Contents

Bandpass Filters

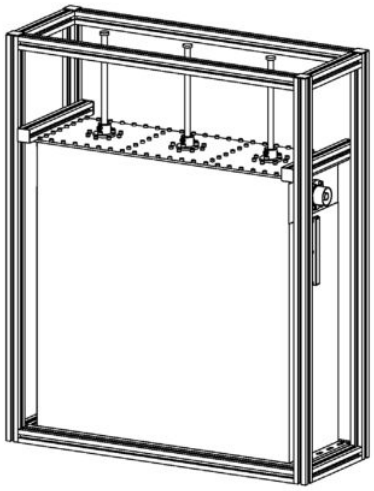
Bandpass filters can be directly applied in radio and television transmission system to regulate the output spectrum of transmitters, and can also be used as an important component to form a multi-channel combiner.

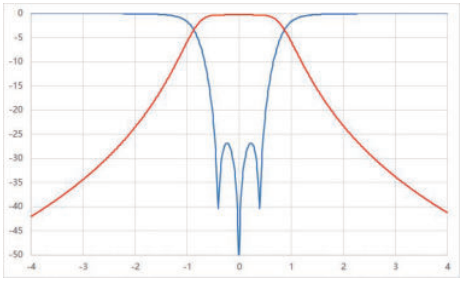
All kinds of bandpass filters that work in different broadcasting and TV band, including Band I (48.5~72.5MHz) , Band II (76~92MHz), FM band (87~108MHz), Band III (167~223MHz), Band IV (470~566MHz) and Band V (606~798MHz). The power levels of these filters range from tens of watts to hundreds of kilowatts.

The bandpass filters contain a variety of resonators to meet different filter design requirements, including 1/4 wavelength coaxial resonators, stepped inpedance coaxial resonators, single-mode waveguide resonators, dual-mode and multi-mode waveguide resonators, helical resonators, etc.

The bandpass filters contain many kinds of topological structures. The number of resonators in the filter varies from two to more than ten. Some filters design cross-couplings between non-adjacent resonators. These filters move some transmission zeros to either low side and/or high side of the transmission passband. These transmission zeros can be symmetrical or asymmetrical in the center frequency of the filter, and they can improve the out-of-band attenuation of the filter and/or smooth the ripple in the passband of the filter.

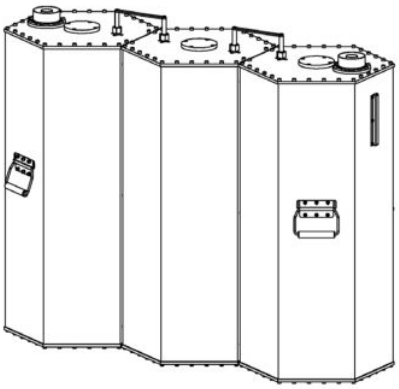
3kW FM Bandpass Filter

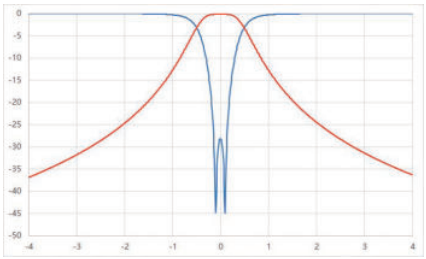


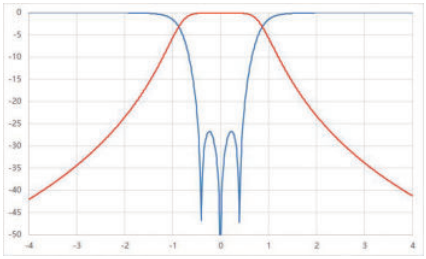


Product Name		3kW FM Bandpass Filter
Frequency Range		87~108MHz
Bandwidth		⩾ 600kHz *
Max Input Power		3kW
VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB
Insertion Loss & Out Band Attenuation	f_0 $f_0 \pm 300kHz$ $f_0 \pm 2MHz$ $f_0 \pm 4MHz$	⩽ 0.30dB ⩽ 0.35dB ⩾ 25dB ** ⩾ 40dB **
Connectors Type		EIA 1 5/8"
Number of Resonators		3
Number of Cross-couplings		0
Environment Temp		-5~55 °C
Dimensions		770×280×930mm
Weight		~45kg

10kW FM Bandpass Filter

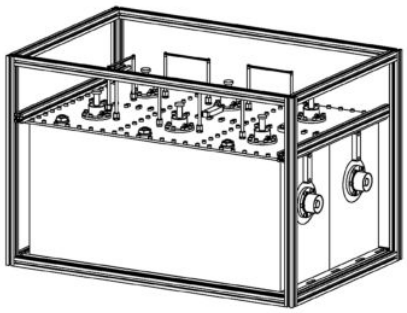


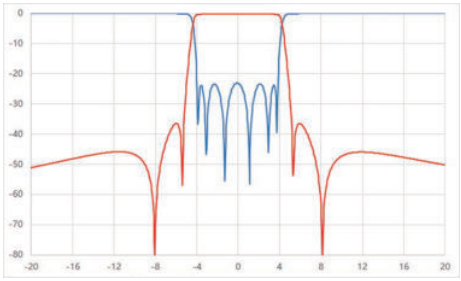




Product Name	10kW FM Bandpass Filter			
Frequency Range	87~108MHz			
Bandwidth	⩾ 600kHz *		⩾ 200kHz *	
Max Input Power	12kW			
VSWR / Return Loss	⩽ 1.10 / ⩾ 26.5dB			
Insertion Loss & Out Band Attenuation	f_0	⩽ 0.15dB	f_0	⩽ 0.20dB
	f_0±300kHz	⩽ 0.20dB	f_0±100kHz	⩽ 0.20dB
	f_0±2MHz	⩾ 25dB **	f_0±2MHz	⩾ 20dB **
	f_0±4MHz	⩾ 40dB **	f_0±4MHz	⩾ 35dB **
Connectors Type	EIA 3 1/8"			
Number of Resonators	3		2	
Number of Cross-couplings	0			
Environment Temp	-5~55 °C			
Dimensions	1220×460×990mm		840×460×990mm	
Weight	~100kg		~70kg	

