



ELECTRICAL SPECIFICATIONS							
Antenna Model	VFH69383B22JU-518J						
Number of Ports	6						
Port Configuration (Label)	UHF (UHF)	2x- 3G/4G/ISM/CBRS (LTE/CELL)				3x - WiFi (WIFI)	
Frequency Bands, MHz	380- 520	698- 806	824- 894	880- 960	1690-3800	2400-2500	4900- 6000
Peak Gain(*), Avg. dBi	3.1	-0.4	0.1	1.2	3.7	2.4	6.5
Peak Gain(*), Max. dBi	3.9	1.2	2.0	2.8	7.4	3.8	7.6
VSWR(**), Avg	1.8	1.8	1.9	2.0	1.4	1.4	1.2
VSWR(**), Max	2.5	2.5	2.5	2.5	2.0	2.0	2.0
Isolation LTE1 to LTE2 (dB)	-21	-11	-15	-16	-17	-24	-34
Isolation LTE1 to WIFI 1 (dB)	-34	-33	-38	-38	-14	-14	-32
Isolation LTE1 to WIFI 2 (dB)	-53	-43	-46	-46	-27	-27	-38
Isolation LTE1 to UHF (dB)	-20	-18	-25	-28	-22	-32	-39
Isolation LTE2 to WFI 1 (dB)	-50	-43	-46	-45	-27	-27	-37
Isolation LTE2 to WIFI 2 (dB)	-33	-35	-41	-41	-12	-12	-32
Isolation LTE2 to UHF (dB)	-14	-12	-15	-15	-17	-20	-31
Isolation WIFI 1 to WIFI 2 (dB)	-74	-72	-71	-71	-29	-29	-35
Isolation WIFI 1 to UHF (dB)	-54	-52	-59	-59	-34	-34	-36
Isolation WIFI 2 to UHF (dB)	-40	-42	-45	-46	-23	-23	-31
Isolation GNSS to LTE 1 (dB)	-40	-45	-43	-46	-47	-55	-52
Isolation GNSS to LTE 2 (dB)	-36	-45	-43	-43	-36	-38	-48
Isolation GNSS to WIFI 1 (dB)	-66	-70	-68	-71	-52	-57	-52
Isolation GNSS to WIFI 2 (dB)	-63	-72	-71	-73	-52	-55	-50
Isolation GNSS to UHF (dB)	-50	-60	-66	-61	-53	-65	-61
Azimuth 3 dB Beamwidth	360°, Omnidirectional						
Nominal Impedance	50 Ω						
Polarization	Linear Vertical						
Max Power/port- Ambient 25°C (W)	60 (UHF) / 30 (LTE-CELL) / 10 (WiFi)						

