

PARAMETER	SPECIFICATION									
Antenna Model	VFD69383B1NJN-518Q / VFD69383W1NJN-518Q									
Number of Ports	2 (1x- LTE/CELL, 1x- GNSS)									
Port Configuration	1x- 3G/4G/ISM/CBRS (LTE/CELL)									
Frequency Bands, MHz	698- 806	824- 894	880- 960	1690-1880	1850- 1990	1910- 2180	2300-2500	2500-2700	3300-3800	
Peak Gain(*), Avg. dBi	0.9	1.7	1.9	3.9	3.5	2.9	3.9	5.2	5.3	
Peak Gain(*), Max. dBi	1.3	2.0	2.0	4.3	3.8	3.8	5.1	5.5	7.0	
VSWR(**), Avg	1.7	1.6	1.6	1.5	1.4	1.5	1.6	1.5	1.3	
VSWR(**), Max	2.5	2	2	2	2	2.1	2	2	2	
Isolation LTE to GNSS (dB)	-41	-43	-42	-46	-53	-53	-57	-53	-39	
Azimuth 3 dB Beamwidth	360°, Omnidirectional									
Nominal Impedance (Ohms)	50									
Polarization	Linear Vertical									
Max Power/port- Ambient 25°C(W)	30 (LTE/CELL)									

Notes:

- (*) This parameters is based on 1ft cable length & 1ft ground plane.
- (**) This parameters is based on 17ft cable length & 1ft ground plane.
- Antenna specification is subjected to change according to the ground plane size.

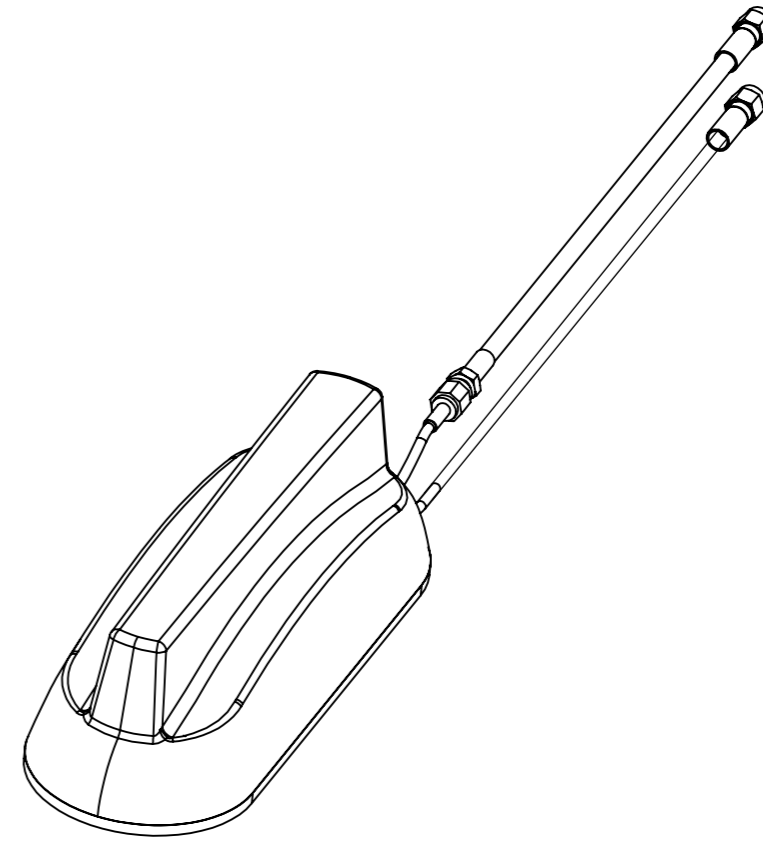
GNSS SPECIFICATION			
PARAMETER	SPECIFICATION		
Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1561.098 ±2.046	1575.42 ±1.023	1602 ±5
Antenna Gain (dBi)	3.7	4.7	5.6
LNA Gain Typ. @ room temp. (dBi)	28±3		
Noise Figure @ room temp., Max (dB)	≤ 2.5 @ 1575 MHz		
Max VSWR @ room temp.	≤ 2.0		
Polarization	RHCP		
Nominal Impedance	50 Ω		
DC Voltage (Vdc)	3.3		
Operating Supply Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA)	20		
Out-of-band Signal Rejection Min @ room temp (dBc)	> 88	> 84	> 86
Input Max Power (dBm)	-33		
Cable Type	RG174		
Cable length, cm	518		
Connector	SMA, Male		