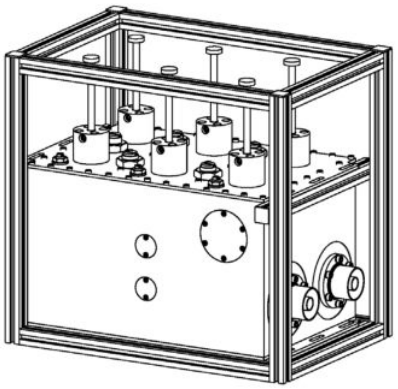
5kW VHF DTV Bandpass Filter

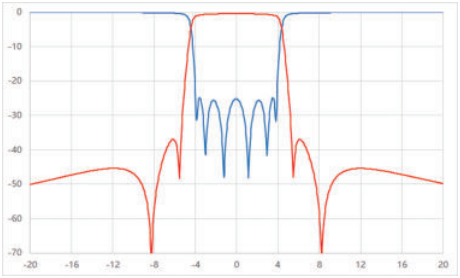




Frequency Range		167~223MHz
Passband / Channel Bandwidth		7.6MHz / 8MHz
Max Input Power		7kW rms
VSWR / Return Loss		⩽ 1.15 / ⩾ 23dB
Insertion Loss & Out Band Attenuation	f_0	⩽ 0.15dB
	$f_0 \pm 3.8$MHz	⩽ 0.40dB
	$f_0 \pm 4.2$MHz	⩾ 1.5dB
	$f_0 \pm 6$MHz	⩾ 35dB
	$f_0 \pm 12$MHz	⩾ 45dB
Connectors Type		EIA 1 5/8"
Number of Resonators		6
Number of Cross-couplings		2
Environment Temp		-5~55 °C
Temp Stability		⩽ 2kHz/°C
Dimensions		740×490×480mm
Weight		~55kg

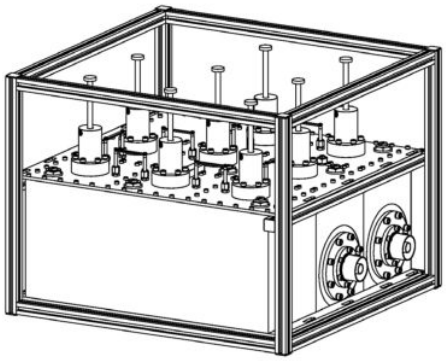
1kW UHF DTV Bandpass Filter

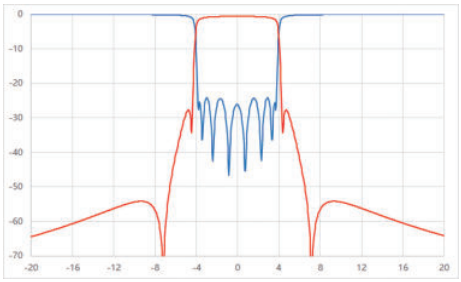




Product Name		1kW UHF DTV Bandpass Filter	
Frequency Range		470~798MHz	
Passband / Channel Bandwidth		7.6MHz / 8MHz *	
Max Input Power		1.3kW rms	
VSWR / Return Loss		⩽ 1.15 / ⩾ 23dB	
Insertion Loss & Out Band Attenuation		470MHz	798MHz
	f_0	⩽ 0.35dB	⩽ 0.40dB
	$f_0 \pm 3.8$MHz	⩽ 0.85dB	⩽ 0.10dB
	$f_0 \pm 4.2$MHz	⩾ 1.5dB	⩾ 1.5dB
	$f_0 \pm 6$MHz	⩾ 35dB	⩾ 35dB
	$f_0 \pm 12$MHz	⩾ 45dB	⩾ 45dB
Connectors Type		EIA 1 5/8"	
Number of Resonators		6	
Number of Cross-couplings		2	
Environment Temp		-5~55 °C	
Temp Stability		⩽ 2kHz/°C	
Dimensions		400×270×370mm	
Weight		~12kg	

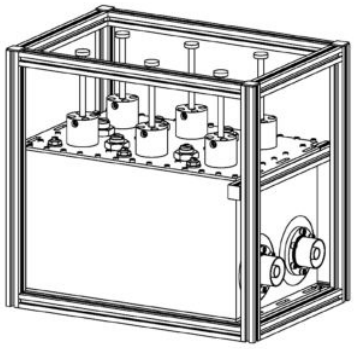
2kW UHF DTV Bandpass Filter





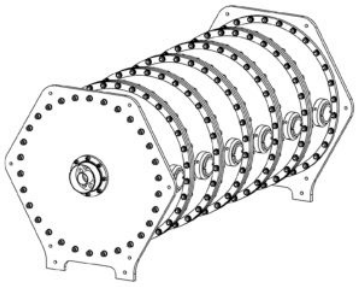
Product Name		2kW UHF DTV Bandpass Filter	
Frequency Range		470~798MHz	
Passband / Channel Bandwidth		7.6MHz / 8MHz	
Max Input Power		2.5kW rms	
VSWR / Return Loss		⩽ 1.15 / ⩾ 23dB	
Insertion Loss & Out Band Attenuation		470MHz	798MHz
	f_0	⩽ 0.45dB	⩽ 0.60dB
	$f_0 \pm 3.8$MHz	⩽ 1.40dB	⩽ 2.00dB
	$f_0 \pm 4.2$MHz	⩾ 15dB	⩾ 15dB
	$f_0 \pm 6$MHz	⩾ 40dB	⩾ 40dB
	$f_0 \pm 12$MHz	⩾ 55dB	⩾ 55dB
Connectors Type		EIA 1 5/8"	
Number of Resonators		8	
Number of Cross-couplings		2	
Environment Temp		-5~55 °C	
Temp Stability		⩽ 2kHz/°C	
Dimensions		530×510×400mm	
Weight		~30kg	

