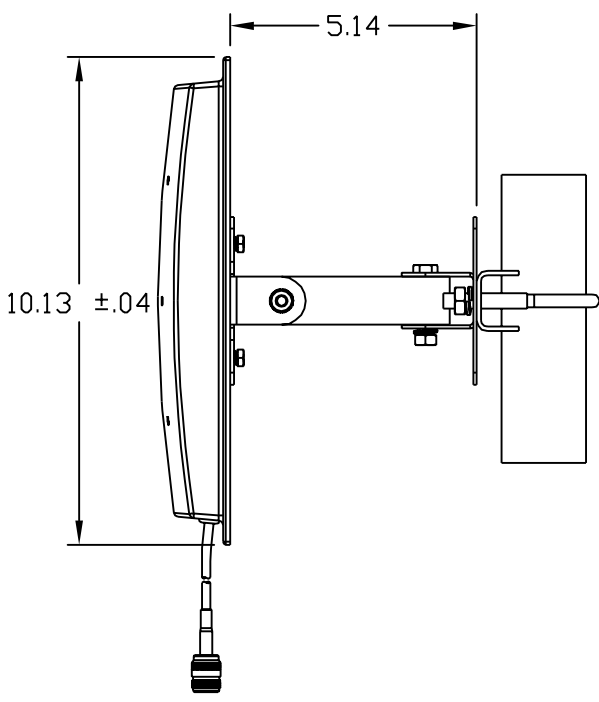
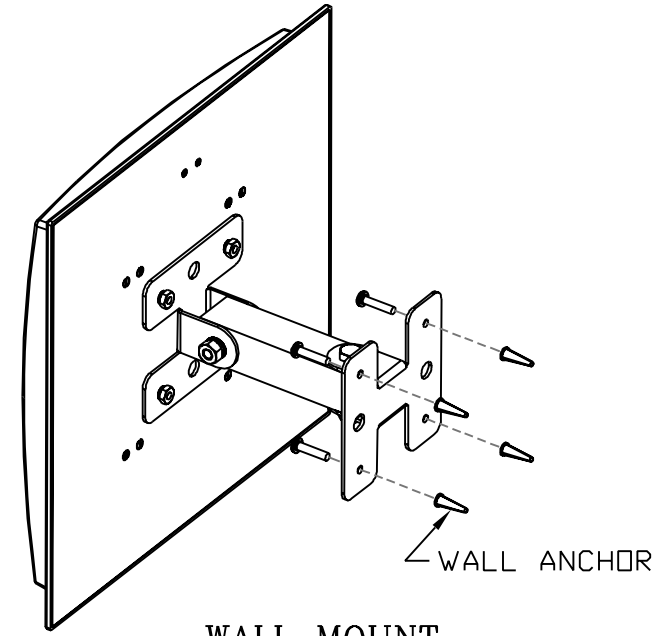
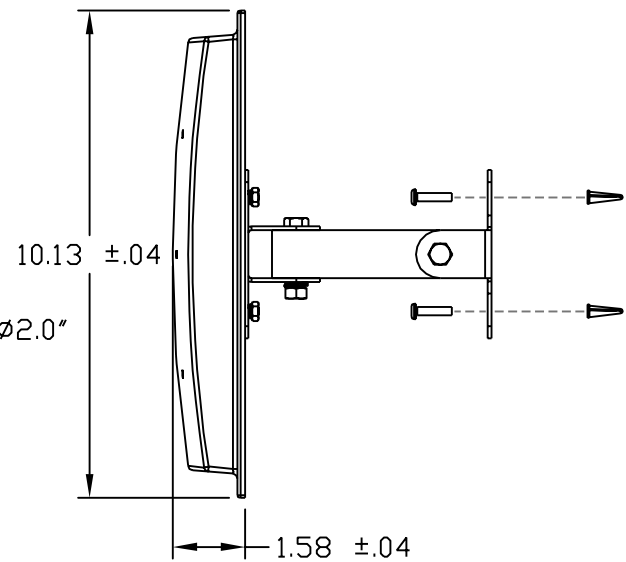
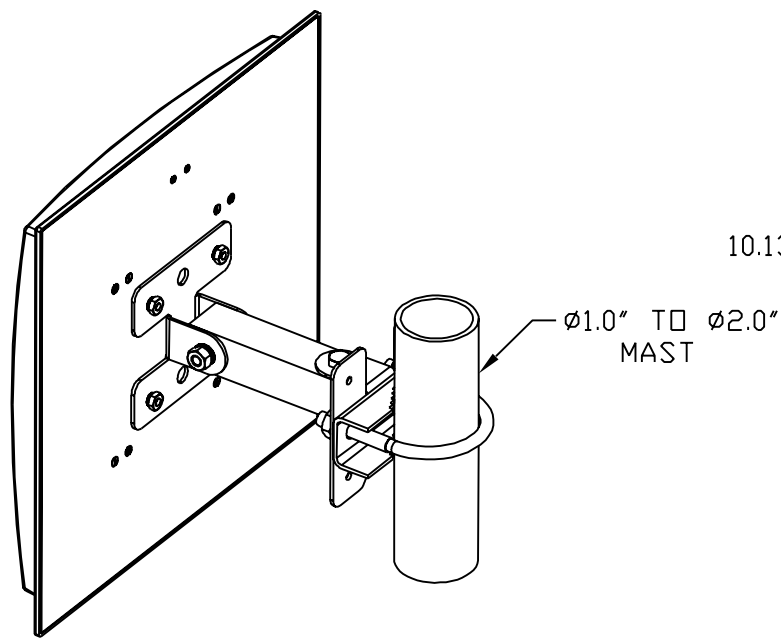
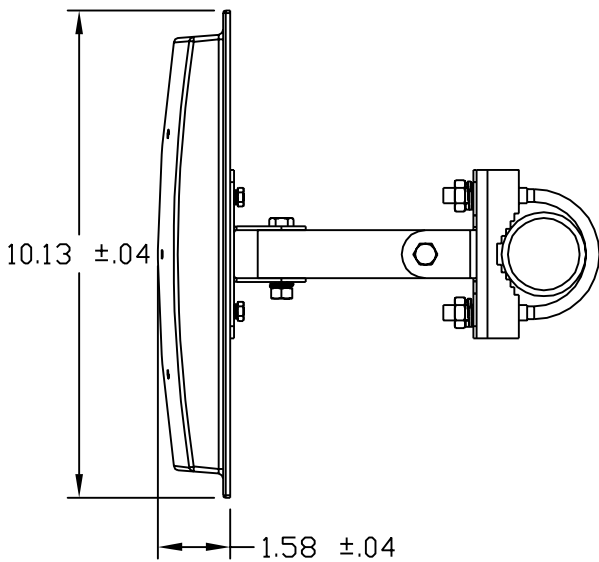
REVISION			
LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	10-14-02	SWJ
AB	ADDED MOUNTING HARDWARE & SYMBOL	12-23-02	AMA
PART NUMBER (ECR#1092)			

