

VHF/UHF Band Filters and Combiners General Catalogue

Edition 07/2006

NOTICE

General Information

The informations and components/systems description contained in this catalog , are correct at the time of publication , Delta Meccanica ,however, maintains a policy of continuous improvement of its products to increase reliability and performances , for these reasons Delta Meccanica reserves the right at any time to discontinue or change specifications, designs , features , models or equipments without incurring in obligation.

The illustrations reported on this catalog show the typical construction , they may not represent full detail or an exact shape of the equipments.

General technical features

All equipments are built employing materials having best R.F. response, like aluminum, brass and copper. Beryllium copper is used for some contacts like fingers.

All manufacturing processes are under control so that parameters and tolerances are fully comply with the related design.

Each device is shipped complete with the factory test report. All filters/combiners have serial number so that will be easier to delivery, even after many years from the delivery date, if required, the right spare parts, and customers may also ask for a copy of the original factory test report we maintain in our records.

High-mech for high-tech

Delta Meccanica is a high-mechanics Italian company specialised in design and manufacture of coaxial systems for broadcasting applications. Matching CAD technology with highly skilled personnel experience is the spirit that underlines our design, manufacture and control activities. All our products are always built in compliance with the tough specifications released by radio and TV broadcasters, technical committees, all over the world.

System integration solutions

Nowadays the technology integration in the telecommunication field is moving quickly; the pervasion of information technology and interconnecting network will produce tangible benefits. Our experience, use of a flexible design techniques and a close contact with our customers give us the knowledge to contribute to this convergence. Delta Meccanica offers a strong capability in the system engineering integration of radiating system, radio frequency filters, transmitting system and any other ancillary devices.



Year	2002
Product	3x4kW UHF Constant Impedance Combiner with Broad Band filtered
Customer	A.V.T
Country	Guadalupe



Year	2003
Product	8X1kW FM Twin Combiner System
Customer	S.R.G
Country	France

Simplicity and strength

Delta Meccanica stands for simplicity and rationality. Our products are the final result of innovative design and reliable manufacturing technologies. We therefore guarantee long lasting duration and quality/price best compromise.

Business activities

Delta Meccanica, besides its traditional activity related to design and manufacture of passive components for RF applications, has recently developed and widened its area of interest towards precision mechanics and mechanic components for electronic, aeronautic and food industry.

Broadcast products and services:

- RF filters and patch panel for analog and digital signals
- RF combiners for analog and digital signals
- RF couplers and ancillary devices
- RF systems customised design



Experience, quality and service

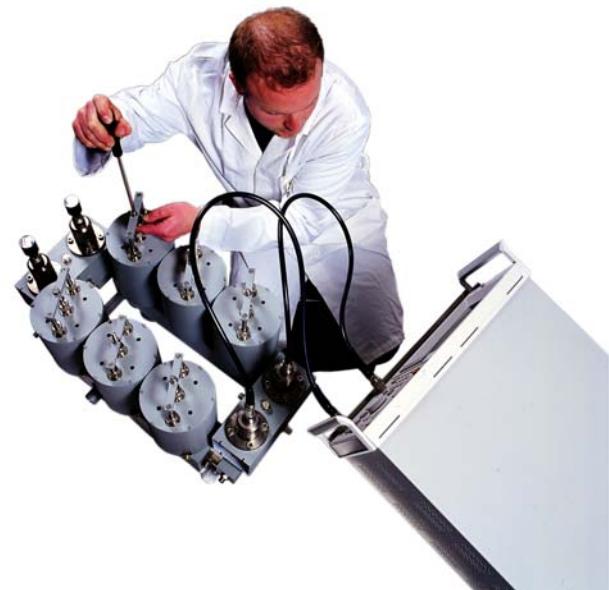
Delta Meccanica was founded in the 1991 year by highly skilled technicians specialised in mechanics and electronics; today the company is certified according to ISO 9001 standard.

Our long lasting experience gives us the right knowledge and sensibility to offer our customers flexible and smart solutions. Every need is met also with tailor-made products. All our products are continuously checked and tested during manufacture and set-up activities.

Year	2000
Product	8X1kW FM Radio Combiner
Customer	Towercast
Country	France



Standard Product 4x1.2kW FM Star Point Combiner



PRODUCT INDEX

- o VHF/UHF Band Pass + Notch Filters
- o DVB Filters
- o Notch Filters
- o Channels TV Combiners
- o Audio/Video Combiners
- o Custom Products

Note:

Delta Meccanica offers many solutions of RF systems and components, seek for the others catalogues

RF Components and Accessories

PRODUCT INDEX

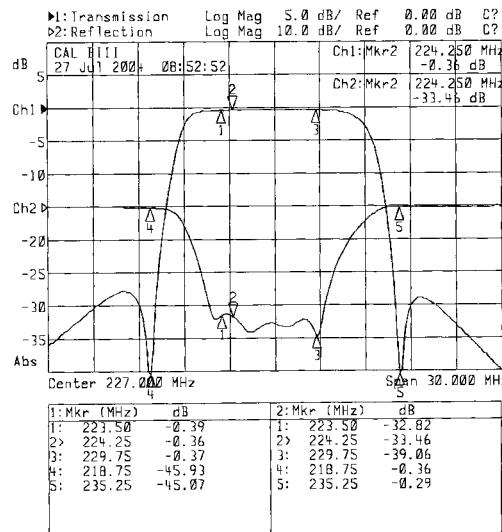
- o Passive components
 - Coaxial Rigid Line
 - Elbows
 - Unflanged Elbows
 - Flanged/Unflanged Elbows
 - Flanged Elbows
 - Inners - Anchor Insulator Connectors
 - Flanges
 - Straight Adaptors
 - Coaxial Adaptors
- o Directional Couplers
- o Hybrid Couplers
- o Dummy Loads
- o Motorized coaxial switches
- o Patch Panels
- o Switching units

FM-Radio Band Filters and Combiners

PRODUCT INDEX

- o FM-Radio Low Pass Filters
- o FM-Radio Band Pass Filters
 - FM Band Pass Filters double cavity
 - FM Band Pass Filters triple cavity
- o DAB Filters
- o Notch Filters
- o FM-Radio Combiners
 - FM-Radio Star Combiner
 - FM-Radio Constant Impedance Combiner
- o Custom Products

VHF/UHF TV FILTERS

Band III**500W VHF 2Notches+4Poles Band Pass Filter****Mechanical Characteristics**

Connections	N or DIN 7/16
Overall dimensions [WxDxH] [mm.]	316x330x50
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	5

Electrical Characteristics

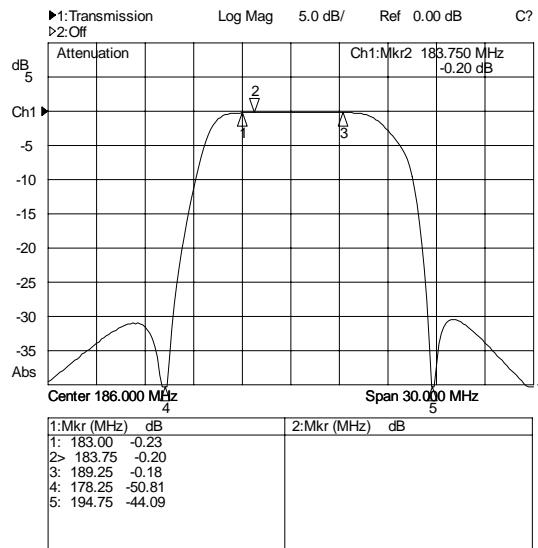
Frequency Range [MHz]	170 ÷ 230
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	500
Insertion Loss [dB] @ V.C.	< 0.45
Maximum amplitude variation [dB]	0.15
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 35
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	30

