OTMX 4-way 1.2 GHz tap

- **Hum and noise meets ANSI/SCTE 16 2001**
- **RF and power bypass capability**
- **Compatible with existing Motorola taps****
- **Robust outdoor powder coated housing**
- **Available in faceplate only replacements**
- **Surge immunity meets IEEE C62.41**
- **Salt spray compliance on housing - 1000 hours**

Overview

The Technetix OTMX series of Motorola compatible** outdoor taps now offers a complete line in outdoor tap passives. All OTMX 4-way outdoor taps are mechanically identical in shape with tap values between 7 and 29 dB. All taps feature sealed female F-ports for drop cable connection on the faceplate and 5/8”-24 NEF-female ports for input and output cable connection on the housing.

As an option these taps can accept field configurable plugin modules which provide increased flexibility in system design. It is possible to use cable equalizers, return path attenuators, and cable simulators in order to fine-tune return path performance.

The housing has an AC-RF bypass switch as standard, allowing faceplates to be changed without loss of power or RF through the tap housing. The faceplates are compatible** with other Motorola hardware. Taps may be strand mounted through the clamp at the back of the housing, or can be surface mounted with an optional bracket.

Also, both the housing and connector design and material selection combine to provide first class leading corrosion resistance.

Technetix Group Limited
e: sales@technetix.com w: www.technetix.com

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Specifications

		MHz	4-8	4-11	4-14	4-17	4-20	4-23	4-26	4-29	4-32	4-35
			Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
Insertion loss (dB)	In to tap	10 - 65	9.0	12.0	15.0	18.25	21.0	24.25	27.0	30.0	33.0	36.0
		65 - 860	9.0	12.0	15.0	18.25	21.0	24.25	27.0	30.0	33.0	36.0
		86 - 1218	9.5	12.5	15.5	18.5	21.5	24.75	27.5	30.5	33.5	36.5
	In to out	10 - 65		3.6	1.6	1.1	1.1	0.8	0.8	0.7	0.7	0.7
		65 - 300		4.0	1.8	1.3	1.2	0.9	0.9	0.9	0.8	0.8
		300 - 550		4.7	2.5	1.9	1.7	1.3	1.3	1.3	1.2	1.2
		550 - 750		4.7	2.7	2.1	1.8	1.5	1.5	1.4	1.3	1.3
		750 - 862		5.0	3.0	2.3	2.0	1.8	1.7	1.7	1.4	1.4
		862 -1000		5.1	3.1	2.4	2.1	1.9	1.8	1.8	1.5	1.5
		1000 - 1218		5.3	3.3	2.6	2.3	2.1	2.0	2.0	1.7	1.7
			Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
Return loss	All ports	10 - 15	18.0	16.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
		15 - 47	18.0	16.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
		47 - 950[5]	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
		950 - 1218	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Directivity	Out to tap	10 - 15		25.0	26.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0
		15 - 65		29.0	30.5	32.0	33.5	35.0	36.5	38.0	39.5	41.0
		65 - 860		27.0	28.5	30.0	31.5	33.0	34.5	36.0	37.5	39.0
		860 - 1218		22.0	24.0	26.0	26.0	27.0	28.0	30.0	33.0	35.0
Isolation	Tap to tap	10 - 15	20.0	20.0	20.0	22.0	22.0	22.0	23.0	23.0	24.0	24.0
		15 - 65	25.0	25.0	25.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
		65 - 860[6]	25.0	25.0	25.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
		860 - 1218	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Screening effectiveness (dB)		10 - 30[3]	2.5 mΩ/m									
		30 - 300[4]	95.0									
		300 - 470[4]	90.0									
		470 - 950[4]	85.0									
		950 - 1218[4]	80.0									
Frequency range (MHz)	All ports	10 - 1218										
Connectors	I/P, O/P	5/8										
	TAP	F-female										

Temperature range (°C)		Min	Max
	Operating	-40	+65
	Storage	-40	+70
	Spec	+20	+65

Power passing (Amps AC/DC)	12
Surge (kV)[1]	2
Impedance (Ω)	75
MTBF (hrs)	100000
Equipment approval	CE

Hum modulation (dB, typ)[2]		Min
	5 - 10	65.0
	10 - 860	70.0
	860 - 1200	65.0

Remarks

1	IEEE-C62.14, combination wave, category B1 (rise time 1,2 µS / fall time 50 µS). No degradation allowed
2	Measured at 7A (test setup in accordance with ANSI-SCTE-16)
3	IEC 62153-7 § 5.5
4	IEC 62153-7 § 5.5
5	F > 40 MHz -1.5dB/oct
6	F > 40 MHz -1.5dB/oct no greater than -20dB

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Mechanical & environmental specifications

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Test	Conditions		Requirements
Air Leakage	Medium	Water	No air leakage
	Duration	1 minute	
	Pressure	1.5 kg/cm^2	
Physical Drop	Height	3ft/91 cm	No physical damage
	Surface	Hard (concrete)	No electrical damage
	No. of drops	5	
	Impact point	5	
Salt Fog	Duration	672 hours (28 days)	According to ASTM B117
Temp Cycling with Humidity	Temperature	-40ºF till 140ºF -40ºC till 60ºC	No electrical damage
	Duration	3hrs extemes - 3hrs transition	Measured when dry
	Humidity	95% RH	
Temp Cycling with Humidity	No. of cycles	14 cycles - 12hrs	
UV Degradation	Exposure	QUV Weatherometer	According to Bellcore GR-2873
	Radiation type	UVB - 313 (ASTM G154)	For surface degradation
	Cycle	4hrs UV - 4hrs condensation	
	Duration	100hrs	
Water Immersion	Depth	47.24 inches/1.2 meters	No water ingress
	Meters duration	168hrs	
Vibration	Frequency	10-55 Hz	No electrical damage
	Position	Vertical	
	Duration	20 minutes	
	Average position	Horizontal X-Y	
	Duration	20 minutes	
Ozone			According to ASTM D1171
Mechanical	SCTE 01 2006		Specification for F-port, female, outdoor
	Bellcore GR-2873		Vibration and impact
Environmental	ASTM B117		Standard practice for operating salt fog spray apparatus
	ASTM B827		Standard practice for conduction mixed flowing gas environmental test
	Bellcore GR-2873		Temperature cycling with humidity
	Bellcore GR-2873		Water immersion
	Bellcore GR-2873		Salt fog exposure
	Bellcore GR-2873		Environmental pollutants
	Bellcore GR-2873		Chemical resistance
Electrical	IEEE C62.41-1991		Recomended practice on surge voltages on low-voltage AC power circuits
	SCTE 48-1 2007		Surge withstand test procedure
Ingress	SCTE 81 2007		Test method for measuring shielding effectiveness using a GTEM cell
Transmission	SCTE 16 2001R2007		Test procedure for hum modulation

	Port	Range	Min	Typical	Max	Units
Connectors	In			5/8"-24 NEF female		
	Tap			F-female		
Temperature Range	Operating		-40		+60	ºC
			-40		+140	ºF
	Storage		-60		+70	ºC
			-76		+158	ºF
Weight	Tap			478		Gram
	Faceplate			195		
Material	F-connector			NiSn plated		
	F-spring			Silver plated		
Color	Housing			Gray		

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e: sales@technetix.com w: www.technetix.com