MOUNTING HARDWARE

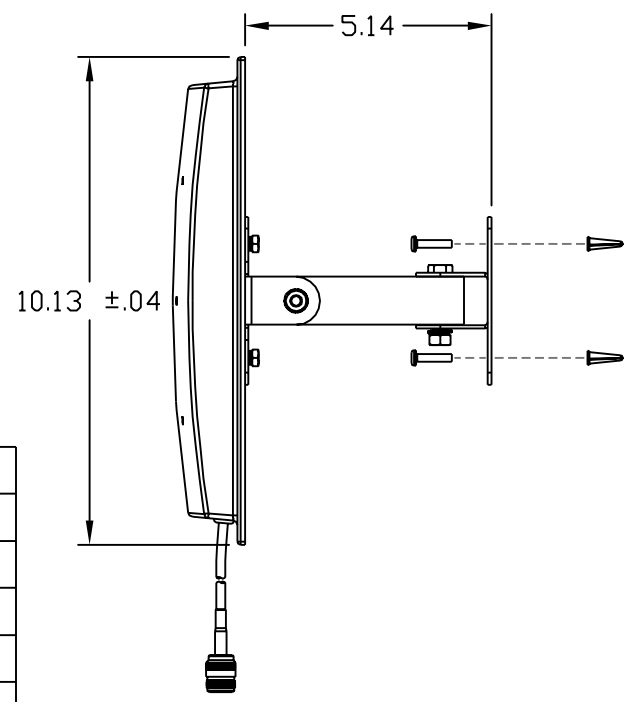
QTY	Description	
1	DISH W/BACK STRUCTURE	
1	FEED ASSEMBLY	
4	1/4-20 X 3/4" SS MS	
4	1/4" SS SPLIT LOCK WASHER	
4	1/4" SS FLAT WASHER	
2	3/8-16 X 2-3/4" CARRIAGE BOLT	
2	AL SPACER	
2	3/8" FLAT WASHER	
2	3/8" SPLIT LOCK WASHER	
2	3/8-16 HEX NUT	
8	3/8" SS FLAT WASHER	
8	3/8" SS SPLIT LOCK WASHER	
4	3/8-16 SS HEX NUT	
4	3/8-16 X 1" SS HH	
2	3/8-16 U-BOLT	
2	V-BLOCK	
1	MOUNTING BRACKET	
1	PIVOT BRACKET	