Technical data sheet

Part Number **1448-4-N**

Band III

1.5kW VHF 2Notches+4Poles Band Pass Filter

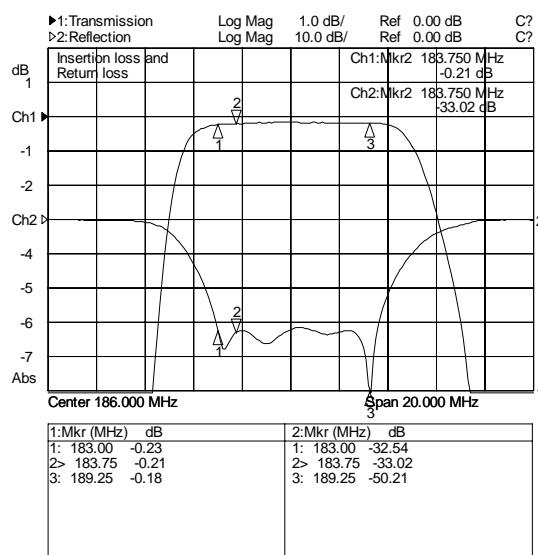


Mechanical Characteristics

Connections	DIN 7/16
Overall dimensions [WxDxH] [mm.]	421x462x70
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	13.5

Electrical Characteristics

Frequency Range [MHz]	170 ÷ 230
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	1500
Insertion Loss [dB] @ V.C.	< 0.3
Maximum amplitude variation [dB]	0.1
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 40
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	30



All data contained in this technical sheet are not binding and can be changed without notice

Data updating 03/06/2005

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Technical data sheet

Part Number **1619-4-N**

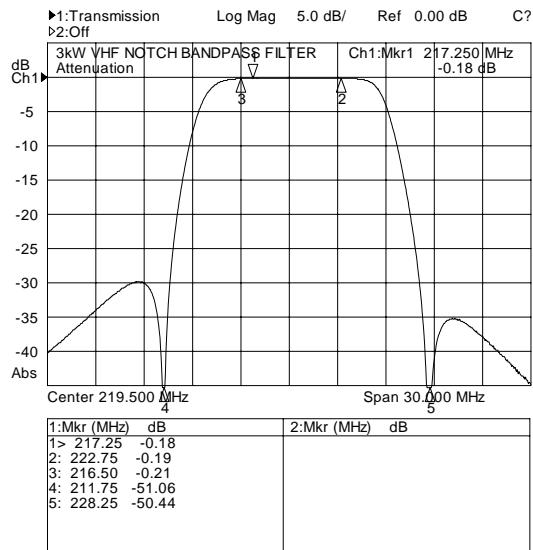
Band-pass filter

Band III

3kW VHF 2Notches+4Poles Band Pass Filter



NEW !

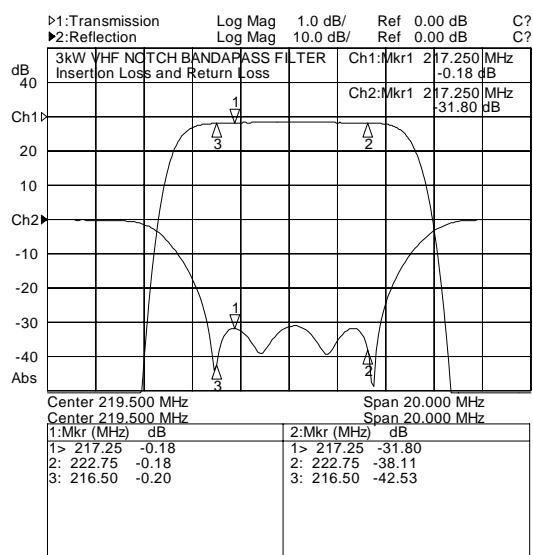


Mechanical Characteristics

Connections	EIA 7/8"
Overall dimensions [WxDxH] [mm.]	496x525x77
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	20

Electrical Characteristics

Frequency Range [MHz]	170 ÷ 230
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	3000
Insertion Loss [dB] @ V.C.	< 0.2
Maximum amplitude variation [dB]	0.05
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 40
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	30



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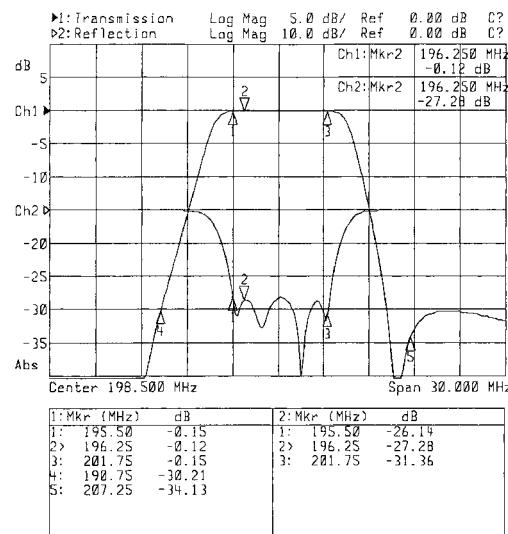
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Band III

5kW VHF 4 Poles Band Pass Filter with Cross Coupling



Mechanical Characteristics

Connections	EIA 1 5/8"
Overall dimensions [WxDxH] [mm.]	428x425x600
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	20

Electrical Characteristics

Frequency Range [MHz]	170 ÷ 230
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	5000
Insertion Loss [dB] @ V.C.	< 0.2
Maximum amplitude variation [dB]	0.05
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 30
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	10

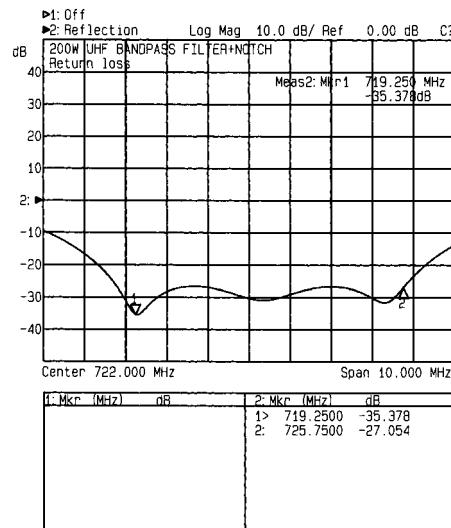
Technical data sheet

Part Number 1425

Notch/band-pass configuration

Band IV/V

200W UHF 2Notches+3Poles Band Pass Filter

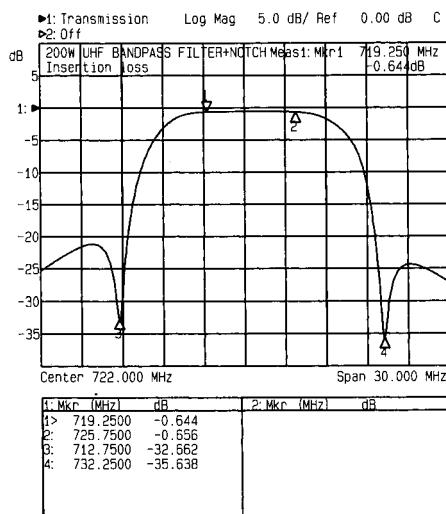


Mechanical Characteristics

Connections	N or SMA on request
Overall dimensions [WxDxH] [mm.]	209x100x34
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	1.2

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	200
Insertion Loss [dB] @ V.C.	0.65
Maximum amplitude variation [dB]	0.05
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 25
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	10



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Data updating 26/08/2005

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Band IV/V

500W UHF 2Notches+3Poles Band Pass Filter

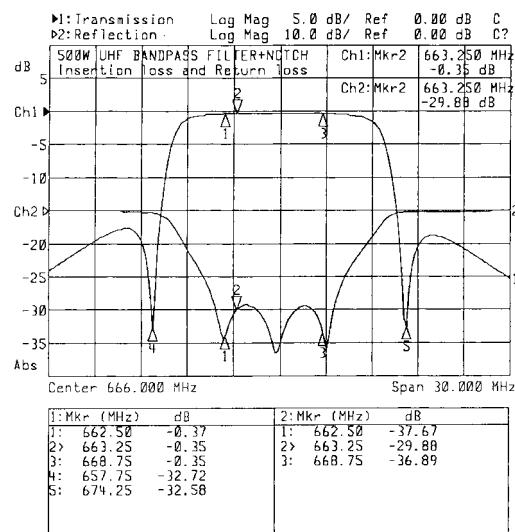


Mechanical Characteristics

Connections	DIN 7/16
Overall dimensions [WxDxH] [mm.]	300x255x42
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	3.9