UHF Analog TV Bandpass Filter



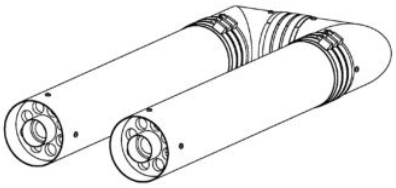
Product Name		1.5kW UHF Analog TV Filter		3kW UHF Analog TV Bandpass Filter	
Frequency Range		470~798MHz		470~798MHz	
Bandwidth		8MHz		8MHz	
Max Input Power		2.5kW peak		4kW peak	
VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB		⩽ 1.10 / ⩾ 26.5dB	
Insertion Loss & Out Band Attenuation	f_0	⩽ 0.25dB	⩽ 0.45dB	⩽ 0.25dB	⩽ 0.40dB
	$f_0 \pm 4$MHz	⩽ 0.30dB	⩽ 0.60dB	⩽ 0.30dB	⩽ 0.55dB
	$f_0 \pm 12$MHz	⩾ 20dB	⩾ 50dB	⩾ 20dB	⩾ 50dB
	$f_0 \pm 20$MHz	⩾ 40dB	⩾ 70dB	⩾ 40dB	⩾ 70dB
Connectors Type		EIA 1 5/8"		EIA 1 5/8"	
Number of Resonators		4*	6*	4*	6*
Number of Cross-couplings		0	0	0	0
Environment Temp		-5~55 ℃		-5~55 ℃	
Temp Stability		⩽ 2kHz/℃		⩽ 2kHz/℃	
Dimensions		290×270×370 mm	400×270×370 mm	380×360×390 mm	530×360×390 mm
Weight		~8kg	~12kg	~14kg	~20kg

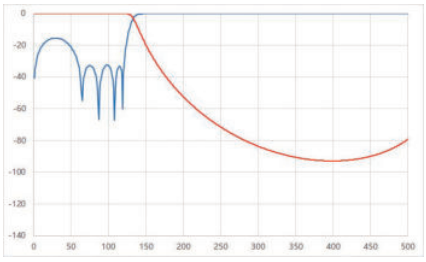
25kW UHF Analog TV Bandpass Waveguide Filter

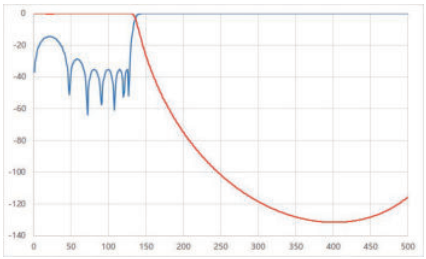


Product Name		25kW UHF Analog TV Waveguide Bandpass Filter			
Frequency Range		470~798MHz		470~798MHz	
Bandwidth		8MHz		8MHz	
Max Input Power		25kW peak			
VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB		⩽ 1.10 / ⩾ 26.5dB	
Insertion Loss & Out Band Attenuation	f_0	⩽ 0.15dB	⩽ 0.15dB	⩽ 0.25dB	⩽ 0.25dB
	$f_0 \pm 4$MHz	⩽ 0.15dB	⩽ 0.15dB	⩽ 0.30dB	⩽ 0.30dB
	$f_0 \pm 12$MHz	⩾ 20dB	⩾ 20dB	⩾ 50dB	⩾ 50dB
	$f_0 \pm 20$MHz	⩾ 40dB	⩾ 40dB	⩾ 70dB	⩾ 70dB
Connectors Type		EIA 3 1/8"			
Number of Resonators		4*	4*	6*	6*
Resonator Type		Single-mode	Dual-mode	Single-mode	Dual-mode
Number of Cross-couplings		0	0	0	0
Environment Temp		-5~55 °C		-5~55 °C	
Temp Stability		⩽ 2kHz/°C		⩽ 2kHz/°C	
Dimensions		Depend on Working Channels			
Weight		Depend on Working Channels			

50kW FM Lowpass Filter

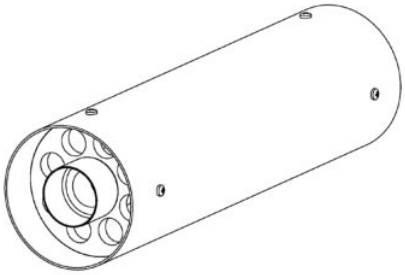


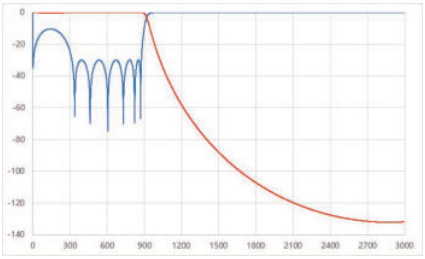


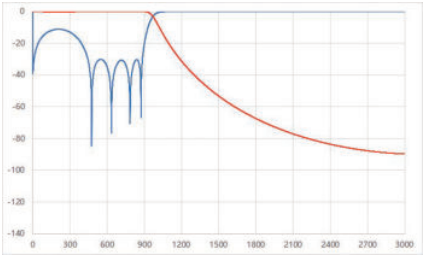


Product Name		50kW FM Lowpass Filter	
Passband Frequency Range		DC~108MHz	
Number of Degrees		11*	15*
Max Input Power		50kW	
VSWR / Return Loss		⩽ 1.08 / ⩾ 28dB	
Insertion Loss & Out Band Attenuation	87~108MHz	⩽ 0.10dB	⩽ 0.10dB
	200MHz	⩾ 50dB	⩾ 70dB
	300MHz	⩾ 80dB	⩾ 100dB
	400MHz	⩾ 80dB	⩾ 120dB
Connectors Type		EIA 4 1/2"	
Environment Temp		-5~55 °C	
Dimensions		700×300×120mm	1000×300×120mm
Weight		~40kg	~50kg

25kW UHF Lowpass Filter

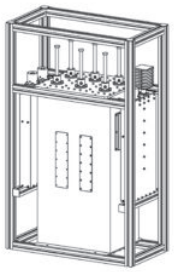






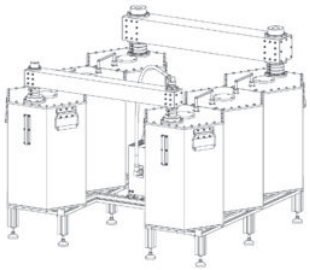
Product Name		25kW VHF Lowpass Filter	
Passband Frequency Range		DC~798MHz	
Number of Degrees		11*	15*
Max Input rms Power		25kW	
Max Input Peak Power		35kW	
VSWR / Return Loss		⩽ 1.08 / ⩾ 28dB	
Insertion Loss & Out Band Attenuation	470~798MHz	⩽ 0.10dB	⩽ 0.10dB
	1100MHz	⩾ 20dB	⩾ 40dB
	1800MHz	⩾ 60dB	⩾ 100dB
	2600MHz	⩾ 80dB	⩾ 120dB
Connectors Type		EIA 4 1/2"	
Environment Temp		-5~55 °C	
Dimensions		ϕ120×290mm	ϕ120×390mm
Weight		~15kg	~20kg