MATERIAL:	DRAWN S JOHNSON	DATE 10-14-02	CUSHCRAFT 48 PERIMETER ROAD MANCHESTER NH. 03108		
	ENGINEER B MATTIS	DATE 10-18-02			
	DO NOT SCALE DRAWING	ENGINEERING MGR A ALEVY	DATE 10-18-02	TITLE: S24024PDSNF MOUNTING & OUTLINE	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: ANGLES ± 0.5° FRACTIONS ± 1/64" .XX ± 0.010" .XXX ± 0.005"	FINISH:		DRAWING NO. S24024PDSNFM0		REV AB
	SCALE	NONE	SIZE	B	SHEET 1 OF 1

REVISION			
LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	9-17-02	SWJ
AB	ADDED MOUNTING HARDWARE & SYMBOL	12-23-02	AMA
PART NUMBER (ECR#1092)			
AC	10.13±.04 WAS 10-5/32, 1.58±.04	2-11-03	AMA
WAS 1-1/2 (ECR#1166)			



MAST MOUNT
CONFIGURATION



WALL MOUNT
CONFIGURATION

MOUNTING HARDWARE

QTY	Description	
2	1/4" SS SPLIT LOCK WASHER	
2	1/4-20 SS HEX NUT	
2	1/4-20 X 1-1/2" SS HH	
4	#8 SS SPLIT LOCK WASHER	
4	#8-32 SS HEX NUT	
4	#8 PLASTIC WALL ANCHOR	
4	8/18 X 3/4" SS MS	
1	EXTENSION TUBE	
2	ARTICULATING MOUNT	
1	MAST CLAMP	
1	5/16-18 U-BOLT	
2	5/16 SS SPLIT LOCK WASHER	
2	5/16-18 SS HEX NUT	

Parameter	Performance
Model Number	S24014PS12NF
Symbol Part Number	ML-2499-BPNA3-01
Frequency	2400-2500 MHz
Gain	14.5 dBi Min.
Polarization	Linear, Vertical
VSWR	1.5:1
H Plane 3 dB Beamwidth	31°
E Plane 3 dB Beamwidth	29°
Front to Back Ratio	24 dB
Pigtail	12" Black Ultralink
RF Connector	Type N female
Power	50 Watts
Weight (Antenna Only)	1.5 lbs
Mounting Hardware	Zinc Plated Steel

MATERIAL:

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
ANGLES ± 0.5°
FRACTIONS ± 1/64"
.XX ± 0.010"
.XXX ± 0.005"

DRAWN
S JOHNSON

ENGINEER
J MORROW

ENGINEERING MGR
A ALEVY

FINISH:

DATE
9-17-02

DATE
9-30-02

DATE
9-30-02

CUSHCRAFT

48 PERIMETER ROAD MANCHESTER NH. 03108

TITLE:
S24014PS12NF
MOUNTING & OUTLINE

DRAWING NO.
S24014PS12NFM0

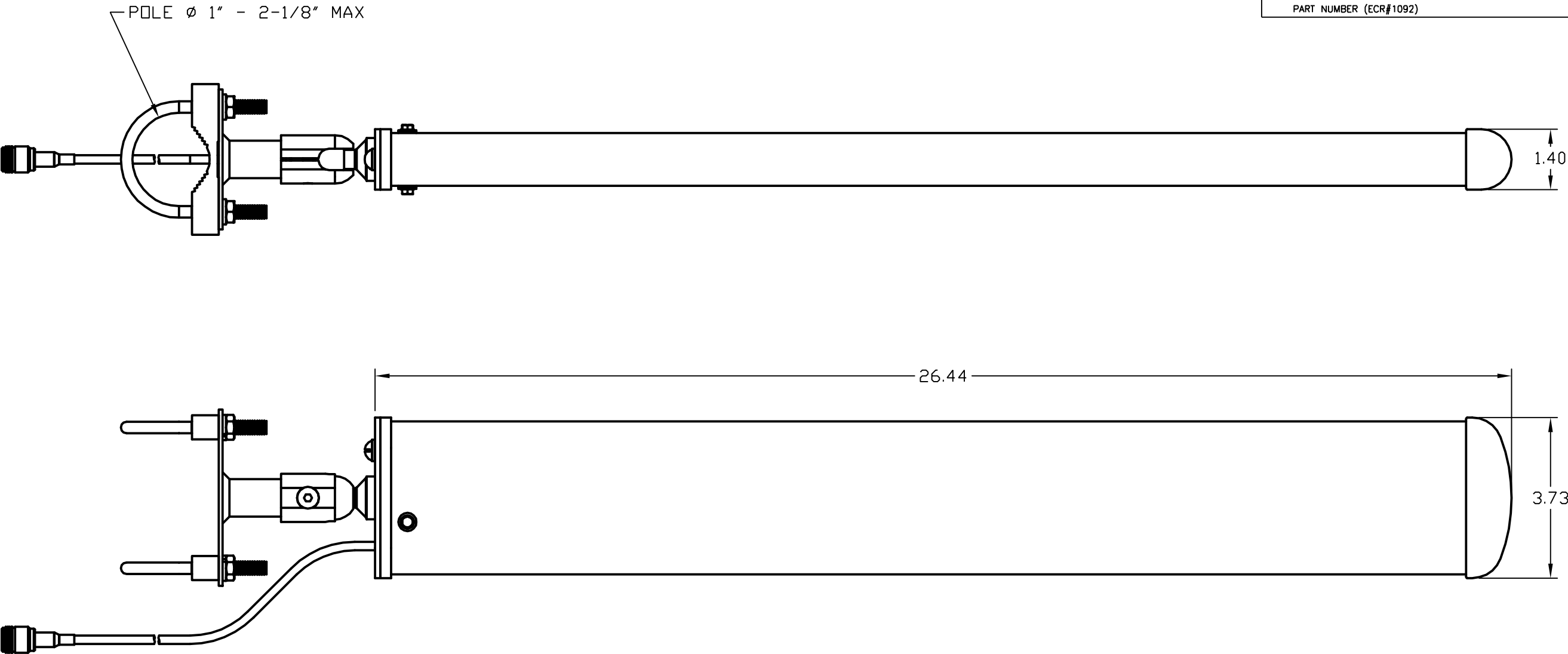
REV
AC

SCALE
1:4

SIZE
B

SHEET
1 OF 1

REVISION			
LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	10-16-02	SWJ
AB	ADDED MOUNTING HARDWARE & SYMBOL	12-23-02	AMA
PART NUMBER (ECR#1092)			



MOUNTING HARDWARE

QTY	Description	
4	5/16 SS SPLIT LOCK WASHER	
4	5/16-18 SS HEX NUT	
2	5/16-18 U-BOLT	
2	V-BLOCK	
1	UNIVERSAL MOUNT	

Parameter	Performance
Model No.	PC2415SNA
Symbol Part Number	ML-2499-BYGA2-01
Frequency	2400-2500 MHz
Gain	13.9 dBi
Polarization	Linear
VSWR	1.5:1 Max.
E-Plane 3 dB Beamwidth	30 Deg.
H-Plane 3 dB Beamwidth	34 Deg.
Front to Back Ratio	18 dB
Cable Length	12"
RF Connector	Type N (f)
Power	50 W
Weight	1.25 lb

