

# MCX Series

## Channel Converters



### ○ Features & Benefits

- Rack Mountable - 1 EIA (1.75") Rack Space
- High Input Capability with Low Noise Figure Provides Wide Dynamic Range
- Crystal Controlled Design Permits Use in Adjacent Channel Systems
- Excellent Image Rejection

The MCX Series are professional quality, single channel converters. These units are designed to convert a single VHF or UHF channel to a desired output channel (VHF or UHF). These converters feature crystal controlled oscillators (MCX-V and MCX-V/U) allowing their use in adjacent channel systems.

The MCX Series is electrically and mechanically compatible with Blonder Tongue's strip amplifiers and bandpass filters. The MCX Series features single conversion circuitry for channel changes without double conversion or external traps and filters. Some channel conversions are forbidden (refer to the chart and/or consult the BT sales department) and require the double conversion process used in Blonder Tongue's heterodyne processors. These converters utilize a balanced mixer design and a highly stable crystal oscillator, thereby allowing operation in adjacent channel headends. The MCX Series offers excellent image rejection.

Forbidden Conversions	
MCX-V	
VHF INPUT	VHF OUTPUT
2	3,6,21,22,7
3	2,4,5,6,14,15,8,9
4	3,5,16,17,11,12
5	3,4,6,15,19,20,21,26,27
6	2,3,5,17,21,22,7,29
14	3,5,14-22
15	3,5,6,14-22,10,13
16	4,14-22
17	5,6,14-22,7
18	14-22,7,9,10
19	14-22,25
20	5,14-22,8,9,10,13
21	2,5,6,14-22,9,11,25
22	2,6,14-22,7-10,13
7	8,12
8	3,7,9,11
9	3,8,10
10	9,11
11	8,10,12
12	7,11,13
13	12,23
23	4,13,23-36
24	10,23-36
25	9,10,23-36
26	9,23-36
27	5,9,10,13,23-36
28	6,9,23-36
29	8,23-36
30	23-36
31	23-36
32	6,10,23-36
33	23-36
34	9,13,23-36
35	23-36
36	2,3,4,13,23-36
T7	Consult Factory
T8	Consult Factory
T9	Consult Factory
T10	Consult Factory
T11	Consult Factory
T12	Consult Factory
T13	Consult Factory

Forbidden Conversions	
MCX-V/U	
UHF INPUT	VHF OUTPUT
14	20,25,26,27
15	20,26,27
16	20,21,26,27,28
17	21,27,28
18	21,27,28,29
19	21,22,28,29
20	22,28,29,30
21	22,29,30
22	22,7,29,30,31
23	7,30,31
24	7,30,31,32
25	7,8,31,32
26	8,31,32,33
27	8,32,33
28	8,9,32,33,34
29	9,33,34
30	9,33,34,35
31	9,10,34,35
32	10,34,35,36
33	10,35,36
34	10,11,35,36
35-36	11,36
37	11,12
38-39	12
40	12,13
41-42	13
43	13,23
44-45	23
46	23,24
47-48	24
49	24,25
50-51	25
52	25,26
53-54	26
55	26,27
56-57	27
58	27,28
59-60	28
61	28,29
62-63	29
64	29,30
65-66	30
67	30,31
68-69	31

Specifications and Ordering Information are located on the following pages.

# MCX Series

## Channel Converters

### ○ Specifications

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<b>RF</b>	<b>MCX-V</b>	<b>MCX-V/U</b>
Frequency Range		
Input MHz:	5-300	50-300
Output MHz:	5-300	470-806
Flatness dB:	0.5	0.5
Input Signal Level		
Minimum dBmV:	-3.5	-4.5
Recommended dBmV:	+22	+22
Frequency Stability - Max. dBmV:	±25	±25
Selectivity ±9 MHz:	-45	-26
Spurious Outputs-L.O. Related dBmV:	-20	-60
Image Rejection dB:	-55	-55
Hum Modulation dB:	-54	-70
Impedance - All Ports ohm:	75	75
Return Loss		
Input dB:	16	16
Output dB:	18	18
<b>General</b>		
Power Requirements		
Voltage VAC:	117, ±10%	117, ±10%
Frequency Hz:	60	60
Fuse A:	1/8	1/8
Temperature Range °C:	-20 to +50	-20 to +50
<b>Mechanical</b>		
Dimensions (WxHxD)		
in:	19.0 x 1.75 x 5.13	19.0 x 1.75 x 5.13
mm:	483 x 44 x 130	483 x 44 x 130
Weight		
lbs:	5.0	5.0
kg:	2.27	2.27
<b>Connectors (Front Panel)</b>		
RF Input:	"F" Type, Female	"F" Type, Female
RF Output:	"F" Type, Female	"F" Type, Female
<b>Controls (Front Panel)</b>		
Oscillator Fine Tune:	NA	NA
<b>Indicators (Front Panel)</b>		
Power ON:	Neon Bulb	Neon Bulb

Refer to product instruction manual for additional specification measurements and notes.

### ○ Ordering Information

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<b>Model</b>	<b>Description</b>
MCX-V/U	Channel Converter 50-300 MHz (VHF), 470-806 MHz (UHF)
MCX-V	Channel Converter 5-300 MHz (SUB/VHF), 5-300 MHz (SUB/VHF)