MECHANICAL SPECIFICATIONS	
Dimensions- L x W x H, mm (inches)	179 x 63 x 48 mm (7.04 x 2.48 x 1.69)
Weight, kg (lbs)	0.54 kg (1.2 lbs)
Mounting	P- Mount
Cable Type	LMR 100- pigtails, LMR 195- jumper cables
Color	Black or White
Radome Material	PC, UL94-V0
Baseplate Material	Aluminum

ENVIRONMENTAL SPECIFICATIONS	
Operating Environment	Outdoor Vehicle
Operating Temperature, °C (°F)	-30 to +70 (-22 to +158)
Storage Temperature	-40 to +85 (-40 to +185)
Ingress Protection	IP67
RoHS Compliance	RoHS Compliant
EMC Standards	EN1373 (Shock & Vibration), EN50155 (Temperature)

UNLESS OTHERWISE NOTED, THIS DOCUMENT CONTAINS LAIRD CONNECTIVITY CONFIDENTIAL INFORMATION. REPRODUCTION, USE, DISCLOSURE OR TRANSMITTAL OF ALL OR ANY PART OF THIS DOCUMENT IS PROHIBITED EXCEPT TO THE EXTENT APPROVED IN WRITING BY AN AUTHORIZED REPRESENTATIVE OF LAIRD CONNECTIVITY. LAIRD CONNECTIVITY RESERVES ALL RIGHTS UNDER PATENTS, TRADEMARKS, COPY RIGHTS AND TRADE SECRETS. COPYRIGHT, LAIRD CONNECTIVITY 2020, ALL RIGHTS RESERVED.

REVISIONS					
REV.	ECN#	ZONE	DESCRIPTION	CHANGED BY/DATE	APPROVED BY/DATE
F01			INITIAL RELEASE	LCTAN 05MAR20	TERENCE 05MAR20
F02	ECO-20-00152		CHANGE DESIGN & UPDATE SPECIFICATION	LCTAN 15SEP20	TERENCE 15SEP20



MATERIAL: SEE BOM		THIRD ANGLE PROJECTION		 PENANG, MALAYSIA	
FINISH: N/A		 DO NOT SCALE DRAWING			
APPROVALS		DATE		TITLE:	
DRAWN BY	LCTAN	19AUG20		VFD69383x1NJN-518Q MOUNTING & OUTLINE	
ELEC. ENG.	TH LEE	19AUG20			
MECH. ENG.	WTNG	19AUG20			
MFG./OPS.	GL YEAP	19AUG20			
INTERPRET DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH ASME Y14.5M-2009		TOLERANCES UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN MILLIMETERS	
ANGLE: ±30'		0 PLACE DECIMAL: ±0.5		SIZE	
1 PLACE DECIMAL: ±0.25		2 PLACE DECIMAL: ±0.13		DWG. NO.	
SURFACE ROUGHNESS 1.6/√		SCALE: 1:2		A3 VFD69383x1NJN-518QMO	
PREVIOUS# ERROR!:Old Number		SHEET 1 OF 2		REV F02	

