

6	5				4	
PARAMETER	SPECIFICATION					
Antenna Model	VFQ69383B21JN-518L / VFQ69383W21JN-518L					
Number of Ports	4					
Port Configuration	2x- 3G/4G/ISM/CBRS (LTE/CELL)				1x - WiFi (WIFI)	
Frequency Bands, MHz	698-806	824-894	880-960	1690-3800	2400-2500	4900-6000
Peak Gain(*), Avg. dBi	0.2	0.6	1.1	3.8	2.4	6.4
Peak Gain(*), Max. dBi	1.2	1.1	1.8	7.4	3.1	7.0
VSWR(**), Avg	1.7	1.7	1.7	1.4	1.6	1.2
VSWR(**), Max	2.5	2.1	2.2	2.1	2	2
Isolation(**) LTE1 to LTE2 (dB)	-10	-12	-15	-18	-23	-37
Isolation(**) LTE1 to WIFI (dB)	-38	-37	-37	-14	-14	-35
Isolation(**) LTE2 to WFI (dB)	-43	-45	-45	-49	-60	-47
Isolation(**) WIFI to GNSS (dB)	-68	-72	-66	-54	-60	-54
Isolation(**) LTE1 to GNSS (dB)	-43	-42	-39	-28	-28	-39
Isolation(**) LTE2 to GNSS (dB)	-39	-44	-46	-50	-59	-54
Azimuth 3 dB Beamwidth	360°, Omnidirectional					
Nominal Impedance (Ohms)	50					
Polarization	Linear Vertical					
Max Power/port- Ambient 25°C(W)	30				10	

Notes:

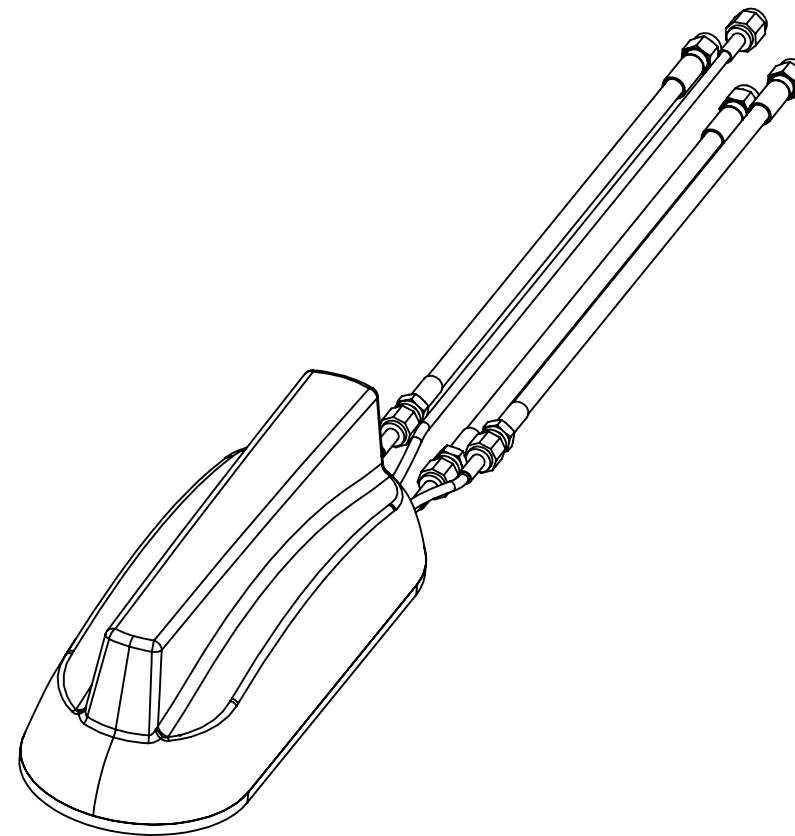
- (*) This parameters is based on 1ft cable length & 1ft ground plane.
- (**) This parameters is based on 17ft cable length & 1ft ground plane.
- Antenna specification is subjected to change according to the ground plane size.

