

OTMX 2-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 2-way outdoor taps are mechanically identical in shape with tap values between 4 and 26 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.

Outdoor taps

OTMX 2-way 1.2 GHz tap

Specifications

| | | MHz | 2-4 | 2-8 | 2-11 | 2-14 | 2-17 | 2-20 | 2-23 | 2-26 | 2-29 | 2-32 | 2-35 | |
|---------------------------------------|-----------------|-------------------------|----------|------|------|-------|------|------|------|------|------|------|------|--|
| Insertion loss (dB) | In to tap | | Max | Max | Max | Max | Max | Max | Max | Max | Max | Max | Max | |
| | | 10 - 65 | 5.0 | 9.0 | 12.0 | 15.25 | 18.0 | 21.0 | 24.0 | 27.0 | 30.0 | 33.0 | 36.0 | |
| | | 65 - 860 | 5.0 | 9.0 | 12.0 | 15.25 | 18.0 | 21.0 | 24.0 | 27.0 | 30.0 | 33.0 | 36.0 | |
| | | 86 - 1218 | 5.5 | 9.5 | 12.5 | 15.5 | 18.5 | 21.5 | 24.5 | 27.5 | 30.5 | 33.5 | 36.5 | |
| | In to out | 10 - 65 | | 3.6 | 1.6 | 1.5 | 1.1 | 0.8 | 0.8 | 0.7 | 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 | 0.8 | |
| | | 300 - 550 | | 4.7 | 2.5 | 1.9 | 1.7 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | |
| | | 550 - 750 | | 4.7 | 2.7 | 2.1 | 1.8 | 1.5 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | |
| | | 750 - 862 | | 5.0 | 3.0 | 2.3 | 2.0 | 1.8 | 1.7 | 1.7 | 1.4 | 1.4 | 1.4 | |
| | | 862 - 1000 | | 5.1 | 3.1 | 2.4 | 2.1 | 1.9 | 1.8 | 1.8 | 1.5 | 1.5 | 1.5 | |
| | | 1000 - 1218 | | 5.3 | 3.3 | 3.6 | 2.3 | 2.1 | 2.0 | 2.0 | 1.7 | 1.7 | 1.7 | |
| Return loss | All ports | | Min | Min | Min | Min | Min | Min | Min | Min | Min | Min | Min | |
| | | 10 - 15 | 18.0 | 18.0 | 16.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | |
| | | 15 - 47 | 18.0 | 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 | 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 | 22.0 | 25.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | |
| | | 15 - 65 | | 27.5 | 26.0 | 30.0 | 32.0 | 33.5 | 35.0 | 36.5 | 38.0 | 39.5 | 41.0 | |
| | | 65 - 860 | | 25.5 | 25.0 | 27.0 | 30.0 | 31.5 | 33.0 | 34.5 | 36.0 | 37.5 | 39.0 | |
| | | 860 - 1218 | | 23.5 | 22.0 | 22.0 | 25.0 | 26.0 | 27.0 | 29.0 | 30.0 | 33.0 | 35.0 | |
| Isolation | Tap to tap | 10 - 15 | 20.0 | 20.0 | 20.0 | 22.0 | 22.0 | 22.0 | 22.0 | 23.0 | 23.0 | 24.0 | 24.0 | |
| | | 15 - 65 | 22.0 | 22.0 | 22.0 | 24.0 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 | |
| | | 65 - 860 ⁶ | 22.0 | 22.0 | 22.0 | 24.0 | 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 | 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 TAP | 5/8 F-female | | | | | | | | | | | | |
| Temperature range (°C) | | | Min | | | | | | Max | | | | | |
| | Operating | | -40 | | | | | | +65 | | | | | |
| | Storage | | -40 | | | | | | +70 | | | | | |
| | Spec | | +20 | | | | | | +65 | | | | | |
| Power passing (Amps AC/DC) | | 12 | | | | | | | | | | | | |
| Hum modulation (dB, typ) ² | | | Min | | | | | | | | | | | |
| | | 5 - 10 | 65.0 | | | | | | | | | | | |
| | | 10 - 860 | 70.0 | | | | | | | | | | | |
| | | 860 - 1200 | 65.0 | | | | | | | | | | | |
| Surge (kV) ¹ | | 2 | | | | | | | | | | | | |
| Impedance (Ω) | | 75 | | | | | | | | | | | | |
| MTBF (hrs) | | 100000 | | | | | | | | | | | | |
| Equipment approval | | CE | | | | | | | | | | | | |

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

OTMX 2-way 1.2 GHz tap

Mechanical & environmental specifications

| 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 | -40°F till 140°F -40°C till 60°C | No electrical damage |
| | Duration | 3hrs extremes - 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 Mechanical | | | According to ASTM D1171 |
| | SCTE 01 2006 | | Specification for F-port, female, outdoor |
| Environmental | Bellcore GR-2873 | | Vibration and impact |
| | 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 | | Recommended 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 | °C |
| | | | -40 | | +140 | °F |
| | Storage | | -60 | | +70 | °C |
| | | | -76 | | +158 | °F |
| Weight | Tap | | | 478 | | Gram |
| | Faceplate | | | 195 | | |
| Material | F-connector | | | NiSn plated | | |
| | F-spring | | | Silver plated | | |
| Color | Housing | | | Gray | | |

© Copyright 2016 Technetix Group Limited. All rights reserved.

This document is for information only. Features and specifications are subject to change without notice. Technetix, the Technetix logo, Ingress Safe, Modem Safe and certain other marks and logos are trade marks or registered trade marks of Technetix Group Limited in the UK and certain other countries. Other brand and company names are trade marks of their respective owners. Technetix protects its technology and designs by registering patents, trade marks and designs in Europe and certain other countries.