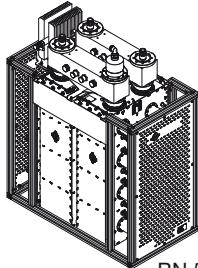
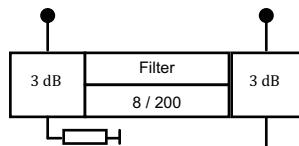
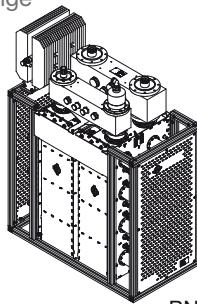


## CCS UHF CIB COMBINERS

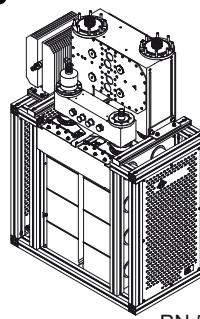
- CCS compact design
- integrated mask filters for DTV
- adjacent channel operation
- for 6, 7 and 8 MHz channel bandwidth
- temperature compensated
- tuneable within the whole UHF range



BN 57 49 65 A0010



BN 57 49 66 A0010



BN 57 49 91 A0020

Part number	BN 57 49 65 A0010	BN 57 49 66 A0010	BN 57 49 91 A0020																																																						
Frequency range		470 - 860 MHz																																																							
Channel spacing		$\geq 0$																																																							
<b>Narrow band input</b>		3 1/8" EIA male																																																							
Filter type integrated cavities/size		<b>8/200 ≡ BN 616544</b>																																																							
Temperature stability		$\leq 2 \text{ kHz} / \text{K}$																																																							
Harmonics attenuation		$\geq 50 \text{ dB}$ for $f \leq 860 \text{ MHz}$																																																							
DTV Mask filtering	DVB-T @ 8 MHz ( $\hat{U}/U_{\text{rms}}=13 \text{ dB}$ )	ISDB-T @ 7 MHz ( $\hat{U}/U_{\text{rms}}=13 \text{ dB}$ )	ATSC @ 6 MHz ( $\hat{U}/U_{\text{rms}}=13 \text{ dB}$ )																																																						
Average input power	<b><math>\leq 8 \text{ kW}</math></b>	<b><math>\leq 6.4 \text{ kW}</math></b>	<b><math>\leq 6.4 \text{ kW}</math></b>																																																						
Tuning instruction	AS8067	AS8074	AS8066																																																						
Insertion loss & Mask filtering (alternative tuning on request)	<table border="0"> <tr> <td>470 MHz</td> <td>860 MHz</td> </tr> <tr> <td><math>f_0</math></td> <td><math>\leq 0.4 \text{ dB}</math></td> <td><math>\leq 0.5 \text{ dB}</math></td> </tr> <tr> <td><math>f_0 \pm 3.805</math></td> <td><math>\leq 1.0 \text{ dB}</math></td> <td><math>\leq 1.4 \text{ dB}</math></td> </tr> <tr> <td><math>f_0 \pm 3.885</math></td> <td><math>\leq 1.5 \text{ dB}</math></td> <td><math>\leq 1.7 \text{ dB}</math></td> </tr> <tr> <td><math>f_0 \pm 4.2</math></td> <td><math>\geq 15 \text{ dB}</math></td> <td><math>f_0 \pm 4.5</math></td> </tr> <tr> <td><math>f_0 \pm 6</math></td> <td><math>\geq 40 \text{ dB}</math></td> <td><math>f_0 \pm 9</math></td> </tr> <tr> <td><math>f_0 \pm 12</math></td> <td><math>\geq 55 \text{ dB}</math></td> <td></td> </tr> </table>	470 MHz	860 MHz	$f_0$	$\leq 0.4 \text{ dB}$	$\leq 0.5 \text{ dB}$	$f_0 \pm 3.805$	$\leq 1.0 \text{ dB}$	$\leq 1.4 \text{ dB}$	$f_0 \pm 3.885$	$\leq 1.5 \text{ dB}$	$\leq 1.7 \text{ dB}$	$f_0 \pm 4.2$	$\geq 15 \text{ dB}$	$f_0 \pm 4.5$	$f_0 \pm 6$	$\geq 40 \text{ dB}$	$f_0 \pm 9$	$f_0 \pm 12$	$\geq 55 \text{ dB}$		<table border="0"> <tr> <td>470 MHz</td> <td>803 MHz</td> </tr> <tr> <td><math>f_0</math></td> <td><math>\leq 0.45 \text{ dB}</math></td> <td><math>\leq 0.5 \text{ dB}</math></td> </tr> <tr> <td><math>f_0 \pm 2.79</math></td> <td><math>\leq 1.20 \text{ dB}</math></td> <td><math>\leq 1.5 \text{ dB}</math></td> </tr> <tr> <td><math>f_0 \pm 3.15</math></td> <td><math>\geq 15 \text{ dB}</math></td> <td><math>f_0 \pm 3.0</math></td> </tr> <tr> <td><math>f_0 \pm 4.5</math></td> <td><math>\geq 30 \text{ dB}</math></td> <td><math>f_0 \pm 3.25</math></td> </tr> <tr> <td><math>f_0 \pm 9</math></td> <td><math>\geq 55 \text{ dB}</math></td> <td><math>f_0 \pm 9</math></td> </tr> </table>	470 MHz	803 MHz	$f_0$	$\leq 0.45 \text{ dB}$	$\leq 0.5 \text{ dB}$	$f_0 \pm 2.79$	$\leq 1.20 \text{ dB}$	$\leq 1.5 \text{ dB}$	$f_0 \pm 3.15$	$\geq 15 \text{ dB}$	$f_0 \pm 3.0$	$f_0 \pm 4.5$	$\geq 30 \text{ dB}$	$f_0 \pm 3.25$	$f_0 \pm 9$	$\geq 55 \text{ dB}$	$f_0 \pm 9$	<table border="0"> <tr> <td>470 MHz</td> <td>820 MHz</td> </tr> <tr> <td><math>f_0</math></td> <td><math>\leq 0.5 \text{ dB}</math></td> <td><math>\leq 0.55 \text{ dB}</math></td> </tr> <tr> <td><math>f_0 \pm 2.69</math></td> <td><math>\leq 1.0 \text{ dB}</math></td> <td><math>\leq 1.30 \text{ dB}</math></td> </tr> <tr> <td><math>f_0 \pm 3.0</math></td> <td><math>\geq 4 \text{ dB}</math></td> <td></td> </tr> <tr> <td><math>f_0 \pm 3.25</math></td> <td><math>\geq 18 \text{ dB}</math></td> <td></td> </tr> <tr> <td><math>f_0 \pm 9</math></td> <td><math>\geq 64 \text{ dB}</math></td> <td></td> </tr> </table>	470 MHz	820 MHz	$f_0$	$\leq 0.5 \text{ dB}$	$\leq 0.55 \text{ dB}$	$f_0 \pm 2.69$	$\leq 1.0 \text{ dB}$	$\leq 1.30 \text{ dB}$	$f_0 \pm 3.0$	$\geq 4 \text{ dB}$		$f_0 \pm 3.25$	$\geq 18 \text{ dB}$		$f_0 \pm 9$	$\geq 64 \text{ dB}$	