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)	3.3	4.6	4.8
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		
Operating Supply Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA)	8.5 ± 3 @ 3.0V		
ESD, Kv	± 2 (contact discharge) / ± 4 (air discharge)		
Out-of-band Signal Rejection Min @ room temp (dBc)	80 (@698-960MHz)	80 (@1428-2700 MHz)	70 (@4900-5800 MHz)
Input Max Power (dBm)	-10		
Cable Type	RG174		
Cable length, cm	518		
Connector	SMA,Male		

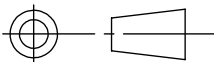
MECHANICAL SPECIFICATIONS	
Dimensions- L x W x H mm (inches)	179 x 63 x 48 mm (7.04 x 2.48 x 1.69)
Weight, kg (lbs)	0.93 kg (2.1 lbs)
Mounting	P- Mount
Cable Type	LMR 100- pigtails, LMR 195- jumper cables
Color	Black or White
Radome Material	PC, UL94-V0
Baseplate Material	Aluminum

THIS DRAWING IS UNPUBLISHED.	RELEASED FOR PUBLICATION	- , - .
© Copyright 2022 TE Connectivity Ltd.		ALL RIGHTS RESERVED.

3			2		1	
REVISIONS						
REV.	ECN#	ZONE	DESCRIPTION		CHANGED BY/DATE	APPROVED BY/DATE
F01			INITIAL RELEASE		LCTAN 19MAR20	TERENCE 19MAR20
F02			CHANGE DESIGN & UPDATE SPECIFICATION		9/14/2020	9/14/2020
F03	ECO-20-00525		UPDATE VIEW		LCTAN 22DEC20	TERENCE 22DEC2



ENVIRONMENTAL SPECIFICATIONS	
Operating Engvironment	Outdoor Vehicle
Operating Temperature, °C (°F)	-30 to +70 (-22 to +158)
Storage Temperature	-40 to +85 (-40 to +185)
Ingress Protection	IP67
Rail Compliance Standards	EN61373 (Shock & Vibration), EN50155 (Temperature)
Material Substance Compliance	RoHS Compliant

MATERIAL: SEE BOM							
FINISH: N/A							
			DO NOT SCALE DRAWING		TITLE: VFQ69383x21JN-518L		
APPROVALS		DATE	INTERPRET DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH ASME Y14.5M-2009				
DRAWN BY	LCTAN	27AUG20	TOLERANCES UNLESS OTHERWISE SPECIFIED				
ELEC. ENG.	TH LEE	27AUG20	DIMENSIONS ARE IN MILLIMETERS				
MECH. ENG.	WTNG	27AUG20					
MFG./OPS.	GL YEAP	27AUG20	ANGLE: ±30' 0 PLACE DECIMAL: ±0.5 1 PLACE DECIMAL: ±0.25 2 PLACE DECIMAL: ±0.13 SURFACE ROUGHNESS 1.6		SIZE A3	DWG. NO. VFQ69383x21JN-518LMO	REV F03
					SCALE: 1:2	PREVIOUS# ERROR!Old Number	SHEET 1 OF 2