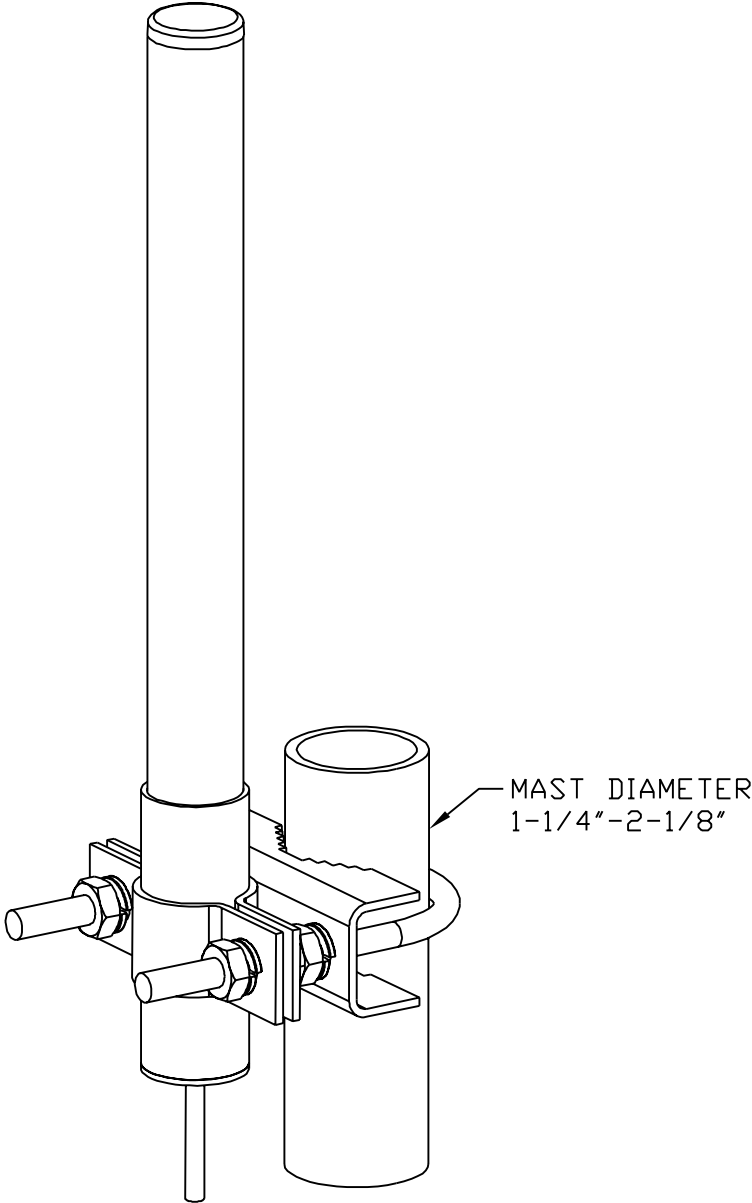
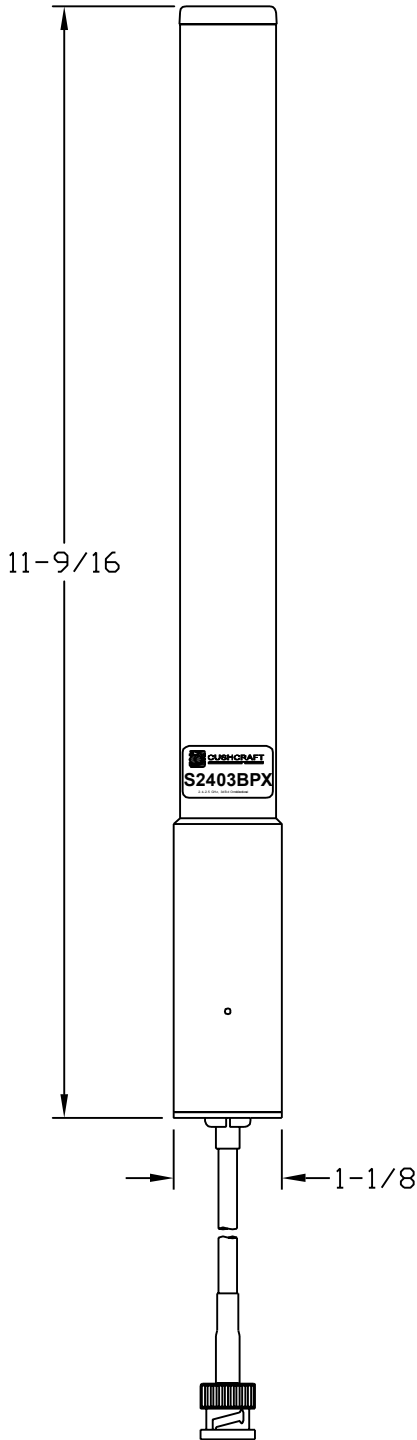
MATERIAL:	DRAWN S JOHNSON	DATE 10-16-02	CUSHCRAFT 48 PERIMETER ROAD MANCHESTER NH. 03108	
	ENGINEER B MATTIS	DATE 10-18-02		
DO NOT SCALE DRAWING	ENGINEERING MGR A ALEVY	DATE 10-18-02	TITLE: PC2415SNA MOUNTING & OUTLINE	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: ANGLES ± 0.5° FRACTIONS ± 1/64" .XX ± 0.010" .XXX ± 0.005"	FINISH:	DRAWING NO. PC2415SNAMO		REV AB
		SCALE NONE	SIZE B	SHEET 1 OF 1

REVISION			
LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	9-17-02	SWJ
AB	ADDED MOUNTING HARDWARE & SYMBOL	12-23-02	AMA
PART NUMBER (ECR#1092)			

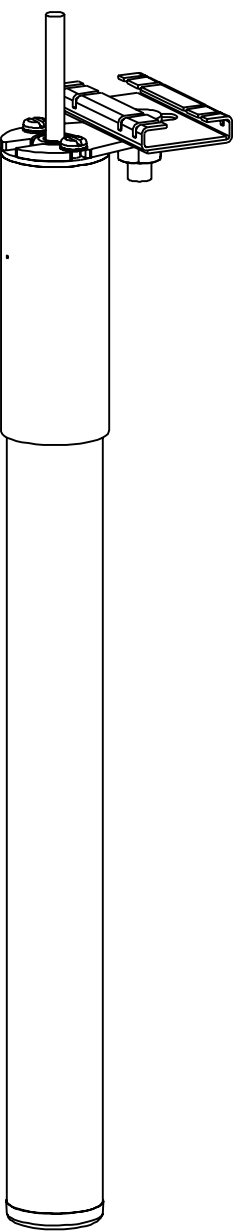
Parameter	Performance
Model Number	S2403BPXS48RBN
Symbol Part Number	ML-2499-HPA3-01
Frequency	2400-2500 MHz
Gain	3 dBd
Polarization	Linear Vertical
VSWR	1.7:1
Elevation Plane 3 dB Beamwidth	31 Degrees
Azimuth Plane 3 dB beamwidth	Omnidirectional
Pigtail	48" CMP Plenum Cable
RF Connector	Reverse BNC
Power	50 Watts
Weight (Antenna)	0.3 lb