470 MHz	860 MHz																																																								
$f_0$	$\leq 0.4 \text{ dB}$	$\leq 0.5 \text{ dB}$																																																							
$f_0 \pm 3.805$	$\leq 1.0 \text{ dB}$	$\leq 1.4 \text{ dB}$																																																							
$f_0 \pm 3.885$	$\leq 1.5 \text{ dB}$	$\leq 1.7 \text{ dB}$																																																							
$f_0 \pm 4.2$	$\geq 15 \text{ dB}$	$f_0 \pm 4.5$																																																							
$f_0 \pm 6$	$\geq 40 \text{ dB}$	$f_0 \pm 9$																																																							
$f_0 \pm 12$	$\geq 55 \text{ dB}$																																																								
470 MHz	803 MHz																																																								
$f_0$	$\leq 0.45 \text{ dB}$	$\leq 0.5 \text{ dB}$																																																							
$f_0 \pm 2.79$	$\leq 1.20 \text{ dB}$	$\leq 1.5 \text{ dB}$																																																							
$f_0 \pm 3.15$	$\geq 15 \text{ dB}$	$f_0 \pm 3.0$																																																							
$f_0 \pm 4.5$	$\geq 30 \text{ dB}$	$f_0 \pm 3.25$																																																							
$f_0 \pm 9$	$\geq 55 \text{ dB}$	$f_0 \pm 9$																																																							
470 MHz	820 MHz																																																								
$f_0$	$\leq 0.5 \text{ dB}$	$\leq 0.55 \text{ dB}$																																																							
$f_0 \pm 2.69$	$\leq 1.0 \text{ dB}$	$\leq 1.30 \text{ dB}$																																																							
$f_0 \pm 3.0$	$\geq 4 \text{ dB}$																																																								
$f_0 \pm 3.25$	$\geq 18 \text{ dB}$																																																								
$f_0 \pm 9$	$\geq 64 \text{ dB}$																																																								
Group delay variation	$\Delta\tau \leq 700 \text{ ns}$	$\Delta\tau \leq 500 \text{ ns}$	$\Delta\tau \leq 400 \text{ ns}$																																																						
<b>Wide band input</b>	3 1/8" EIA male	4 1/2" EIA male	52-120 BT male																																																						
Average input power	$\leq 17.5 \text{ kW}$	$\leq 33 \text{ kW}$	$\leq 60 \text{ kW}$																																																						
Attention:	The power at the wide band input must be reduced by 50 % of the power fed into the narrow band input																																																								
DTV Mask filtering		no																																																							
Insertion loss		$\leq 0.1 \text{ dB}$ (non adjacent)																																																							
<b>Output</b>	3 1/8" EIA male	4 1/2" EIA male	52-120 BT male																																																						
Peak output voltage	$\leq 12.5 \text{ kV}$	$\leq 15.5 \text{ kV}$	$\leq 19.5 \text{ kV}$																																																						
Isolation between inputs		$\geq 35 \text{ dB}$																																																							
VSWR (one WB channel)		$\leq 1.06$																																																							
Dimensions (L x W x H) mm	900 x 480 x 1200	900 x 480 x 1200	900 x 520 x 1400																																																						
Weight	$\approx 175 \text{ kg}$	$\approx 190 \text{ kg}$	$\approx 240 \text{ kg}$																																																						
Environmental conditions	for limitations see „Environmental Conditions for Broadcast Products“																																																								