D

C

B

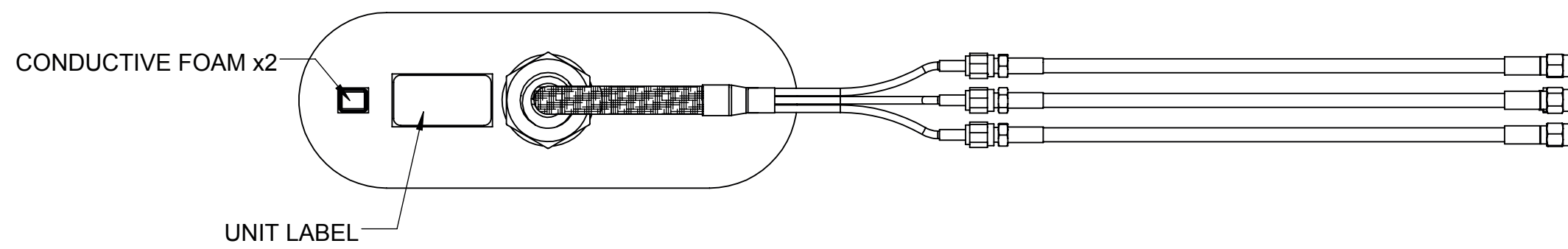
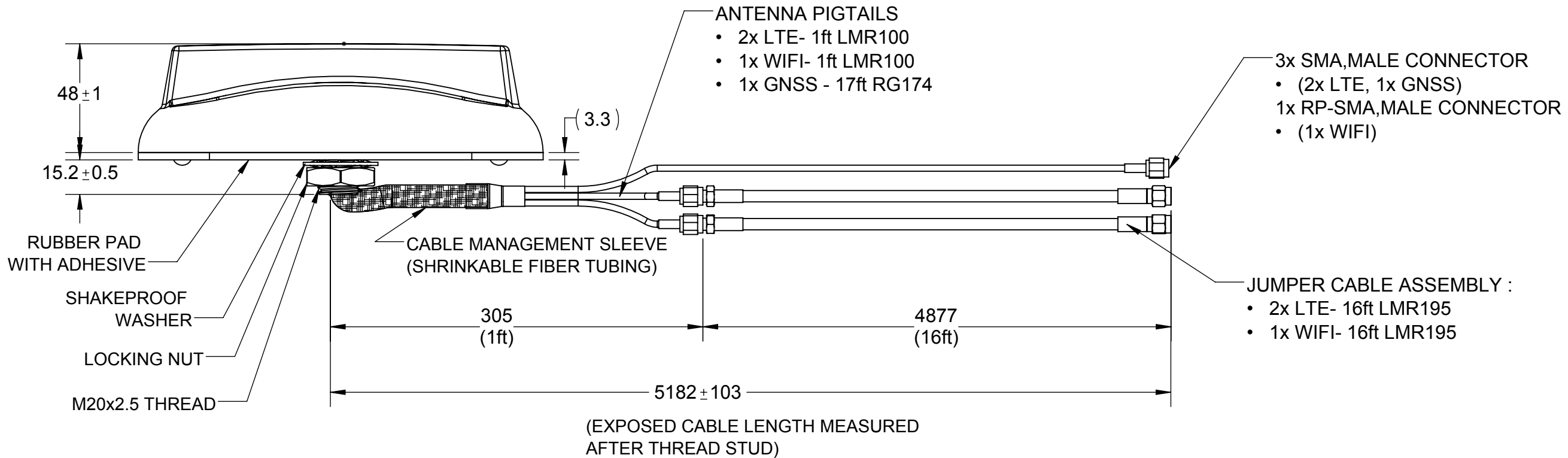
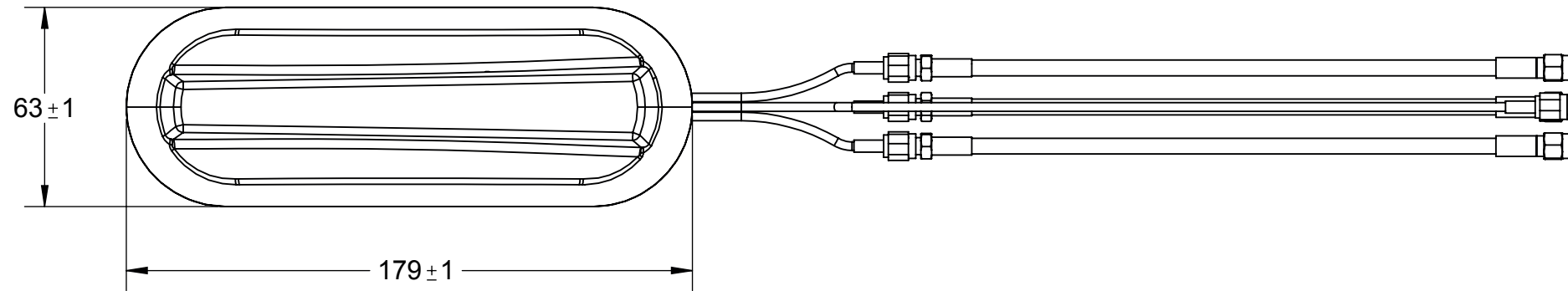
A

D

C

B

A



THIS DRAWING IS UNPUBLISHED.	RELEASED FOR PUBLICATION
© Copyright 2022 TE Connectivity Ltd.	ALL RIGHTS RESERVED.

SIZE A3	DWG. NO. VFQ69383x21JN-518LMO	REV F03
SCALE: 1:2	PREVIOUS# ERROR!:Old Number	SHEET 2 OF 2