MOUNTING HARDWARE

QTY	Description	
1	CEILING MOUNT ADAPTOR PLATE	
2	#6-32 X 1/4" SS SCREW	
2	#6 INT. TOOTH LOCK WASHER	
1	1/4" INT. TOOTH LOCK WASHER	
1	CEILING HANGER BRACKET	
1	5/16-18 U-BOLT	
4	5/16" SS LOCK WASHER	
6	5/16-18 SS HEX NUT	
2	OMNI CLAMP	
1	MAST CLAMP	

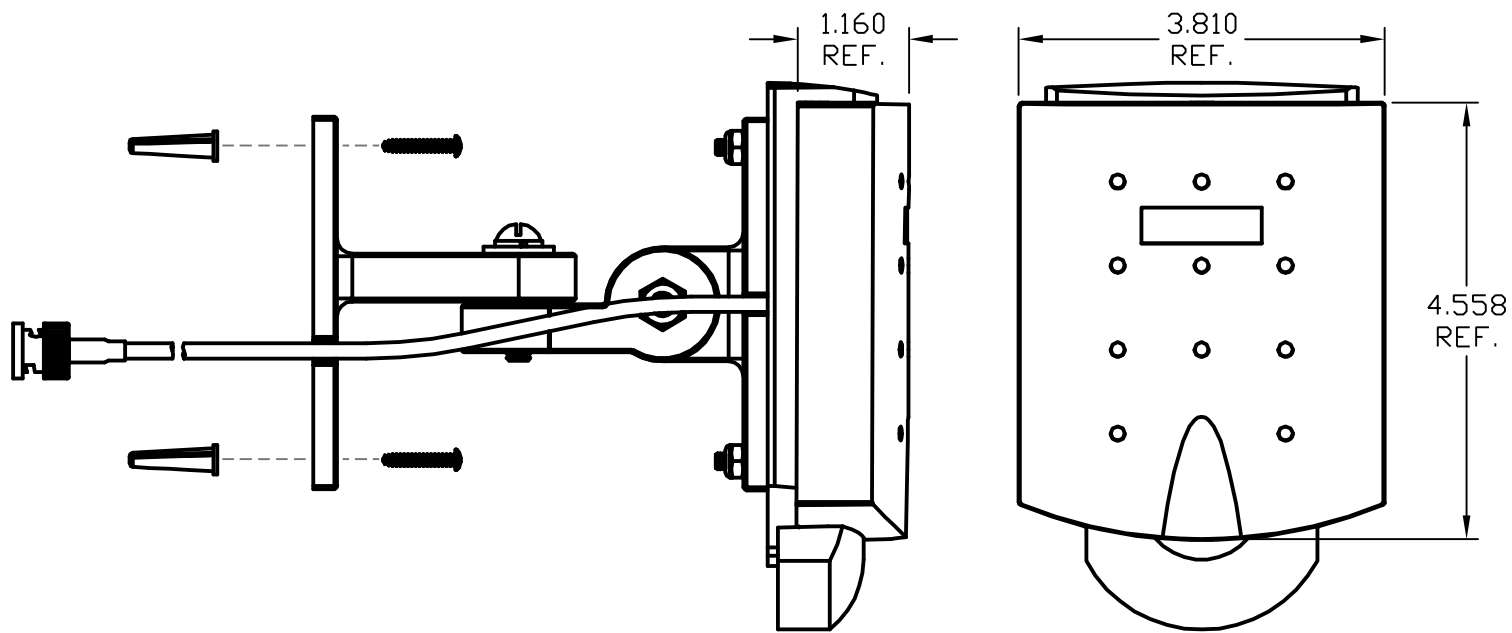
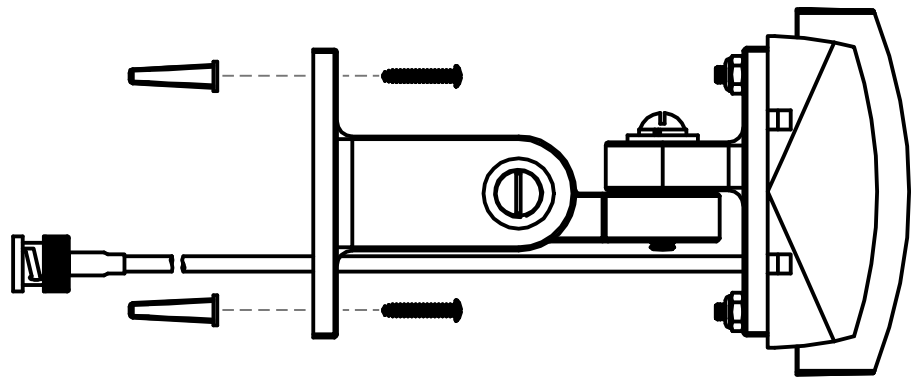


MAST MOUNT
CONFIGURATION



CEILING MOUNT CONFIGURATION
(INDOOR ONLY)