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	500
Insertion Loss [dB] @ V.C.	< 0.45
Maximum amplitude variation [dB]	0.05
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 30
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	10



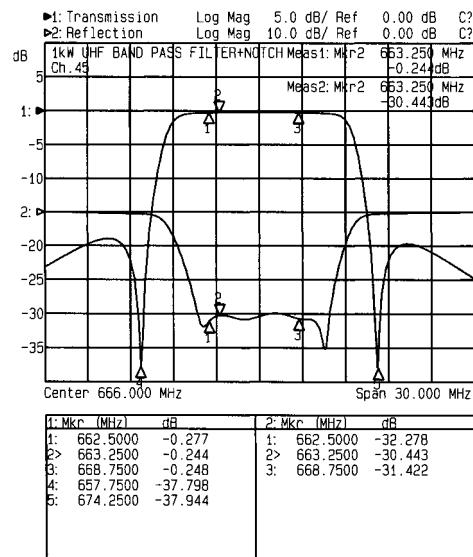
Technical data sheet

Part Number **1445-3-N**

Notch/band-pass configuration

Band IV/V

1kW UHF 2Notches+3Poles Band Pass Filter



Mechanical Characteristics

Connections	DIN 7/16
Overall dimensions [WxDxH] [mm.]	378x204x62
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	6.5

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	1000
Insertion Loss [dB] @ V.C.	< 0.35
Maximum amplitude variation [dB]	0.05
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 30
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	10

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Data updating 23/03/2006

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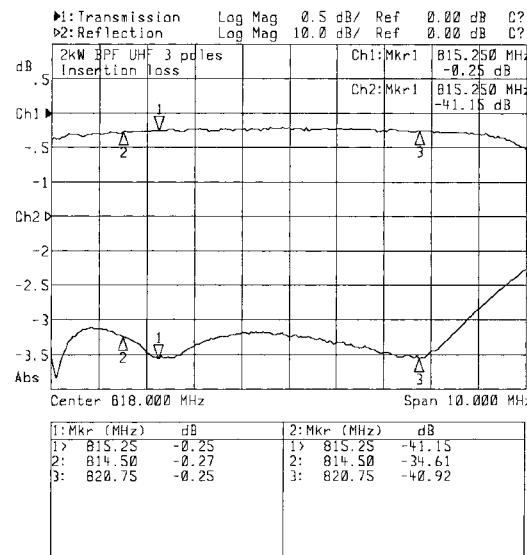
Technical data sheet

Part Number 1421-3-N

Notch/band-pass configuration

Band IV/V

2kW UHF 2Notches+3Poles Band Pass Filter

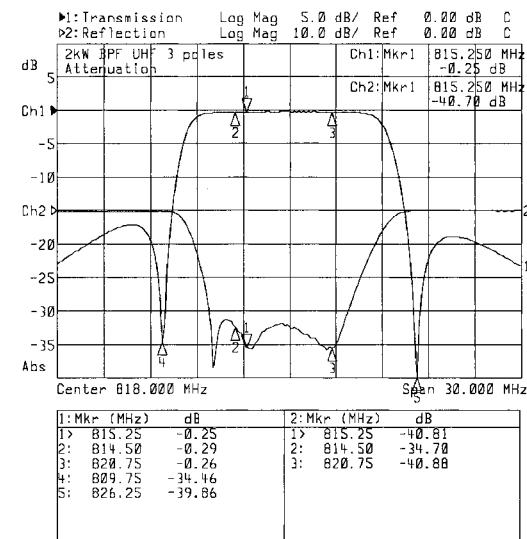


Mechanical Characteristics

Connections	EIA 7/8"
Overall dimensions [WxDxH] [mm.]	452x372x75
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	11

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	2000
Insertion Loss [dB] @ V.C.	< 0.28
Maximum amplitude variation [dB]	0.05
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 35
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	10



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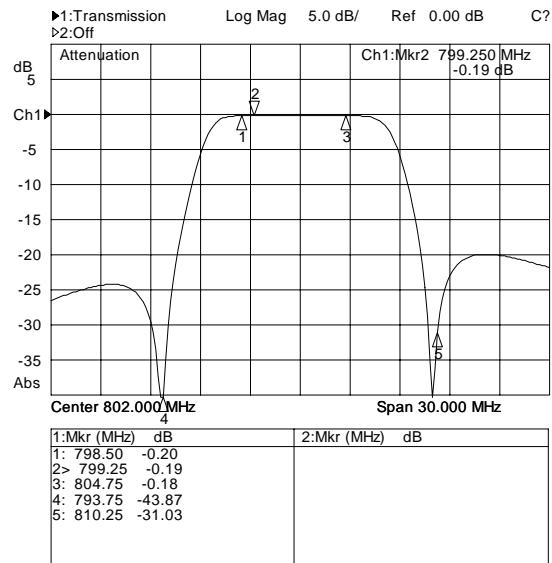
Data updating 16/06/2006

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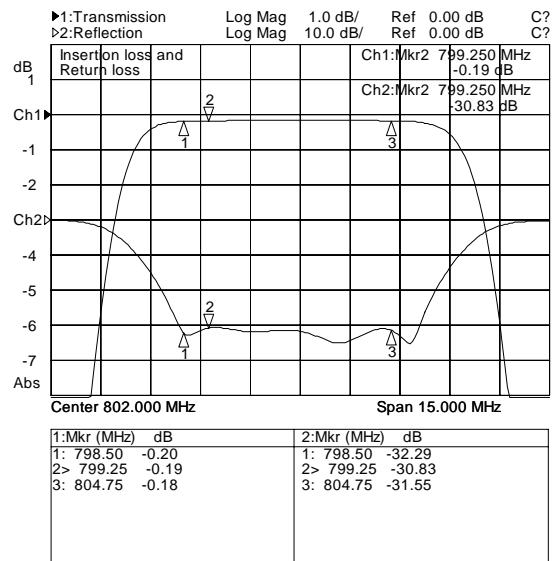
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Band IV/V**5kW UHF 4 Poles Band Pass Filter with Cross Coupling****Mechanical Characteristics**

Connections	EIA 1 5/8"
Overall dimensions [WxDxH] [mm.]	297x350x415
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	30

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Maximum Input Power [W]	5000
Insertion Loss [dB] @ V.C.	< 0.22 (typ.0.19)
Maximum amplitude variation [dB]	0.05
Attenuation @ V.C. -5.5 and V.C. +11 MHz [dB]	> 30
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Max. Group Delay Variation [ns]	15