2kW FM CIB Combiner



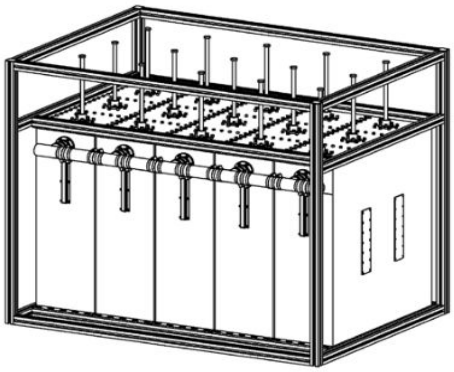
Product Name		2kW FM CIB Combiner		
Frequency Range		87~108MHz		
Min Frequency Spacing		1.2MHz	0.5MHz	0.5MHz
NB Max Input Power		2kW		
NB VSWR / Return Loss		⩽ 1.08 / ⩾ 28dB		
NB Bandwidth		⩾ 600kHz*	⩾ 200kHz	⩾ 200kHz
NB Insertion Loss & Out Band Attenuation		f_0 ⩽ 0.50dB f_0±300kHz ⩽ 0.55dB f_0±2MHz ⩾ 25dB f_0±4MHz ⩾ 40dB	f_0 ⩽ 0.90dB f_0±100kHz ⩽ 1.10dB f_0-500kHz ⩾ 20dB f_0+500kHz ⩾ 20dB f_0±2MHz ⩾ 30dB	f_0 ⩽ 0.90dB f_0±100kHz ⩽ 1.10dB f_0-500kHz ⩾ 20dB f_0+500kHz ⩾ 20dB f_0±2MHz ⩾ 30dB
WB Max Input Power		6kW	6kW	6kW
WB VSWR / Return Loss		⩽ 1.08 / ⩾ 28dB		
WB Insertion Loss		⩽ 0.10dB		
Isolation	NB to WB) WB to NB	⩾ 50dB	⩾ 35dB ⩾ 35dB	⩾ 35dB
Max Output Power		8kW		
Connectors Type	NB WB Output		EIA 1 5/8" EIA 1 5/8" EIA 1 5/8"	
Number of Resonators		3	3	3
Number of Cross-couplings		0	1	1
Environment Temp		-5~55 °C		
Temp Stability		⩽ 2kHz/°C		
Dimensions		590×300×940mm		
Weight		~42kg	~45kg	~45kg

10kW FM CIB Combiner



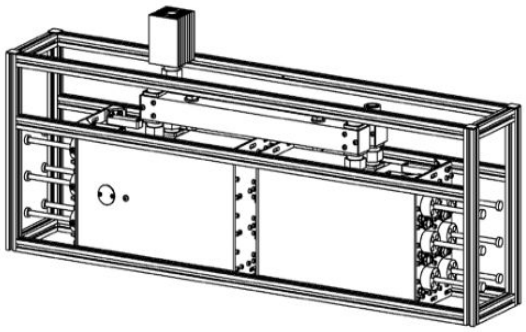
Product Name	10kW FM CIB Combiner			
Frequency Range	87~108MHz			
Min Frequency Spacing	1.2MHz	1.2MHz	0.5MHz	0.5MHz
NB Max Input Power	10kW			
NB VSWR / Return Loss	⩽ 1.08 / ⩾ 28dB			
NB Bandwidth	⩾ 600kHz	⩾ 600kHz	⩾ 200kHz	⩾ 200kHz
NB Insertion Loss & Out Band Attenuation	f_0 ⩽ 0.20dB f_0±300kHz ⩽ 0.25dB f_0±2MHz ⩾ 25dB f_0±4MHz ⩾ 40dB	f_0 ⩽ 0.20dB f_0±300kHz ⩽ 0.25dB f_0±2MHz ⩾ 25dB f_0±4MHz ⩾ 40dB	f_0 ⩽ 0.40dB f_0±100kHz ⩽ 0.45dB f_0-500kHz ⩾ 20dB f_0+500kHz ⩾ 20dB f_0±2MHz ⩾ 30dB	f_0 ⩽ 0.40dB f_0±100kHz ⩽ 0.50dB f_0-500kHz ⩾ 20dB f_0+500kHz ⩾ 20dB f_0±2MHz ⩾ 30dB
WB Max Input Power	15kW	30kW	15kW	15kW
WB VSWR / Return Loss	⩽ 1.08 / ⩾ 28dB			
WB Insertion Loss	⩽ 0.10dB			
Isolation NB to WB	⩾ 35dB			
Isolation WB to NB	⩾ 50dB	⩾ 50dB	⩾ 35dB	⩾ 35dB
Max Output Power	15kW	40kW	15kW	15kW
Connectors Type NB	EIA 1 5/8"	EIA 1 5/8"	EIA 1 5/8"	EIA 1 5/8"
Connectors Type WB	EIA 1 5/8"	EIA 3 1/8"	EIA 1 5/8"	EIA 1 5/8"
Connectors Type Output	EIA 1 5/8"	EIA 3 1/8"	EIA 1 5/8"	EIA 1 5/8"
Number of Resonators	3	3	3	3
Number of Cross-couplings	0	0	1	1
Environment Temp	-5~55 ℃			
Temp Stability	⩽ 2kHz/℃			
Dimensions	1260×1220×870mm			
Weight	~170kg	~210kg	~220kg	~220kg

3kW FM Manifold Combiner



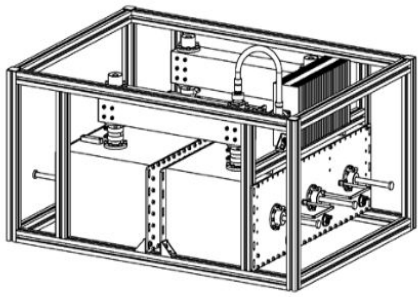
Product Name	3kW FM Manifold Combiner			
Frequency Range	87~108MHz			
Number of Inputs	2	3	4	5
Min Frequency Spacing	1.0MHz			
Max Single Input Power	3kW			
VSWR / Return Loss	⩽ 1.08 / ⩾ 28dB			
Insertion Loss	⩽ 0.40dB			
Bandwidth	⩾ 200kHz			
Isolation	⩾ 40dB			
Input connectors Type	EIA 1 5/8"			
Output connector Type	EIA 1 5/8" or EIA 3 1/8"			
Number of Resonators	3			
Number of Cross-couplings	0 or 1			
Environment Temp	-5~55 °C			
Temp Stability	⩽ 2kHz/°C			
Dimensions	Depend on Working Channels			
Weight	Depend on Working Channels			