MATERIAL:	DRAWN S JOHNSON	DATE 9-17-02	CUSHCRAFT 48 PERIMETER ROAD MANCHESTER NH. 03108	
	ENGINEER R LITTLEFIELD	DATE 9-23-02		
DO NOT SCALE DRAWING	ENGINEERING MGR A ALEVY	DATE 9-23-02	TITLE: S2403BPXS48RBN MOUNTING & OUTLINE	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: ANGLES ± 0.5° FRACTIONS ± 1/64" .XX ± 0.010" .XXX ± 0.005"	FINISH:	DRAWING NO. S2403BPXS48RBNMO		REV AB
		SCALE 1:2	SIZE B	SHEET 1 OF 1



REVISION			
LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	10-15-02	SWJ
AB	ADDED MOUNTING HARDWARE & SYMBOL	12-23-02	AMA
PART NUMBER (ECR#1092)			
AC	S.T.I. P/N WAS ML-2499-7PNA2-01 (ECR#1134)	1-21-03	AMA

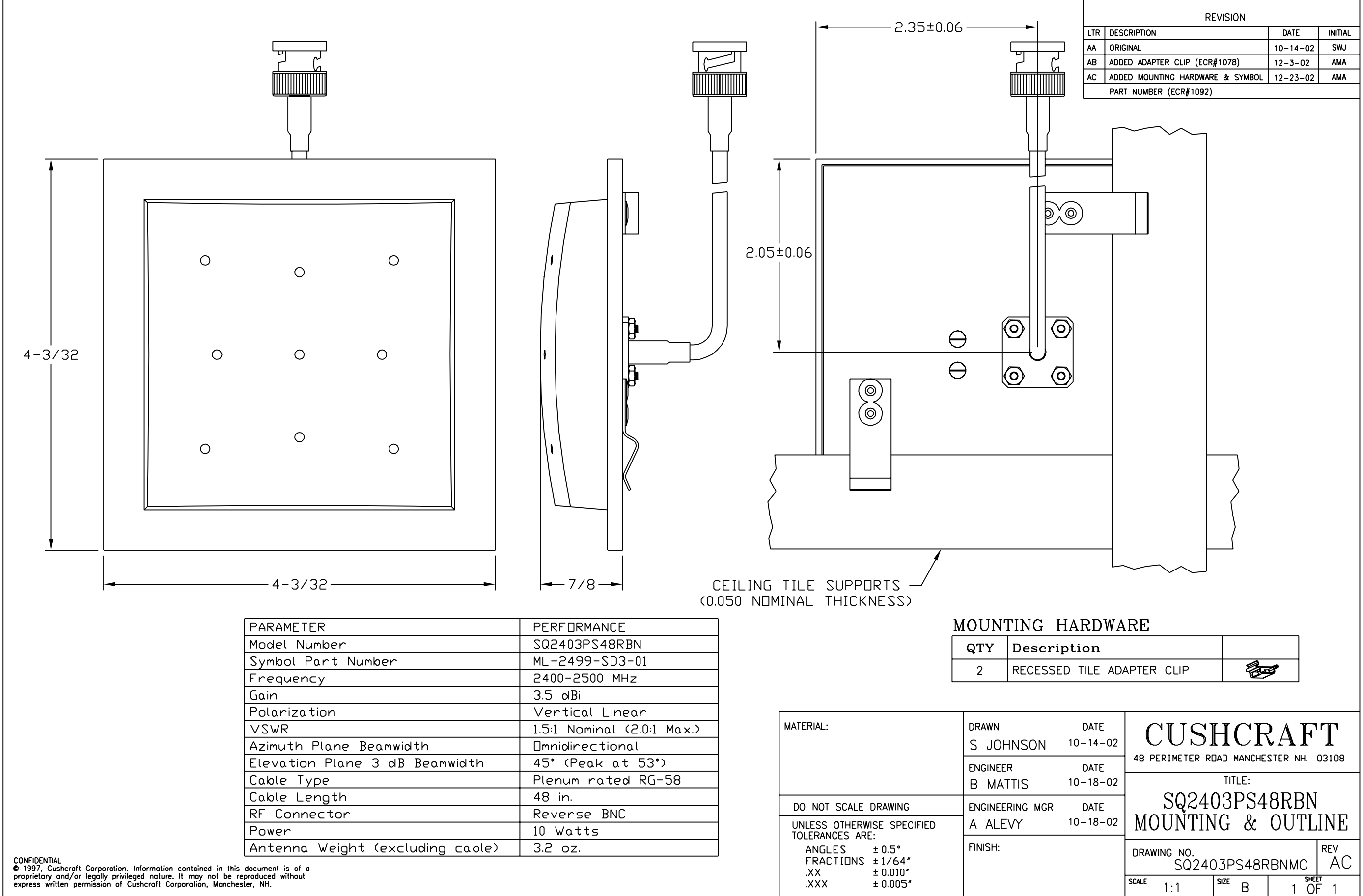
MOUNTING HARDWARE

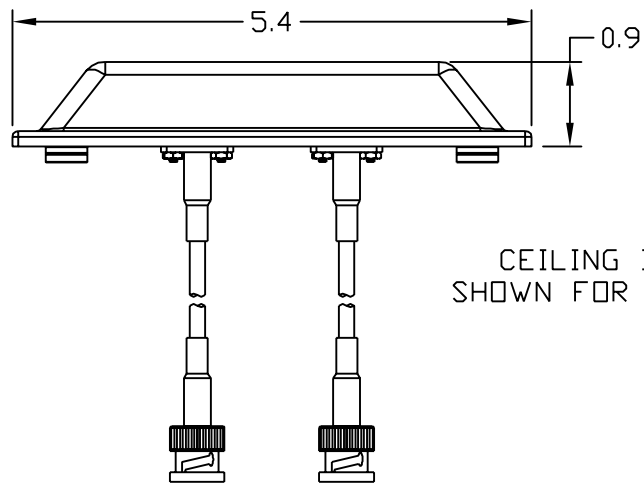
QTY	Description	
2	1/4-20 X 1-1/4" SS MS	
2	1/4" SS FLAT WASHER	
2	1/4" SS SPLIT LOCK WASHER	
2	1/4-20 SS HEX NUT	
4	#8-32 SS/NYLON HEX NUT	
4	#8-32 X 5/8" SS MS	
4	#8 PLASTIC WALL ANCHOR	
4	8/18 X 3/4" SS MS	
1	ALL-PURPOSE MOUNT ARM	
1	ALL-PURPOSE WALL MOUNT	
1	ALL-PURPOSE ANT. MOUNT	
1	WALL MOUNT	
1	WALL MOUNT SKIRT	

Parameter	Performance
Model No.	S2407MPAS48RBN
Symbol Part Number	ML-2499-PNAHD-01
Frequency	2400-2500 Mhz
Gain	7.5 dBi
Polarization	Linear, Vertical
VSWR	1.7:1 Typ.
Azimuth Plane 3 dB Beamwidth	65°
Elevation Plane 3 dB Beamwidth	50°
Front to Back Ratio	12 dB
Cable Length	48"
RF Connector	Reverse BNC
Power	50 W
Weight	0.5 lb

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MATERIAL:	DRAWN S JOHNSON	DATE 10-15-02	CUSHCRAFT 48 PERIMETER ROAD MANCHESTER NH. 03108	
