Micro Communications, Inc.

SERIES 49400

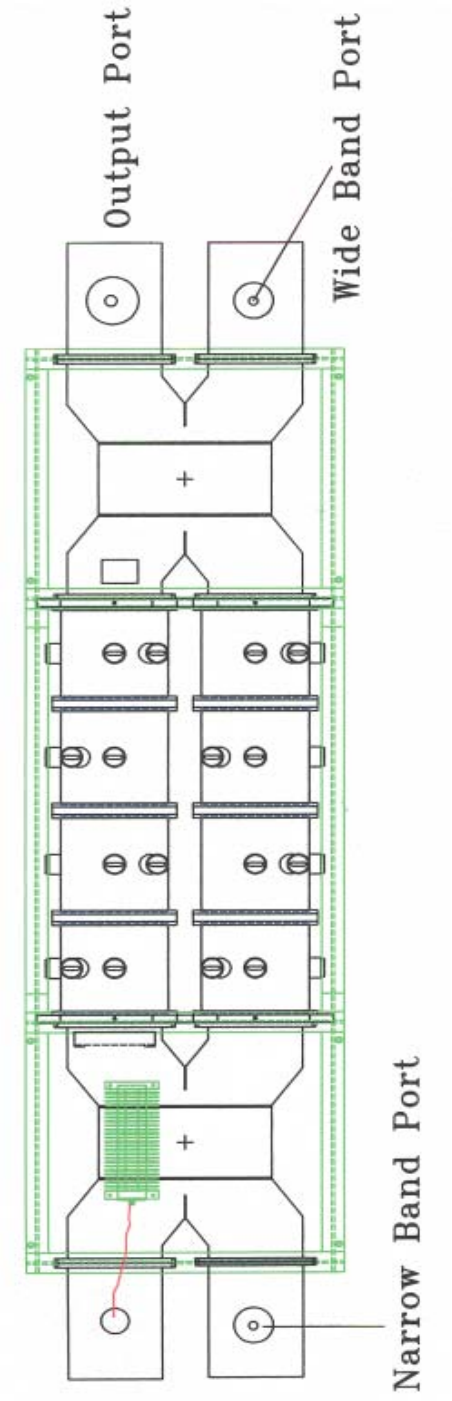
UHF N - 1 CHANNEL COMBINER

- Allows use of single antenna for DTV and NTSC
- Filters DTV signal to meet FCC Mask
- Temperature-stable design gives maximum width passband

The combining of the NTSC and DTV signal into a common transmission line and broadcast antenna saves in tower loadings by removing the need for two antennas and dual runs of transmission line. Another advantage of using a single antenna is that it gives the best control over NTSC/DTV signal strength ratios in the radiated field.

The N - 1 is a Constant Impedance Channel Combiner. The DTV signal is filtered for unwanted, out-of-band products, while the NTSC channel is reflected by the filters, resulting in a combined NTSC and DTV multiplex to the common antenna port.

The design utilizes Invar cavity components for minimized thermal drift.



N - 1 Combiner shown with Waveguide Hybrids

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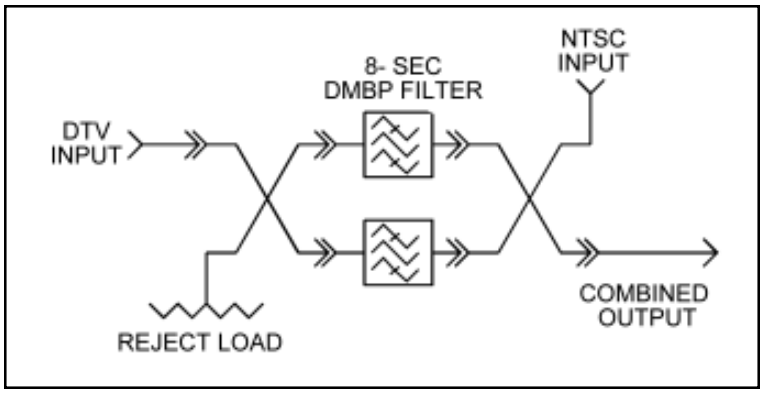

UHF N – 1 Combiner Performance Specifications

	NTSC (Visual Carrier F_V, Aural Carrier F_A)		DTV (Center Frequency F_C)	
Insertion Loss (dB)	< 0.10 < 0.30	F_V to F_A F_V –0.50 MHz	< 0.17 < 0.35	F_C $F_C \pm 2.69$ MHz
VSWR	< 1.08 < 1.10	F_V to F_A F_V –0.50 MHz	<1.08	$F_C \pm 2.69$ MHz
Group Delay Variation (ns)	< 600 < 200 < 20	F_V –0.75 MHz to F_V F_V –0.50 MHz to F_V F_V to F_A	< 350	$F_C \pm 2.69$ MHz
Isolation (dB)		> 30		> 30
Power Rating (kW)		240 Peak		75 Avg
Weight	1055lbs 478kg			

All specifications are subject to change without notice.

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