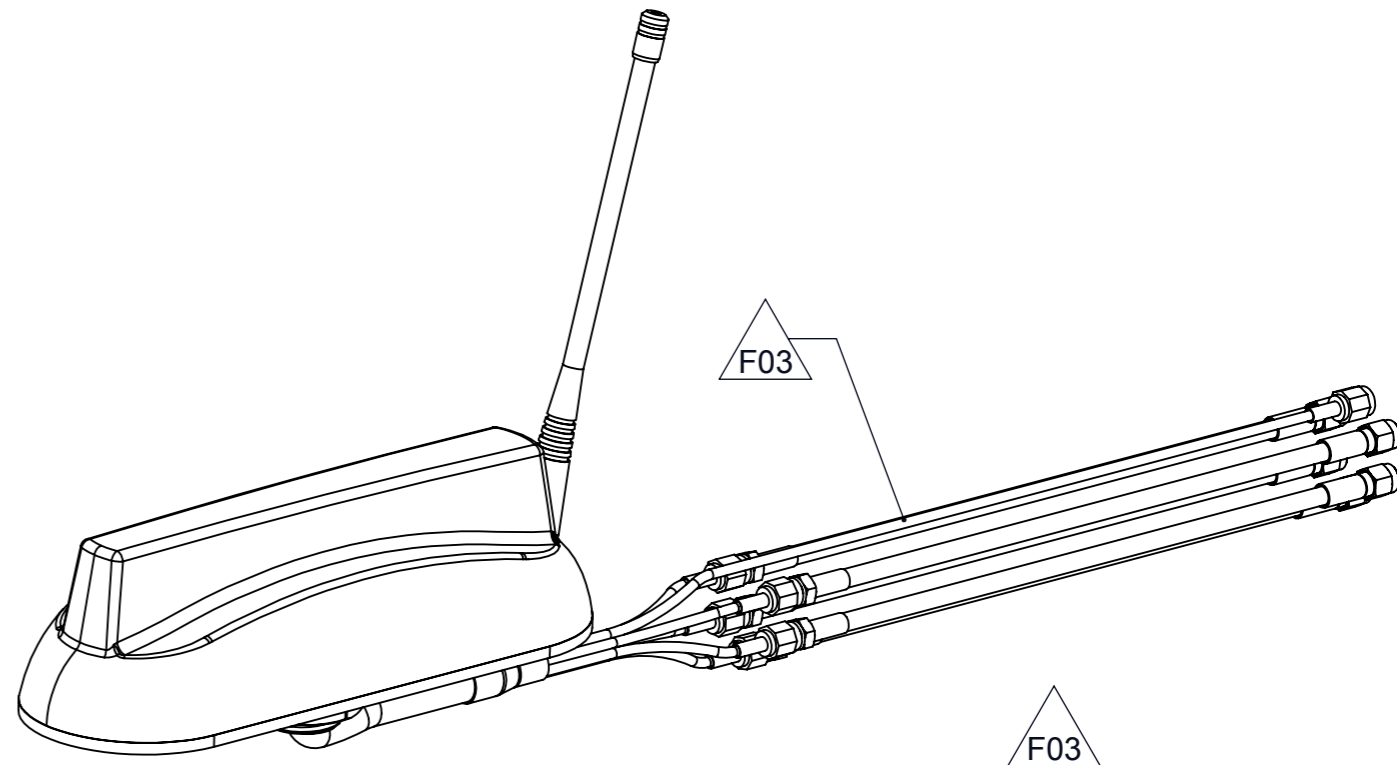
MECHANICAL SPECIFICATIONS	
Dimensions- L x W x H mm (inches)	179 x 63 x 48 mm (7.04 x 2.48 x 1.69)
Weight, kg (lbs)	1.31 kg (2.88 lbs)
Mounting	P- Mount
Cable Type	LMR 100- Black pigtails, LMR 195- Black jumper cables
Color	Black
Radome Material	PC, UL94-V0
Baseplate Material	Aluminum

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
Rail Compliance Standards	EN61373 (Shock & Vibration), EN50155 (Temperature)
Material Substance Compliance	RoHS Compliant

- 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.

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REVISIONS					
REV.	ECN#	ZONE	DESCRIPTION	CHANGED BY/DATE	APPROVED BY/DATE
F02	ECO-19-00510		ADD REMARKS FOR RUBBER WASHER; UPDATED GNSS ANTENNA SPECIFICATION	YS TAN 15OCT19	WT NG 15OCT19
F03	ECO-20-00563		REVISED SPEC TABLE; ADD JUMPER CABLE ASSEMBLY; UPDATED ANTENNA VIEW; UPDATE UHF WHIP LENGTH	YS TAN 14JAN21	WT NG 14JAN21



GNSS ANTENNA SPECIFICATIONS			
Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1559.052 - 1563.144	1574.42 - 1576.42	1598.0625 - 1605.89
Absolute Gain (dBi)	5.2	5.9	3.8
LNA Gain Typ. @ room temp. (dBi)	28 ± 3		
Noise Figure @ room temp., Max (dB)	≤ 2.5 @ 1575 MHz		
Max VSWR @ room temp.	2.5:1		
Polarization	RHCP		
Nominal Impedance	50 Ω		
DC 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- 960 MHz) 80 (@ 1428- 1511 MHz) 50 @ (1627- 1638 MHz) 80 @ (1710- 2700 MHz) 70 (@ 4900- 5800 MHz)		
Input Max Power (dBm)	-10		
Cable Type	RG174, Black		