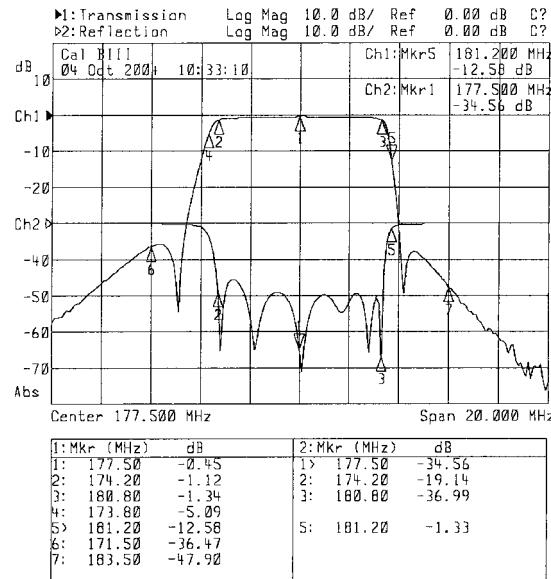
DVB FILTERS

Part Number **1448-6-N**

Digital Video Broadcasting

Band III

250W VHF/DVB Band Pass Filter - Uncritical Mask

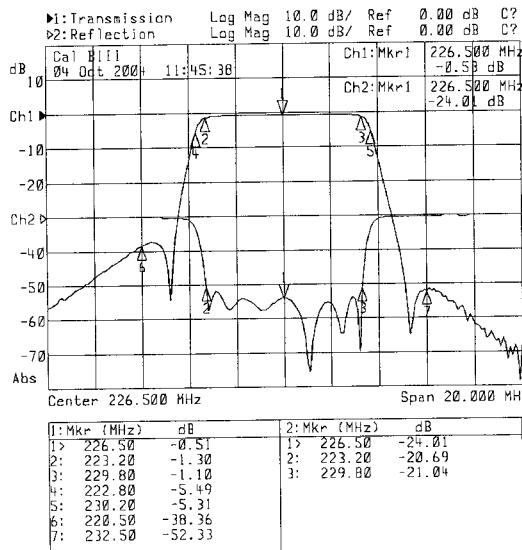


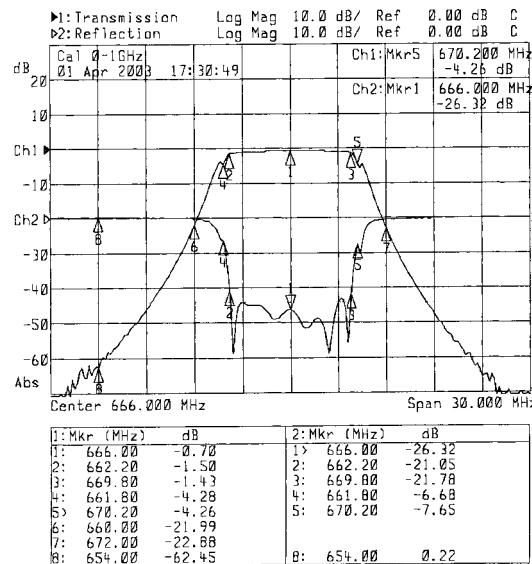
Mechanical Characteristics

Connections	N or DIN 7/16
Overall dimensions [WxDxH] [mm.]	536x462x65
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	17.5

Electrical Characteristics

Frequency Range [MHz]	170 ÷ 240
Insertion Loss [dB] @ Fo	< 0.6
Insertion Loss [dB] @ Fo ± 3.3 MHz	< 1.4
Attenuation @ Fo ± 3.7 MHz [dB]	> 5
Attenuation @ Fo ± 6 MHz [dB]	> 35
Attenuation @ Fo ± 12 MHz [dB]	> 50
Maximum amplitude variation [dB]	0.8
Return loss [dB]	> 22
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	250 (r.m.s.)
Max. Group Delay Variation [ns]	300



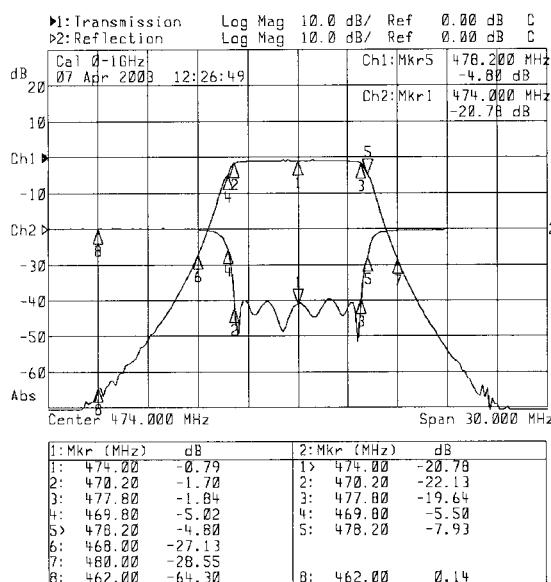


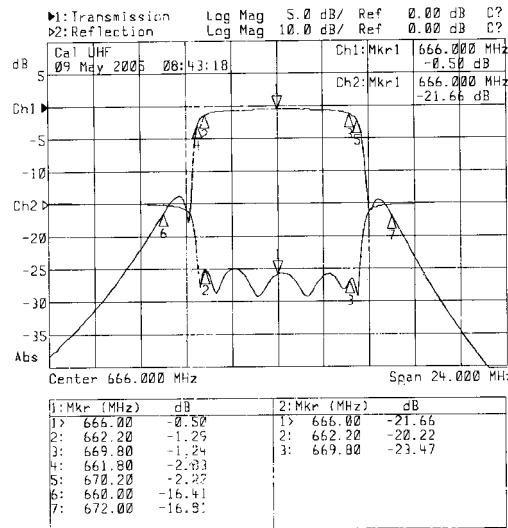
Mechanical Characteristics

Connections	DIN 7/16
Overall dimensions [WxDxH] [mm.]	564x280x62
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	11

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 0.90
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.85
Attenuation @ Fo ± 4.2 MHz [dB]	> 4
Attenuation @ Fo ± 6 MHz [dB]	> 15
Attenuation @ Fo ± 12 MHz [dB]	> 55
Maximum amplitude variation [dB]	1
Return loss [dB]	> 21
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	200 (r.m.s.)
Max. Group Delay Variation [ns]	300



Band IV/V
**250W UHF/DVB Band Pass Filter - *Uncritical Mask*
*Specially designed for analogue to digital transition***
**Mechanical Characteristics**

Connections	DIN 7/16
Overall dimensions [WxDxH] [mm.]	440x280x62
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	9

Electrical Characteristics

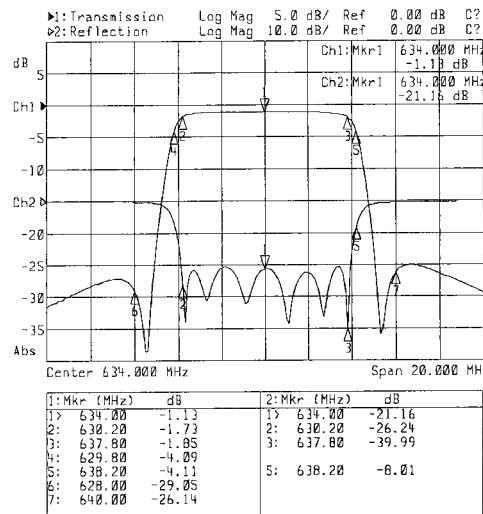
Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 0.6
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.3
Attenuation @ Fo ± 4.2 MHz [dB]	> 2
Attenuation @ Fo ± 6 MHz [dB]	> 16
Attenuation @ Fo ± 12 MHz [dB]	> 35
Maximum amplitude variation [dB]	0.7
Return loss [dB]	> 21
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	250 (r.m.s.)
Max. Group Delay Variation [ns]	200

Technical data sheet

Part Number 1468-6

Band IV/V

200W UHF/DVB 6 Poles B. P. Filter with Cross Coupling - Uncr. Mask



Mechanical Characteristics

Connections	N or DIN 7/16
Overall dimensions [WxDxH] [mm.]	208x111x330
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	7.5

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 1.2
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.9
Attenuation @ Fo ± 4.2 MHz [dB]	> 4
Attenuation @ Fo ± 6 MHz [dB]	> 25
Attenuation @ Fo ± 12 MHz [dB]	> 35
Maximum amplitude variation [dB]	0.7
Return loss [dB]	> 20
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	200 (r.m.s.)
Max. Group Delay Variation [ns]	350

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Data updating 25/10/2005

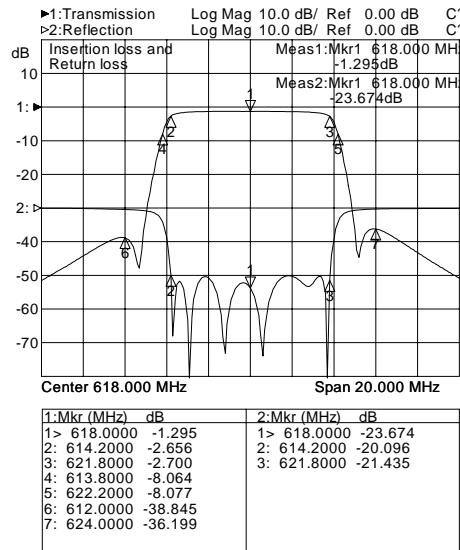
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Technical data sheet

