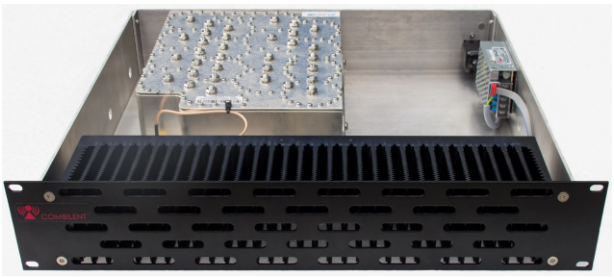
DS20398
October 2018

2 ch Combiner and Duplexer System

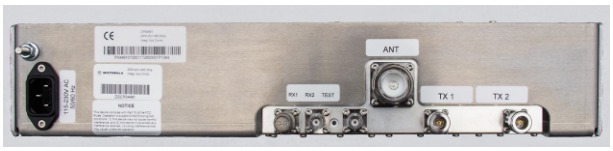
Key features:

Two transmitter duplexing with amplifier on a single antenna.

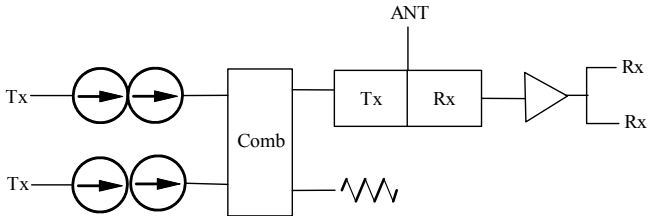
- Two Base Stations to operate on a single antenna
- Low Noise amplifier included for maximum sensitivity
- Band-pass selectivity in the duplexer for high level carrier suppression
- Test port included for accurate receiver sensitivity measurements
- Integrated isolators on the Duplex system shelf
- Low PIM design for a two channel duplexer
- Integrated receive distribution for one or two channels
- Hybrid design to allow combining without regard to transmit frequency separation
- Compact 19” design
- Wide bandwidth for UHF
- Full band for 7/8/900 MHz
- Multiple units allows more than two channels to be combined on multiple antennas
- Very economical compared to two duplexers, two antennas, and two antenna cables



Front view



Back view



Schematic

Cost advantages:

- Reduces the number of antennas and cables on the tower, reducing wind loading, icing problems, tower climbs, etc.
- Reduced time for installation, less time at the site.
- Less cable on the tower and fewer antennas results in lower long-term maintenance costs.
- Compact – takes up less rack space.
- Fewer tower climbs, a distinct cost advantage.

Installation advantages:

- Plug and play solution
- Reduced installation time. Attach cabling and ready to go
- Reduced setup time
- No tuning required
- Reduced need for tower crew
- Integrated solution for two channels
- Smaller package, easier to install.
- System shares single antenna.

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Part Numbers	Description
CP05445	2 ch duplexer 400-420 MHz
CP04491	2 ch duplexer 450-460 MHz
CP05446	2 ch duplexer 480-500 MHz
CP05455	2 ch duplexer 700 MHz Rx: 793-805 MHz/ Tx: 763-775 MHz
CP05456	2 ch duplexer 800 MHz Rx: 806-824 MHz / Tx: 851-869 MHz
CP01031	2 ch duplexer 900 MHz Rx: 896-902 MHz / Tx: 935-941 MHz

Specification, System

Frequency	According to part number
Tx / Rx bandwidth UHF	See table below
Duplex spacing UHF	See table below
Tx insertion loss	See table below
Tx input power	2*100 W
Tx input return loss	>18 dB
Tx-Tx isolation	>75 dB
Tx to ANT selectivity in Rx band	>80 dB
ANT port return loss in Tx band	>17 dB
PIM	Tolerant
Rx gain	4 dB to 14 dB in 1 dB steps settable by rotary switch
Noise figure	See table below
Integrated test port	30 dB
OIP3	+35 dBm
Rx port return loss	>15 dB.
Rx to Rx isolation	>20 dB
ANT to Rx selectivity in Tx band	>80 dB
ANT port return loss in Rx band	>17 dB

Operating temp.	-10°C to 60°C
Enclosure	Indoor
Connectors, Tx	N-female in the back
Connector, ANT	7-16 female in the back
Connectors, Rx and TEST	BNC-female in the back
Dimensions	19”, 2U, 15.8” deep
Weight	25 lbs

Part number	Band width	Duplex spacing	Tx-insertion loss (typical)	Rx noise figure (typical)
CP05445	5 MHz	10 MHz	5.3 dB	3 dB
CP04491	2.5 MHz	5 MHz	5.8 dB	3 dB
CP04446	5 MHz	10 MHz	5.3 dB	3 dB
CP05455	Full band	Full band	4.8 dB	2.7 dB
CP05456	Full band	Full band	4.8 dB	2.7 dB
CP01031	Full band	Full band	4.8 dB	2.7 dB

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