1kW VHF DTV CIB Combiner



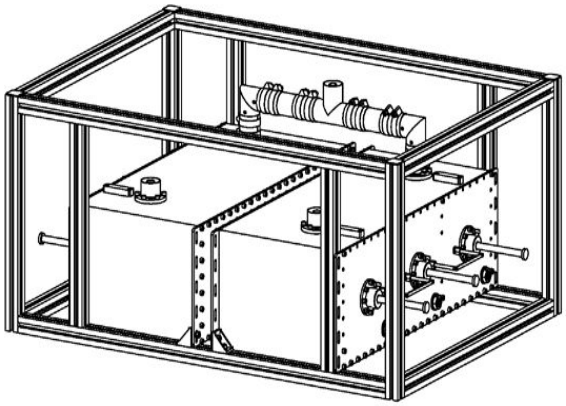
Product Name		1kW VHF DTV CIB Combine
Frequency Range		167~223MHz
Min Frequency Spacing		0
NB Max Input Power		1kW rms
NB VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB
NB Bandwidth		7.6MHz
NB Insertion Loss & Out Band Attenuation		f_0 ⩽ 0.50dB f_0±3.8MHz ⩽ 1.25dB f_0±4.2MHz ⩾ 4dB f_0±6MHz ⩾ 20dB f_0±12MHz ⩾ 40dB
WB Max Input Power		3kW rms
WB VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB
WB Insertion Loss		⩽ 0.10dB
Isolation	NB to WB	⩾ 35dB
	WB to NB	⩾ 50dB(non-adjacent channels) / ⩾ 35dB(adjacent channels)
Max Output Power		4kW rms
Connectors Type	NB	DIN 7/16(F)
	WB	DIN 7/16(F)
	Output	DIN 7/16(F)
Number of Resonators		6
Number of Cross-couplings		2
Environment Temp		-5~55 °C
Temp Stability		⩽ 2kHz/°C
Dimensions		960×170×330mm
Weight		~20kg

15kW VHF Analog TV CIB Combiner

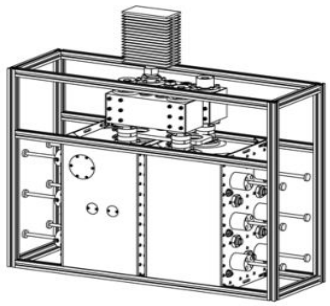


Product Name		15kW VHF Analog TV CIB Combiner		
Frequency Range		167~223MHz		
Min Channel Spacing		2	1	1
NB Max Input Power		15kW Peak		
NB VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB		
NB Bandwidth		8MHz		
NB Insertion Loss & Out Band Attenuation		f_0 ⩽ 0.10dB f_0±4MHz ⩽ 0.10dB f_0±12MHz ⩾ 10dB f_0±20MHz ⩾ 20dB	f_0 ⩽ 0.15dB f_0±4MHz ⩽ 0.15dB f_0±12MHz ⩾ 20dB f_0±20MHz ⩾ 40dB	f_0 ⩽ 0.20dB f_0±4MHz ⩽ 0.30dB f_0±12MHz ⩾ 50dB f_0±20MHz ⩾ 70dB
WB Max Input Power		45kW Peak		
WB VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB		
WB Insertion Loss		⩽ 0.10dB		
Isolation	NB to WB WB to NB	⩾ 35dB ⩾ 45dB		
Max Output Power		45kW Peak		
Connectors Type	NB WB Output	EIA 3 1/8" EIA 3 1/8" EIA 3 1/8"		
Number of Resonators		3	4	6
Number of Cross-couplings		0	0	0
Environment Temp		-5~55 °C		
Temp Stability		⩽ 2kHz/℃		
Dimensions		970×710×440mm	930×500×650mm	930×500×860mm
Weight		~70kg	~90kg	~120kg

7.5kW VHF Analog TV Starpoint Combiner

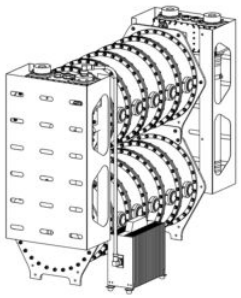


Product Name		7.5kW VHF Analog TV Starpoint Combiner	
Frequency Range		470~798MHz	
Min Frequency Spacing	4	2	1
Max Single Input Power		7.5kW	
VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB	
Insertion Loss	⩽ 0.10dB	⩽ 0.10dB	⩽ 0.20dB
Bandwidth		8MHz	
Isolation		⩾ 40dB	
Input connectors Type		EIA 1 5/8"or EIA 3 1/8"	
Output connector Type		EIA 3 1/8"	
Number of Resonators	3	4	6
Number of Cross-couplings	0	0	0
Environment Temp		-5~55 °C	
Temp Stability		⩽ 2kHz/°C	
Dimensions		Depend on Working Channels	
Weight		Depend on Working Channels	