	ENGINEER B MATTIS	DATE 10-18-02		
	DO NOT SCALE DRAWING	ENGINEERING MGR A ALEVY	DATE 10-18-02	TITLE: S2407MPAS48RBN MOUNTING & OUTLINE
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: ANGLES ± 0.5° FRACTIONS ± 1/64" .XX ± 0.010" .XXX ± 0.005"		DRAWING NO. S2407MPAS48RBNMO		REV AC
		SCALE 1:2	SIZE B	SHEET 1 OF 1





CEILING BRACKET
SHOWN FOR REFERENCE

MOUNTING HARDWARE

QTY	Description	
2	RECESSED TILE ADAPTER CLIP	

PARAMETER	PERFORMANCE
Model Number	S2402DSS48RBN
Symbol Part Number	ML-2499-SDD1-01
Frequency	2400-2500 MHz
Gain	2 dBi
Polarization	Vertical Linear
VSWR	1.7:1 Typ.
Azimuth Plane Beamwidth	Omni Directional
Elevation Plane 3 dB Beamwidth	80°
Cable Length	48"
RF Connectors	Reverse BNC (2X)
Power	5 Watts
Antenna Weight	0.4 lbs (0.18 kg)
Radome Color	White
Mounting	Ceiling Clip

MATERIAL:

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
TOLERANCES ARE:

ANGLES ± 0.5°
FRACTIONS ± 1/64"
.XX ± 0.010"
.XXX ± 0.005"

DRAWN S JOHNSON DATE 10-14-02

ENGINEER B MATTIS DATE 10-18-02

ENGINEERING MGR A ALEVY DATE 10-18-02

FINISH:

REVISION

LTR	DESCRIPTION	DATE	INITIAL
AA	ORIGINAL	10-14-02	SWJ
AB	ADDED ADAPTER CLIP (ECR#1078)	12-3-02	AMA
AC	ADDED MOUNTING HARDWARE & SYMBOL	12-23-02	AMA
PART NUMBER (ECR#1092)			

CUSHCRAFT
48 PERIMETER ROAD MANCHESTER NH. 03108

TITLE:
**S2402DSS48RBN
MOUNTING & OUTLINE**

DRAWING NO. S2402DSS48RBNM0 REV AC

SCALE 1:2 SIZE A SHEET 1 OF 1