Part Number 1468

Band IV/V

200W UHF/DVB 8 Poles B. P. Filter with Cross Coupling - Critical Mask

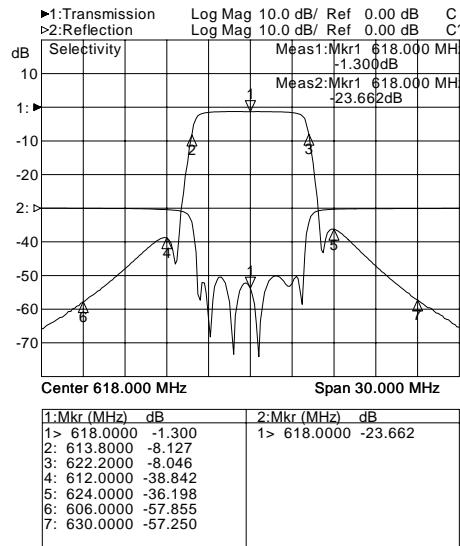


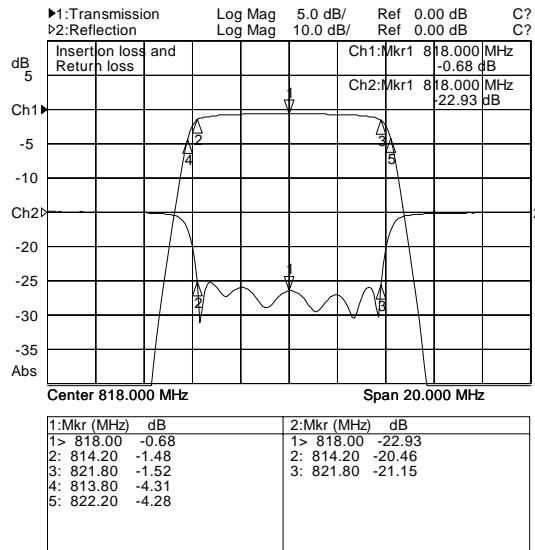
Mechanical Characteristics

Connections	N or DIN 7/16
Overall dimensions [WxDxH] [mm.]	260x111x330
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	8

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 1.5
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 2.7
Attenuation @ Fo ± 4.2 MHz [dB]	> 8
Attenuation @ Fo ± 6 MHz [dB]	> 35
Attenuation @ Fo ± 12 MHz [dB]	> 55
Maximum amplitude variation [dB]	1.2
Return loss [dB]	> 20
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	200 (r.m.s.)
Max. Group Delay Variation [ns]	300



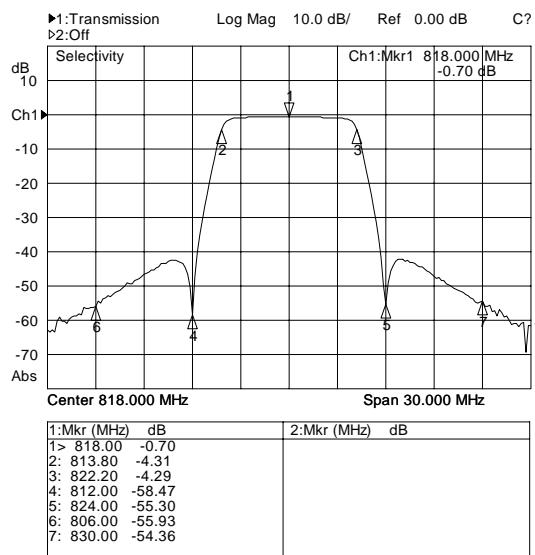


Mechanical Characteristics

Connections	DIN 7/16 or EIA 7/8"
Overall dimensions [WxDxH] [mm.]	170x280x415
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	13

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 0.7
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.7
Attenuation @ Fo ± 4.2 MHz [dB]	> 4
Attenuation @ Fo ± 6 MHz [dB]	> 40
Attenuation @ Fo ± 12 MHz [dB]	> 50
Maximum amplitude variation [dB]	1
Return loss [dB]	> 20
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	500 (r.m.s.)
Max. Group Delay Variation [ns]	350

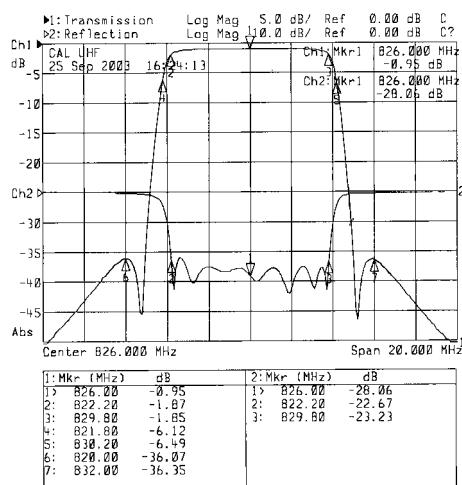


Technical data sheet

Part Number 1494

Band IV/V

500W UHF/DVB 8 Poles B. P. Filter with Cross Coupling - Critical Mask



Mechanical Characteristics

Connections	DIN 7/16
Overall dimensions [WxDxH] [mm.]	170x361x415
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	15

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 1
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.9
Attenuation @ Fo ± 4.2 MHz [dB]	> 6
Attenuation @ Fo ± 6 MHz [dB]	> 35
Attenuation @ Fo ± 12 MHz [dB]	> 56
Maximum amplitude variation [dB]	0.9
Return loss [dB]	> 22
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	500 (r.m.s.)
Max. Group Delay Variation [ns]	400

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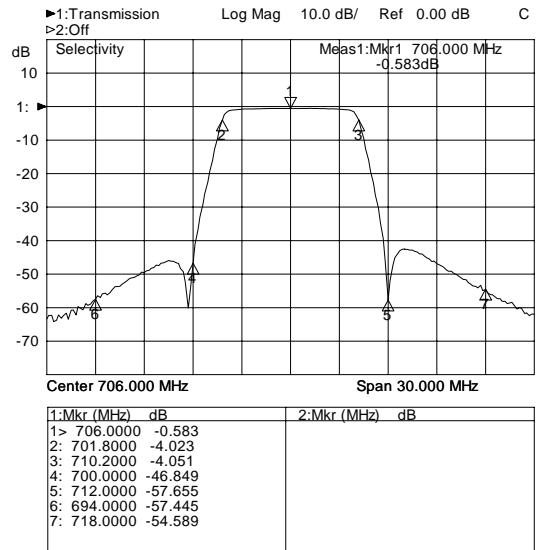
Data updating 03/08/2006

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Band IV-V

1kW UHF/DVB 6 Poles B. P. Filter with Cross Coupling -Uncritical Mask

NEW !

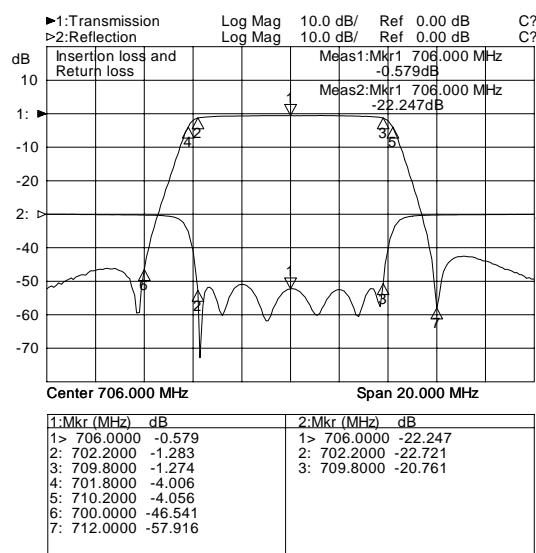


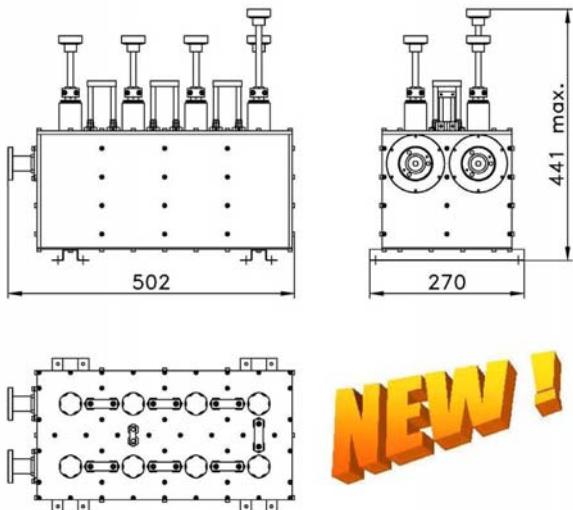
Mechanical Characteristics

Connections	EIA 7/8"
Overall dimensions [WxDxH] [mm.]	270x392x441
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	16

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 0.65
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.3
Attenuation @ Fo ± 4.2 MHz [dB]	> 4
Attenuation @ Fo ± 6 MHz [dB]	> 40
Attenuation @ Fo ± 12 MHz [dB]	> 50
Maximum amplitude variation [dB]	0.65
Return loss [dB]	> 20
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	1000 (r.m.s.)
Max. Group Delay Variation [ns]	250



Band IV-V**1kW UHF/DVB 8 Poles B. P. Filter with Cross Coupling - Critical Mask**

NEW!