2kW UHF DTV CIB Combiner

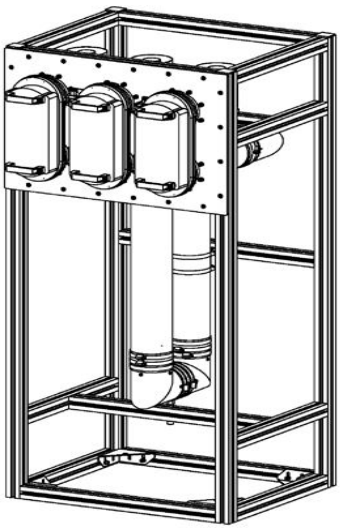
Product Name		2kW UHF DTV CIB Combiner	
Frequency Range		470~798MHz	
Min Channel Spacing		0	
NB Max Input Power		2kW rms	
NB VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB	
NB Bandwidth		7.6MHz	
NB Insertion Loss & Out Band Attenuation		470 MHz f_0 ⩽ 0.40dB f_0±3.8MHz ⩽ 0.90dB f_0±4.2MHz ⩾ 4dB** f_0±6MHz ⩾ 20dB** f_0±12MHz ⩾ 40dB**	798 MHz f_0 ⩽ 0.45dB f_0±3.8MHz ⩽ 1.15dB f_0±4.2MHz ⩾ 4dB** f_0±6MHz ⩾ 20dB** f_0±12MHz ⩾ 40dB**
WB Max Input Power		5.5kW rms	
WB VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB	
WB Insertion Loss		⩽ 0.10dB	
Isolation	NB to WB	⩾ 35dB	
	WB to NB	⩾ 50dB(non-adjacent channels) / ⩾ 35dB(adjacent channels)	
Max Output Power		5.5kW rms	
Connectors Type	NB	EIA 1 5/8"	
	WB	EIA 1 5/8"	
	Output	EIA 1 5/8"	
Number of Resonators		6	
Number of Cross-couplings		2	
Environment Temp		-5~55 ℃	
Temp Stability		⩽ 2kHz/℃	
Dimensions		720×240×710mm	
Weight		~35kg	



25kW UHF Analog TV Waveguide CIB Combiner

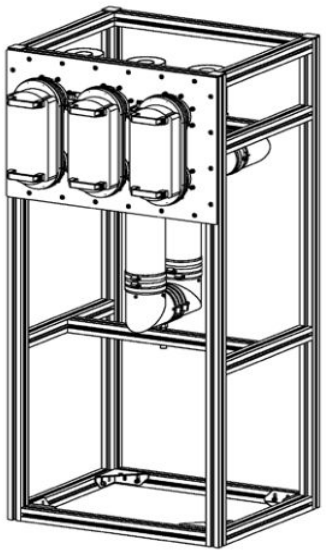
Product Name		25kW UHF Analog TV Waveguide CIB Combiner					
Frequency Range		470~798MHz					
Min Channel Spacing		2	2	1	1	1	1
NB Max Input Power		25KW Peak					
NB VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB					
NB Bandwidth		8MHz					
NB Insertion Loss & Out Band Attenuation		f_0 ⩽ 0.15dB f_0±4MHz ⩽ 0.15dB f_0±12MHz ⩾ 10dB f_0±20MHz ⩾ 20dB		f_0 ⩽ 0.20dB f_0±4MHz ⩽ 0.25dB f_0±12MHz ⩾ 20dB f_0±20MHz ⩾ 40dB		f_0 ⩽ 0.35dB f_0±4MHz ⩽ 0.45dB f_0±12MHz ⩾ 50dB f_0±20MHz ⩾ 70dB	
WB Max Input Power		25kW Peak	40kW Peak	25kW Peak	40kW Peak	25kW Peak	40kW Peak
WB VSWR / Return Loss		⩽ 1.10 / ⩾ 26.5dB					
WB Insertion Loss		⩽ 0.10dB					
Isolation	NB to WB WB to NB	⩾ 35dB ⩾ 45dB					
Max Output Power		25kW Peak	40kW Peak	25kW Peak	40kW Peak	25kW Peak	40kW Peak
Connectors Type	NB	EIA 3 1/8"					
	WB	EIA 3 1/8"	EIA 4 1/2"	EIA 3 1/8"	EIA 4 1/2"	EIA 3 1/8"	EIA 4 1/2"
	Output	EIA 3 1/8"	EIA 4 1/2"	EIA 3 1/8"	EIA 4 1/2"	EIA 3 1/8"	EIA 4 1/2"
Number of Resonators		3	3	4	4	6	6
Number of Cross-couplings		0	0	0	0	0	0
Waveguide Mode		Single Mode					
Environment Temp		-5~55 °C					
Temp Stability		⩽ 2kHz/°C					
Dimensions		Depend on Working Channels					
Weight		Depend on Working Channels					

FM Antenna Patch Pannel



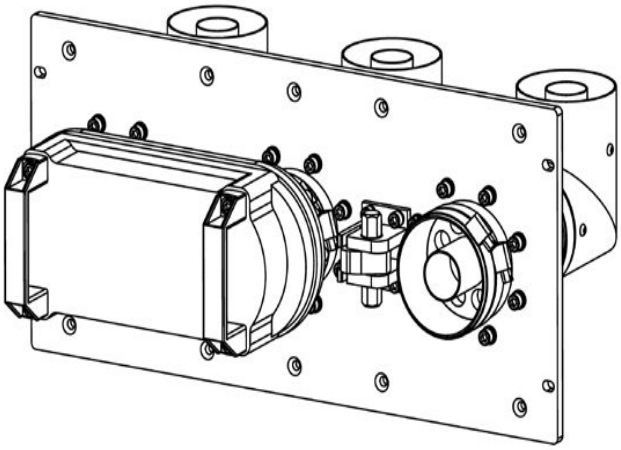
Product Name	15kW FM Antenna Patch Pannel	45kW FM Antenna Patch Pannel	75kW FM Antenna Patch Pannel	95kW FM Antenna Patch Pannel
Frequency Range	87 ~ 108MHz			
Power divider structure	Direct Divide Model			
Switch Mode	Manual			
Max Input Power	15kW	45kW	75kW	95kW
VSWR / Return Loss	⩽ 1.06 / ⩾ 30.5dB			
Insertion Loss	⩽ 0.10dB			
Isolation	⩾ 60dB			
Output Phase Difference	⩽ 1°			
Number of Ports	6			
Input Connector Type	EIA 1 5/8"	EIA 3 1/8"	EIA 4 1/2"	EIA 4 7/8"
Output Connectors Type	EIA 1 5/8"	EIA 1 5/8"or EIA 3 1/8"	EIA 3 1/8"or EIA 4 1/2"	EIA 4 1/2"or EIA 4 7/8"
Dimensions	400×650×1440mm	520×680×1440mm	650 × 710 × 1440 mm	800×800×1440mm
Weight	~60kg	~75kg	~ 110 kg	~150kg