MATERIAL: N/A	THIRD ANGLE PROJECTION											
FINISH: N/A	DO NOT SCALE DRAWING											
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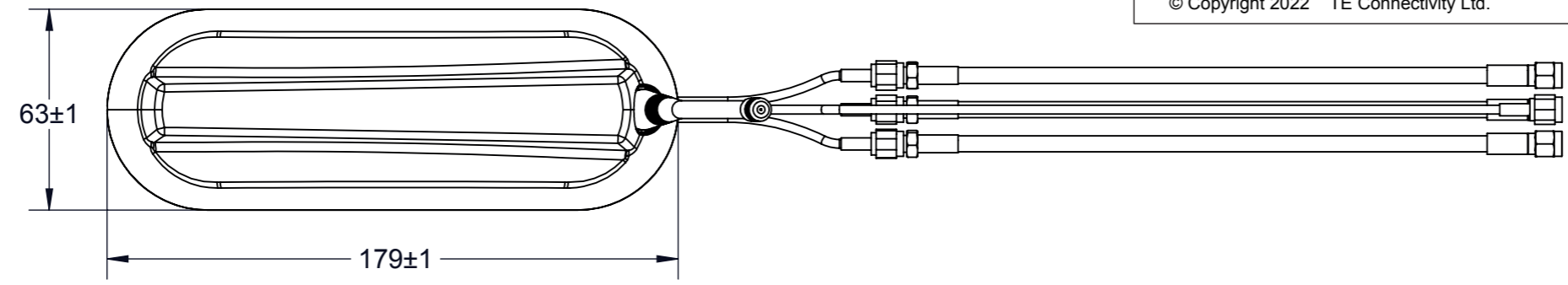
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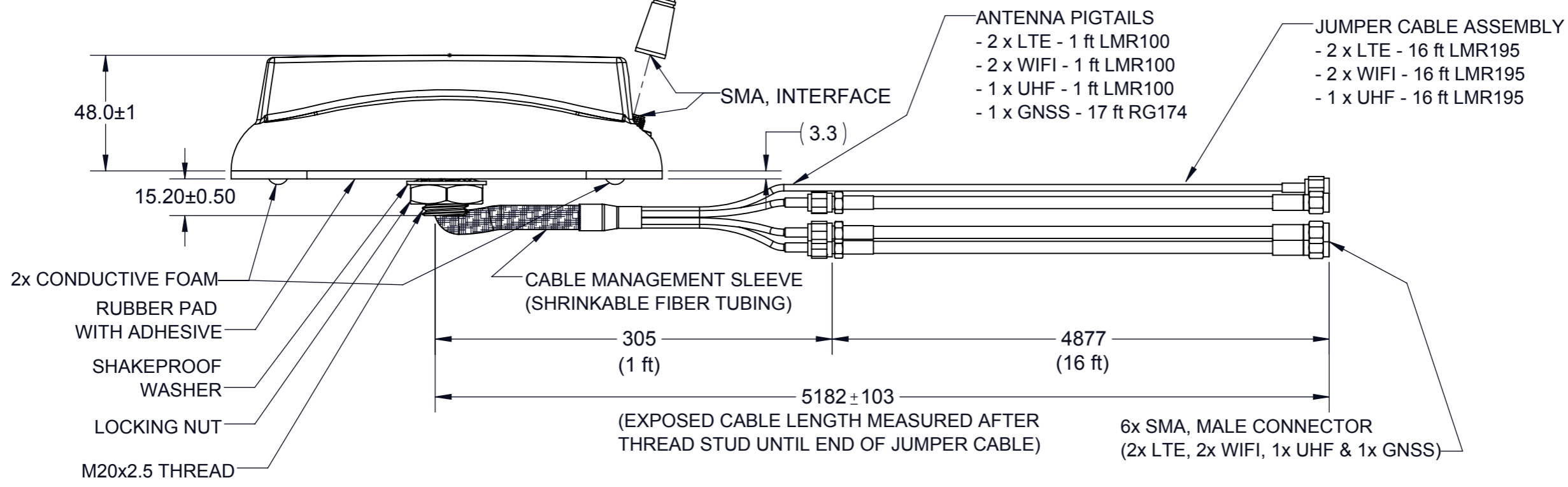
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EXTERNAL UHF WHIP ANTENNA
P/N:EXC3805SM-001
NOTE: REFER SHEET 3 FOR
ANTENNA OUTLINE DETAIL

F03

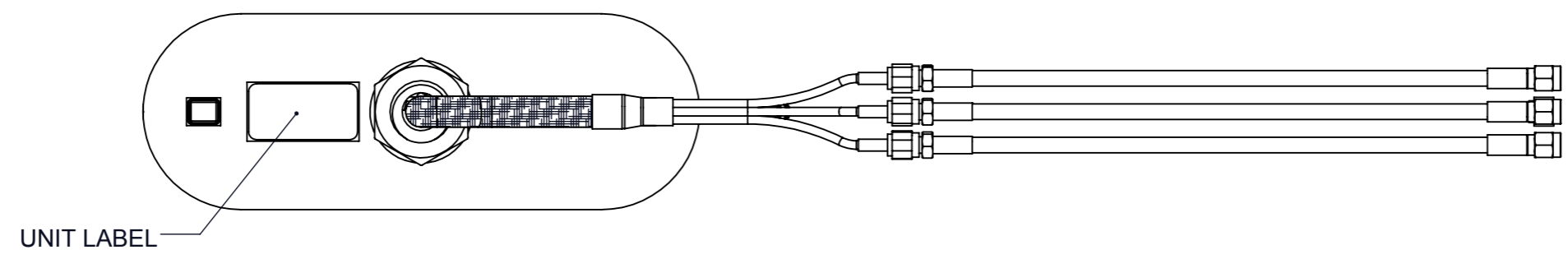
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A