Mechanical Characteristics

Connections	EIA 7/8"
Overall dimensions [WxDxH] [mm.]	270x502x441
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	21

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 0.9
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.9
Attenuation @ Fo ± 4.2 MHz [dB]	> 8
Attenuation @ Fo ± 6 MHz [dB]	> 40
Attenuation @ Fo ± 12 MHz [dB]	> 70
Maximum amplitude variation [dB]	1
Return loss [dB]	> 20
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	1000 (r.m.s.)
Max. Group Delay Variation [ns]	350

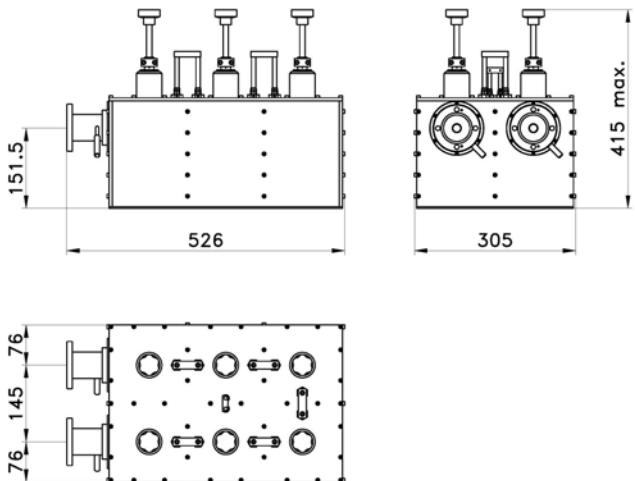
Technical data sheet

Part Number **1604-6**

Digital Video Broadcasting

Band IV/V

2kW UHF/DVB 6 Poles B. P. Filter with Cross Coupling - Uncr. Mask



Mechanical Characteristics

Connections	EIA 1 5/8"
Overall dimensions [WxDxH] [mm.]	305x526x415
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	42

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 0.5
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.1
Attenuation @ Fo ± 4.2 MHz [dB]	> 4
Attenuation @ Fo ± 6 MHz [dB]	> 35
Attenuation @ Fo ± 12 MHz [dB]	> 55
Maximum amplitude variation [dB]	0.6
Return loss [dB]	> 20
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	2000 (r.m.s.)
Max. Group Delay Variation [ns]	250

All data contained in this technical sheet
are not binding and can be changed
without notice

Data updating 16/01/2006

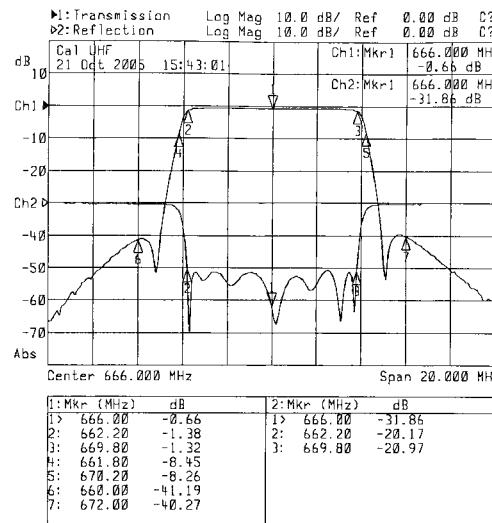
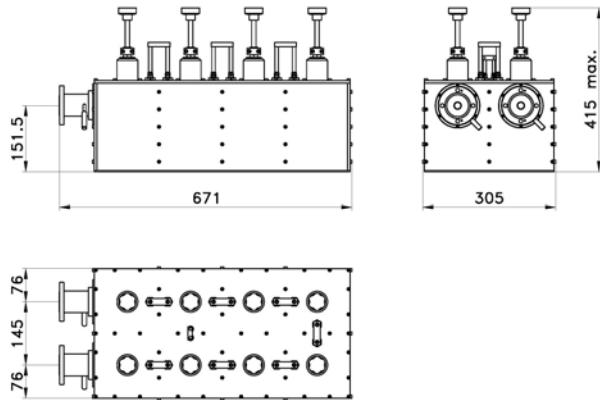
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Technical data sheet

Part Number 1604-8

Band IV/V

2kW UHF/DVB 8 Poles B. P. Filter with Cross Coupling - Critical Mask

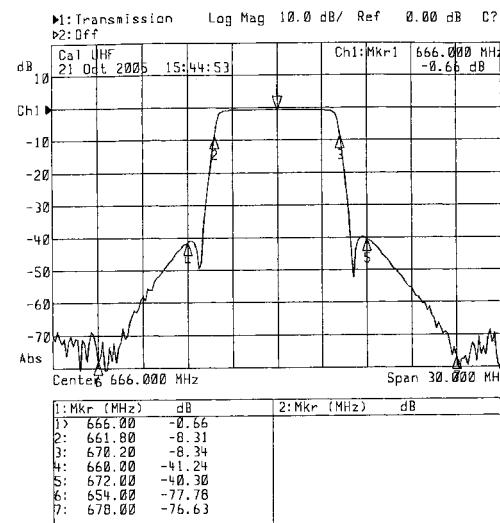


Mechanical Characteristics

Connections	EIA 1 5/8"
Overall dimensions [WxDxH] [mm.]	305x671x415
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	55

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB] @ Fo	< 0.7
Insertion Loss [dB] @ Fo ± 3.805 MHz	< 1.4
Attenuation @ Fo ± 4.2 MHz [dB]	> 8
Attenuation @ Fo ± 6 MHz [dB]	> 40
Attenuation @ Fo ± 12 MHz [dB]	> 70
Maximum amplitude variation [dB]	0.7
Return loss [dB]	> 20
Input/Output Impedance [Ohm]	50
Maximum Input Power [W]	2000 (r.m.s.)
Max. Group Delay Variation [ns]	350



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Data updating 16/01/2006

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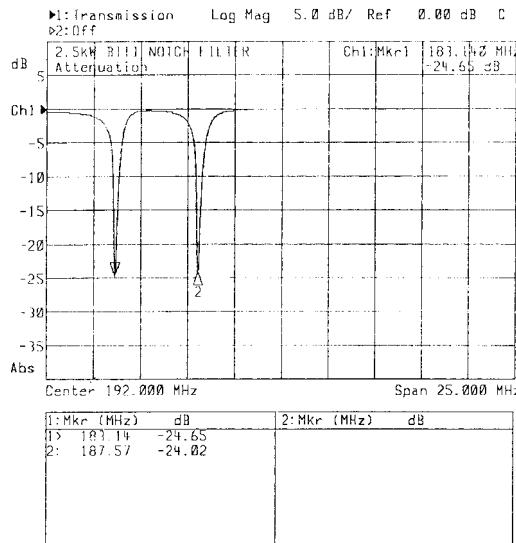
NOTCH FILTERS

Technical data sheet

Part Number 1359

Band III

2.5kW VHF Notch Filter

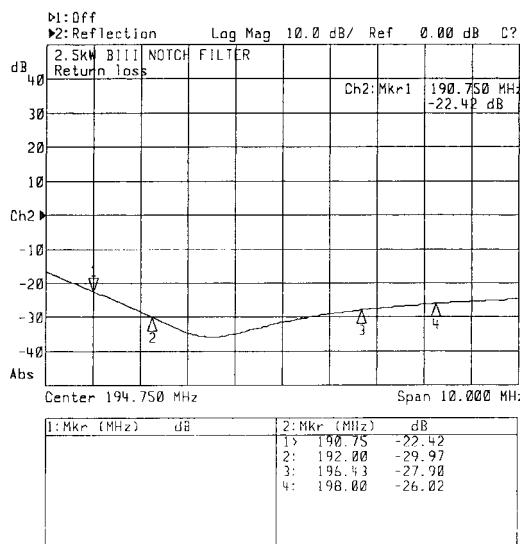


Mechanical Characteristics

Connections	EIA 7/8"
Overall dimensions [WxDxH] [mm.]	255x760(max)x80
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	6
Air cooling System [m3/h]	N.A.