VHF Antenna Patch Pannel



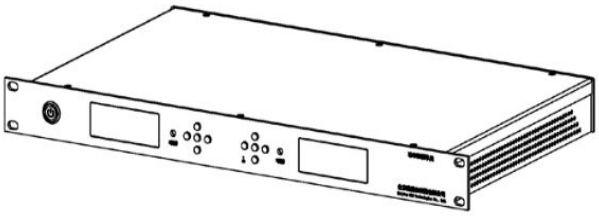
Product Name	10kW VHF Antenna Patch Pannel	30kW VHF Antenna Patch Pannel	50kW VHF Antenna Patch Pannel	60kW VHF Antenna Patch Pannel
Frequency Range	167~223MHz			
Power divider structure	Direct Divide Model			
Switch Mode	Manual			
Max Input Power	10kW rms	30kW rms	50kW rms	60kW rms
VSWR / Return Loss	⩽ 1.08 / ⩾ 28dB			
Insertion Loss	⩽ 0.10dB			
Isolation	⩾ 60dB			
Output Phase Difference	⩽ 1°			
Number of Ports	6			
Input Connector Type	EIA 1 5/8"	EIA 3 1/8"	EIA 4 1/2"	EIA 4 7/8"
Output Connectors Type	EIA 1 5/8"	EIA 1 5/8"or EIA 3 1/8"	EIA 3 1/8"or EIA 4 1/2"	EIA 4 1/2"or EIA 4 7/8"
Dimensions	400×650×1440mm	520×680×1440mm	650×710×1440mm	800×800×1440mm
Weight	~60kg	~70kg	~105kg	~140kg

Broadband Switch Patch Pannel



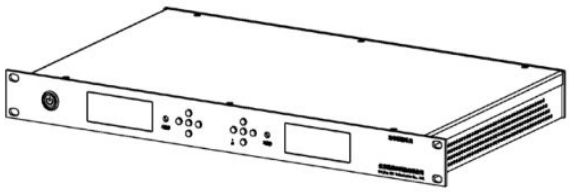
Product Name	Broadband Switch Patch Pannel					
Frequency Range	DC ~ 1GHz					
Switch Mode	Manual					
Switch Function	1 in & 2 out	1 in & 3 out	2 in & 2 out	1 in & 2 out	1 in & 3 out	2 in & 2 out
Max Input Power	Depend on Frequency and Connectors Type					
VSWR / Return Loss	⩽ 1.06 / ⩾ 30.5dB					
Insertion Loss	⩽ 0.10dB					
Isolation	⩾ 60dB					
Number of Ports	3	4	4	3	4	4
Input Connector Type	EIA 1 5/8"	EIA 1 5/8"	EIA 1 5/8"	EIA 3 1/8"	EIA 3 1/8"	EIA 3 1/8"
Output Connectors Type	EIA 1 5/8"	EIA 1 5/8"	EIA 1 5/8"	EIA 3 1/8"	EIA 3 1/8"	EIA 3 1/8"
Dimensions	483×177×350mm (4U)	483×266×350mm (6U)	483×266×350mm (6U)	483×222×350mm (5U)	483×355×350mm (8U)	483×355×350mm (8U)
Weight	~12kg	~15kg	~15kg	~15kg	~20kg	~20kg

FM Power Monitoring and Display System



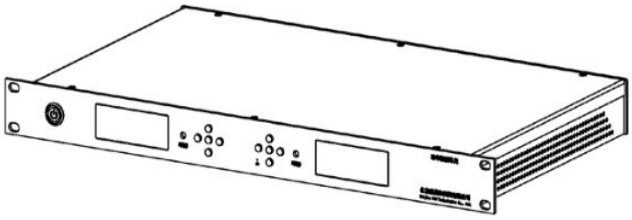
Product Name	EIA 1 5/8" FM Power Monitoring and Display System	EIA 3 1/8" FM Power Monitoring and Display System	EIA 4 1/2" FM Power Monitoring and Display System
Frequency Range		87~108MHz	
Insertion Loss		⩽ 0.10dB	
Main Path VSWR / Return Loss		⩽ 1.06 / ⩾ 30.5dB	
Main Path Connector Type	EIA 1 5/8"	EIA 3 1/8"	EIA 4 1/2"
Max Main Path Input Power	15kW	45kW	75kW
Coupled Connector Type		N(F)	
Number of Forward Monitoring Port	2*	2*	2*
Number of Backward Monitoring Port	2*	2*	2*
Directivity		⩾ 33dB	
Input Power Range		-40~+10dBm	
Supply Voltage		AC 220V / 50Hz	
Dimensions		483×300×44.5mm (1U)	
Weight		~6kg	

VHF Power Monitoring and Display System



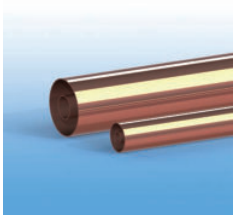
Frequency Range		167~223MHz	
Insertion Loss		⩽ 0.10dB	
Main Path VSWR / Return Loss		⩽ 1.06 / ⩾ 30.5dB	
Main Path Connector Type	EIA 1 5/8"	EIA 3 1/8"	EIA 4 1/2"
Max Main Path Input Power	10kW rms	30kW rms	40kW rms
Coupled Connector Type		N(F)	
Number of Forward Monitoring Port	2*	2*	2*
Number of Backward Monitoring Port	2*	2*	2*
Directivity		⩾ 33dB	
Input Power Range		-40~+10dBm	
Supply Voltage		AC 220V / 50Hz	
Dimensions		483×300×44.5mm (1U)	
Weight		~6kg	

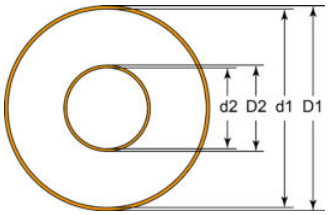
UHF Power Monitoring and Display System



Frequency Range		470~798MHz	
Insertion Loss		⩽ 0.10dB	
Main Path VSWR / Return Loss		⩽ 1.06 / ⩾ 30.5dB	
Main Path Connector Type	EIA 1 5/8"	EIA 3 1/8"	EIA 4 1/2"
Max Main Path Input Power	5.5kW rms	15kW rms	25kW rms
Coupled Connector Type		N(F)	
Number of Forward Monitoring Port	2*	2*	2*
Number of Backward Monitoring Port	2*	2*	2*
Directivity		⩾ 33dB	
Display Unit			
Input Power Range		-40~+10dBm	
Supply Voltage		AC 220V / 50Hz	
Dimensions		483×300×44.5mm (1U)	
Weight		~6kg	

Coaxial Rigid Line

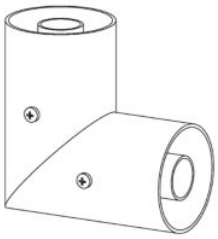


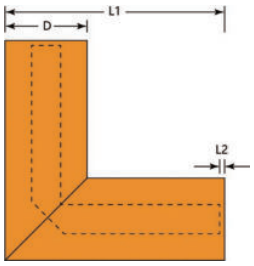


Made of high quality copper.
Various tube size.
Suitable for national and international standards.
Good straightness and excellent surface finish.
Equipped with inner support.
Low insertion loss and return loss.