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SIZE A3	DWG. NO. VFH69383B22JU-518JMO	REV F03
SCALE: 1:2	PREVIOUS#	SHEET 2 OF 3

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EXTERNAL UHF WHIP ANTENNA OUTLINE

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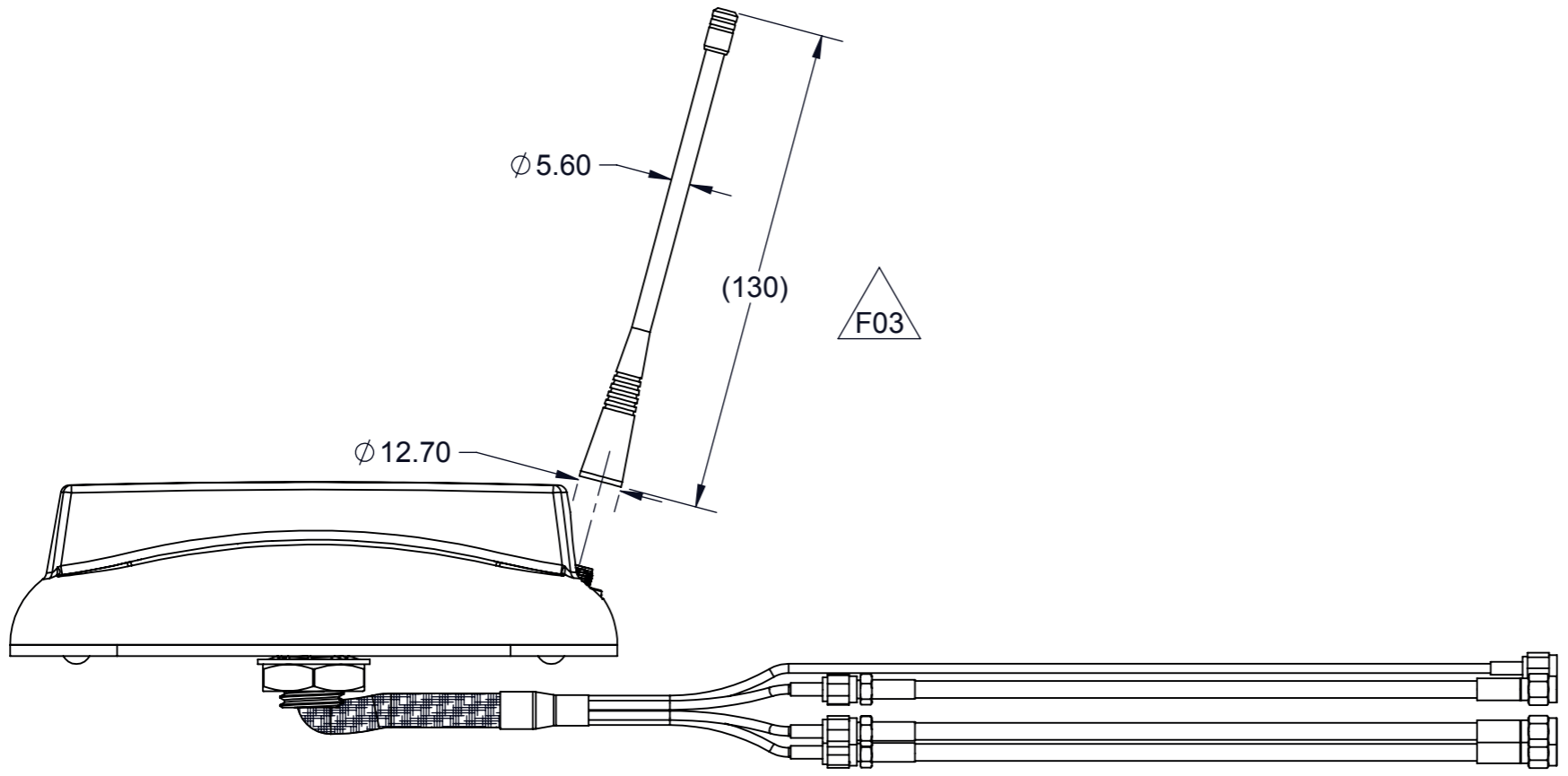
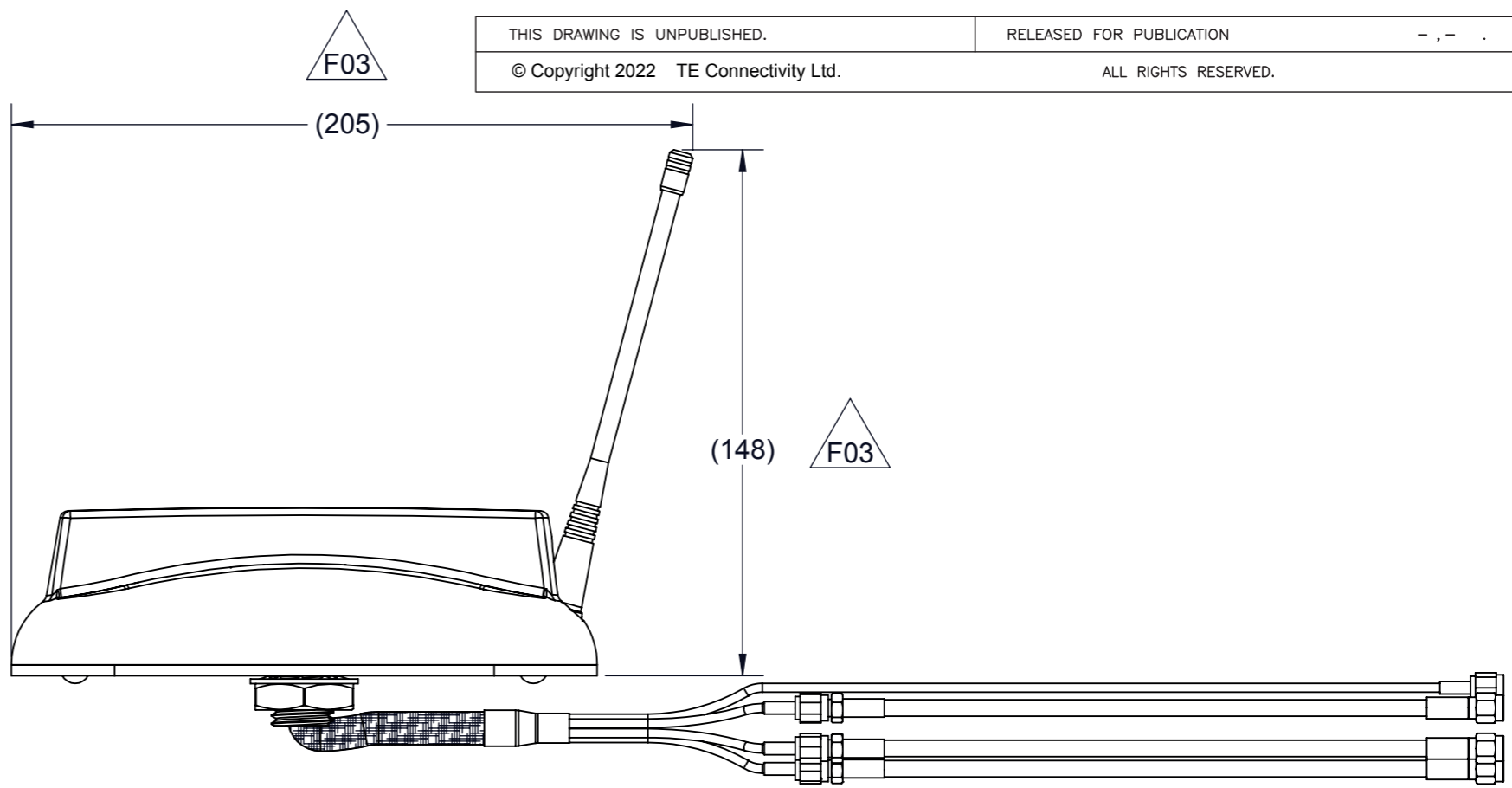
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SIZE A3	DWG. NO. VFH69383B22JUMO	REV F03
SCALE: 1:2	PREVIOUS#	SHEET 3 OF 3

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