Electrical Characteristics

Frequency Range [MHz]	170 ÷ 230
Insertion Loss [dB]	< 0.1
Notch for each branch	4
Peak Attenuation in Any Cavity [dB]	max. 15
Tunable Freq. (each notch) [MHz]	174 ÷ 230
Maximum Input Power [W]	2500
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50

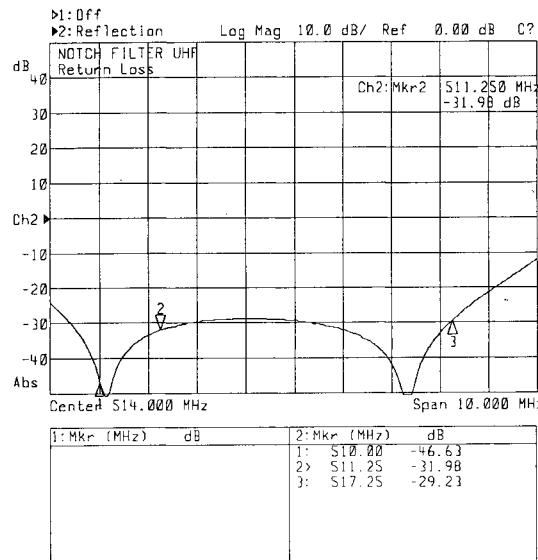


Technical data sheet

Part Number 1449

Band IV/V

10kW UHF Notch Filter

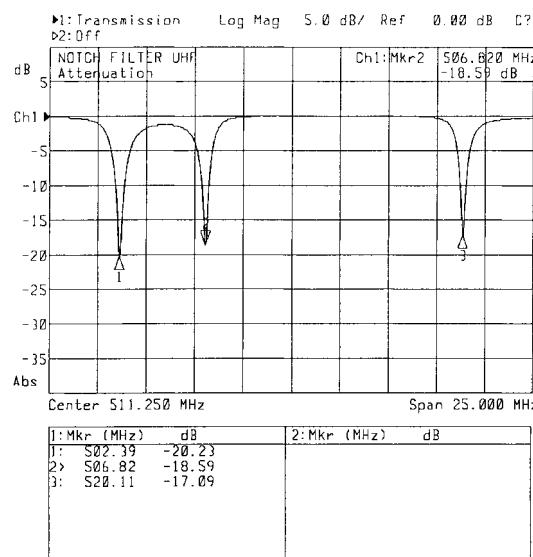


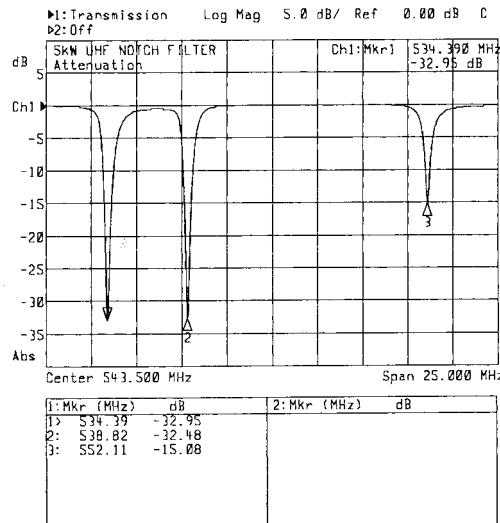
Mechanical Characteristics

Connections	EIA 3 1/8" or 1 5/8"
Overall dimensions [WxDxH] [mm.]	500x130x500
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	18
Air cooling System [m ³ /h]	N.A.

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB]	< 0.1
Notch for each branch	3
Peak Attenuation in Any Cavity [dB]	12 ÷ 25
Tunable Freq. (each notch) [MHz]	450 ÷ 1800
Maximum Input Power [W]	10000
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50



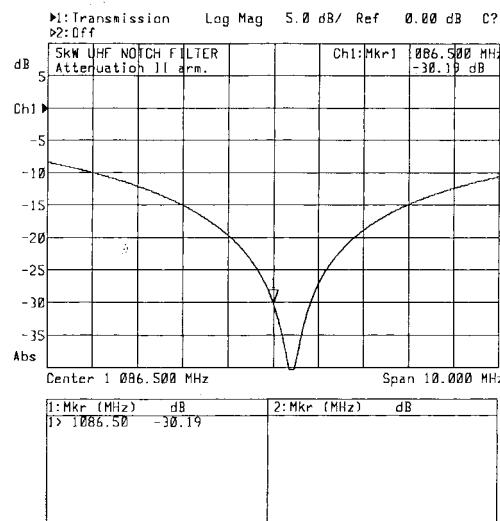
Band IV/V
10kW UHF Notch Filter


Mechanical Characteristics

Connections	EIA 3 1/8" or 1 5/8"
Overall dimensions [WxDxH] [mm.]	850x130x500
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	36
Air cooling System [m3/h]	N.A.

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB]	< 0.15
Notch for each branch	6
Peak Attenuation in Any Cavity [dB]	12 ÷ 25
Tunable Freq. (each notch) [MHz]	450 ÷ 1800
Maximum Input Power [W]	10000
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50

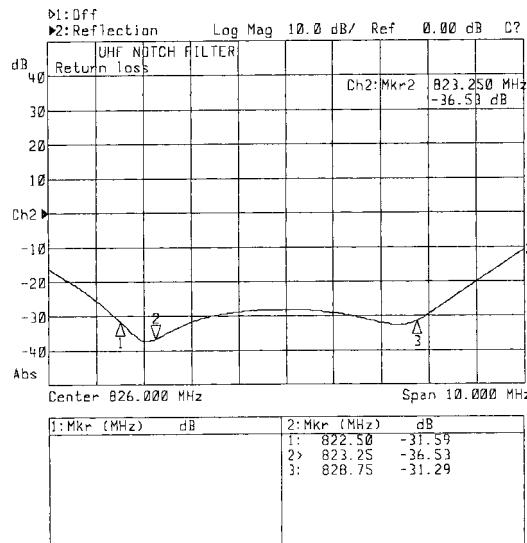


Technical data sheet

Part Number 1309-3

Band IV/V

20kW UHF Notch Filter

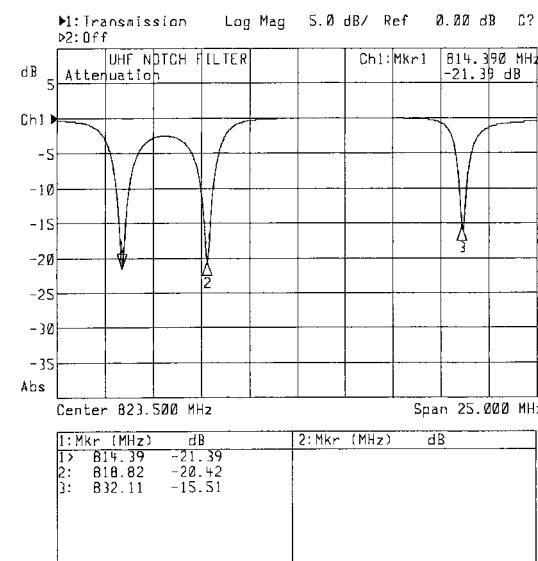


Mechanical Characteristics

Connections	EIA 3 1/8"
Overall dimensions [WxDxH] [mm.]	502x250x440
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	15
Air cooling System [m3/h]	150