Product Name		EIA 7/8" Coaxial Rigid line	EIA 1 5/8" Coaxial Rigid line	EIA 3 1/8" Coaxial Rigid line	EIA 4 1/2" Coaxial Rigid line
Frequency Range		DC~1GHz	DC~1GHz	DC~1GHz	DC~1GHz
Material		Copper			
Impedance		50 Ω			
VSWR / Return Loss		⩽ 1.06 / ⩾ 30.7dB	⩽ 1.08 / ⩾ 28.3dB	⩽ 1.10 / ⩾ 26.4dB	⩽ 1.10 / ⩾ 26.4dB
Dimensions	D1 (mm)	22.2	41.3	79.4	106.0
	d1 (mm)	20.0	38.8	76.8	103.0
	D2 (mm)	8.7	16.9	33.4	44.8
	d2 (mm)	7.4	15.0	31.3	42.8
Linear Density		~0.8kg/m	~1.8kg/m	~3.8kg/m	~5.6kg/m

Right Angle Elbows

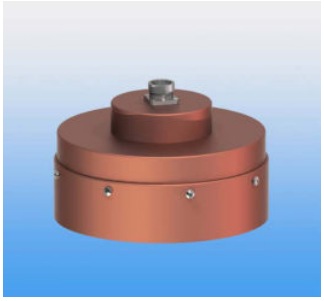




Made of high quality copper and silver-plated brass.
Various tube size.
Suitable for national and international standards.
Low insertion loss and return loss.
Leading production technology, and excellent product consistency.

Product Name		EIA 7/8" Right Angle Elbow	EIA 1 5/8" Right Angle Elbow	EIA 3 1/8"Right Angle Elbow	EIA 4 1/2"Right Angle Elbow
Frequency Range		DC~1GHz	DC~1GHz	DC~1GHz	DC~1GHz
Impedance		50 Ω			
VSWR / Return Loss		⩽ 1.06 / ⩾ 30.7dB	⩽ 1.08 / ⩾ 28.3dB	⩽ 1.10 / ⩾ 26.5dB	⩽ 1.10 / ⩾ 26.5dB
Dimensions	D (mm)	22.2	41.3	79.4	106.0
	L1 (mm)	50.0	75.0	119.7	148.0
	L2 (mm)	1.5	1.5	1.5	1.5
Weight		~0.2kg	~0.3kg	~1.2kg	~2.2kg

Coaxial Adapters

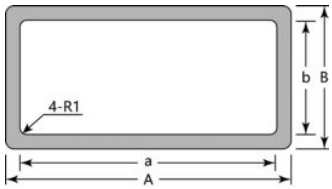


Made of high quality copper and silver-plated brass.
Various tube size.
Suitable for national and international standards.
Low insertion loss and return loss.
Leading production technology, and excellent product consistency.

	N(M)	N(F)	DIN716(M)	DIN716(F)	EIA 7/8"	EIA 1 5/8"	EIA 3 1/8"	EIA 4 1/2"	EIA 4 7/8"	EIA 6 1/8"	EIA 9 3/16"
N(M)	✓	✓	✓	✓							
N(F)		✓	✓	✓							
DIN716(M)			✓	✓	✓	✓	✓				
DIN716(F)				✓	✓	✓	✓	✓	✓	✓	✓
EIA 7/8"						✓					
EIA 1 5/8"							✓				
EIA 3 1/8"								✓	✓	✓	✓
EIA 4 1/2"									✓	✓	✓
EIA 4 7/8"										✓	✓
EIA 6 1/8"											✓
EIA 9 3/16"											

Frequency Range	Depend on Connctors Type
Impedance	50 Ω
VSWR / Return Loss	⩽ 1.10 / ⩾ 26.5dB
Dimensions	Depend on Connctors Type
Weight	Depend on Connctors Type

Rectangular Waveguide



Made of high quality silver-plated brass or aluminum alloy.
Various tube size.
Suitable for national and international standards.
Good straightness and excellent surface finish.
Low insertion loss and return loss.

Product Name		WR1800 Rectangular Waveguide	WR1500 Rectangular Waveguide	WR1150 Rectangular Waveguide	WR975 Rectangular Waveguide
TE10 Mode Cut-off Freq		328MHz	393MHz	513MHz	605MHz
Master Mode Frequency Range		410~620MHz	490~750MHz	640~980MHz	760~1150MHz
Material		Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy
VSWR / Return Loss		⩽ 1.10 / ⩾ 26.4dB			
Dimensions	D1 (mm)	457.2	381.0	292.1	247.65
	d1 (mm)	228.6	190.5	146.05	123.82
	D2 (mm)	-	-	-	-
	d2 (mm)	-	-	-	-
	R1 (mm)	1.5	1.5	1.5	1.2
Linear Density		~ 21.9kg/m	~ 18.8kg/m	~ 9.9kg/m	~ 7.6kg/m

Product Name		WR770 Rectangular Waveguide	WR650 Rectangular Waveguide	WR510 Rectangular Waveguide	WR430 Rectangular Waveguide
TE10 Mode Cut-off Freq		766MHz	908MHz	1.157GHz	1.372GHz
Master Mode Frequency Range		0.96~1.46GHz	1.13~1.73GHz	1.45~2.20GHz	1.72~2.61GHz
Material		Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy
VSWR / Return Loss		⩽ 1.10 / ⩾ 26.4dB			
Dimensions	D1 (mm)	195.58	165.1	129.54	109.22
	d1 (mm)	97.79	82.55	64.77	54.61
	D2 (mm)	-	169.16	133.6	113.28
	d2 (mm)	-	86.61	68.83	58.67
	R1 (mm)	1.2	1.2	1.2	1.2
Linear Density		~6.5kg/m	~5.1kg/m	~2.8kg/m	~2.2kg/m