6

5

4

3

2

1

D

D

C

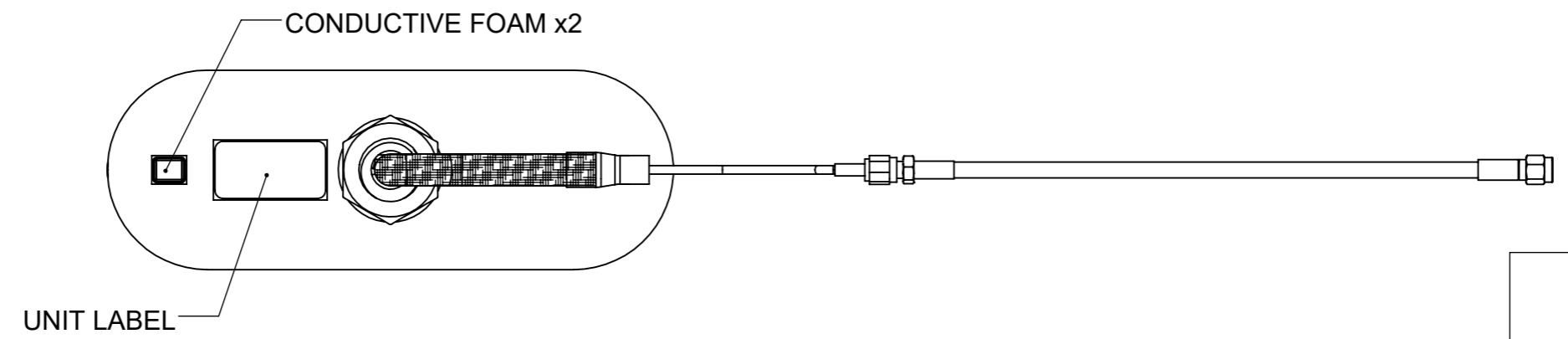
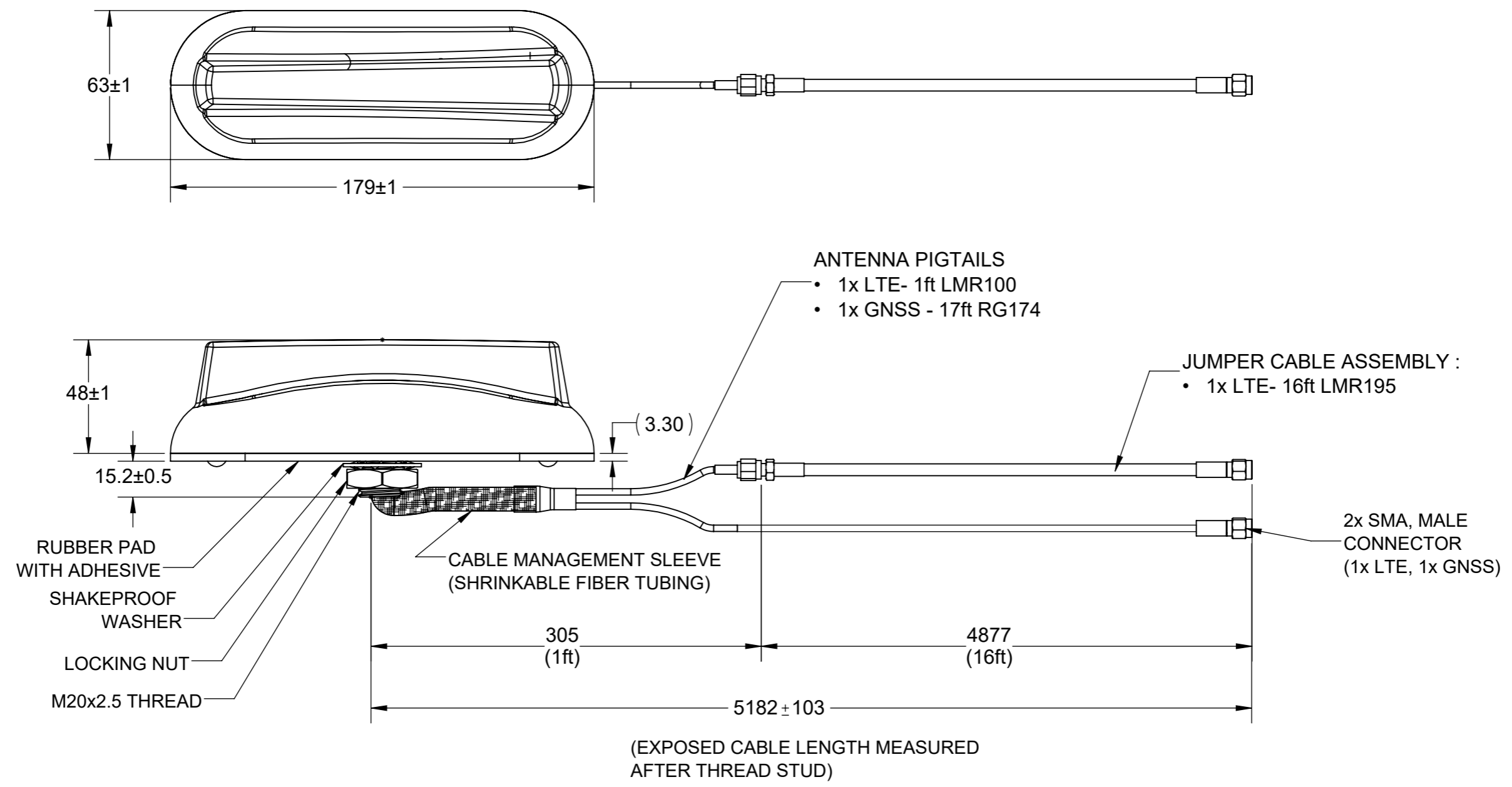
C

B

B

A

A



Laird ™ CONNECTIVITY		
PENANG, MALAYSIA		
SIZE	DWG. NO.	REV
A3	VFD69383x1NJN-518QMO	F02
SCALE: 1:2	PREVIOUS# ERROR!:Old Number	SHEET 2 OF 2

6

5

4

3

2

1