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 860
Insertion Loss [dB]	< 0.1
Notch for each branch	3
Peak Attenuation in Any Cavity [dB]	15 ÷ 30
Tunable Freq. (each notch) [MHz]	470 ÷ 880
Maximum Input Power [W]	20000
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50



All data contained in this technical sheet are not binding and can be changed without notice

Data updating 30/08/2005

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Band IV/V**40kW UHF Notch Filter with hybrids**

Mechanical Characteristics

Connections	EIA 4 1/2"
Overall dimensions [WxDxH] [mm.]	1450x300x410
Temperature range [C°]	-10 ÷ 50
Weight [kg.]	100
Air cooling System [m3/h]	300

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Insertion Loss [dB]	< 0.1
Notch for each branch	7 + 1 (2° harmonic)
Peack Attenuation in Any Cavity [dB]	max. 35
Tunable Freq. (each notch) [MHz]	900 ÷ 1800
Maximum Input Power [W]	40000
Return loss [dB]	> 26
Input/Output Impedance [Ohm]	50

VHF/UHF TV COMBINERS

VHF-UHF Channel Combiner

Combiner systems

Combiners are systems composed by 2 or more filters connecting together, and are used to connect more transmitters , working at different frequencies to a single antenna system.

To achieve this purpose it is possible to employ different configurations, in the following explanations we describe the ones we use.

Delta Meccanica manufactures a wide range of combiners from little power to many kilowatts, and till to day, we delivered systems designed to combine 6 channels, with just one guard channel of separation furthermore we provide the installation, if required, world-wide, and we suggest that the installation be made by our technicians for complex systems, mainly when many channels must be connected to the combiner, and the customer is not familiar with these multiple arrangement, you have to consider that an equipment designed to accept many frequencies , works well when all the technical requirements are correct , it is sufficient that only one parameter be out of the specification (perhaps for transport reason) , that all system doesn't work at all.



Star Type Combining Filter

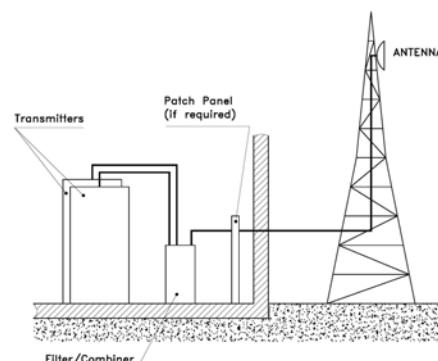
The power of TX1 transmitter -see fig.1- crosses through F1 (band pass filter) and is rejected by F2 (bandpass filter) and sent to star point connection .

The same thinghappens for the power of TX2, that crosses through F2, and is rejected by F1, and sent to star point connection, where both power are added up, and sent to only one antenna system.

It is important that the connecting lines to star point and the filters, have the lengths calculated so that, all the power of each transmitter, reaches the antenna, without reflection. It is possible to use this configuration to connect, two transmitters.

This configuration allows to connect channels with at least of 2 channels of separation, to have a good isolation value.

When it's possible to employ this configuration, this is the less expensive solution.



Constant Impedance Combining Filter (Bridge Multiplexer).

This system (see fig.2 and 4) must be used when there is just one channel of separation between the two channels to combine (i.e. it's possible to combine ch 52 and 54).

Constant Impedance configuration, is a very flexible , as permits future expansion of the whole system, adding , on cascade , a new combiner with a new channel. This system includes band pass filters (with 3 or 4 cavities) connected to 3 dB hybrid couplers. TX1 enter into the first hybrid coupler (called narrow band input), and is divided in two halves, while both filters are tuned on TX1 channel. TX1 power is recombined in the second hybrid coupler, and sent to the antenna system. Hybrid couplers provide the isolation between the two signals. In the same way, TX2 enter into the second hybrid coupler (broadband input), but this frequency is rejected by the two filters tuned on the first channel, and is isolated by this one, by means of hybrid coupler.

This system is more expensive if compared to the star type, but sometime is more reliable, and flexible.

Note: sometime may be necessary to filter also the broadband channel, this configuration improves isolation and VSWR.

To reach the best combiner performances, it's necessary to have all the data necessary to tune in the best way the equipment, for this reason, customer should always specify :

- narrow band channel

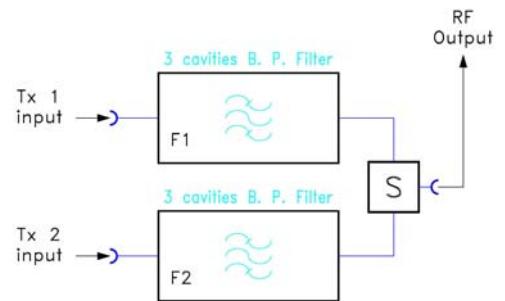


Fig. 1

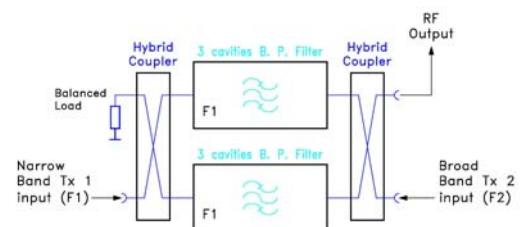


Fig. 2

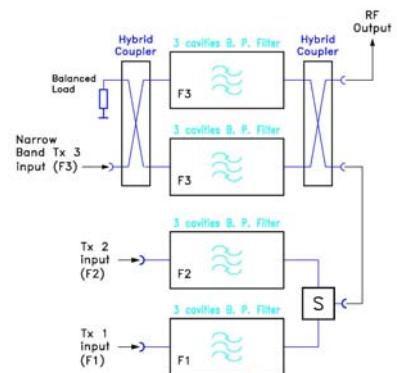


Fig. 3

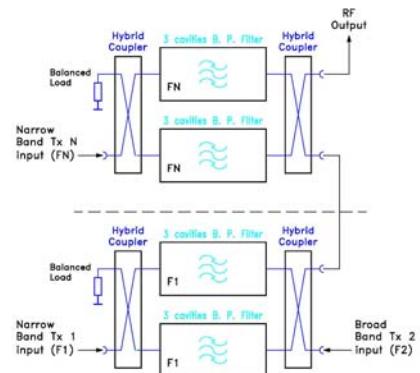


Fig. 4

Mixed Configuration

The two previous systems (Star Type and Constant Impedance) over described, can be sometime used in a Mixed Configuration

- see fig.3 - when it's necessary to connect at least three transmitters to a single antenna. The output of the star diplexer is connected to broadband port of the constant impedance combiner.

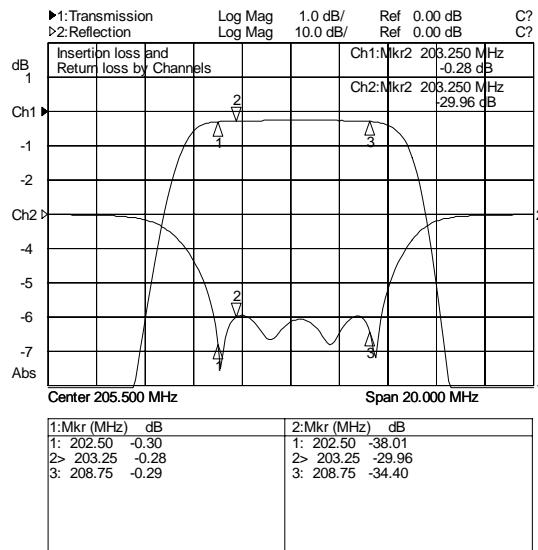
Technical data sheet

Part Number **1463-4-S2**

Star type configuration

Band III

2x500W Star Combiner - 4 Cavities Band Pass Filter



Mechanical Characteristics

Connections

<i>Input</i>	DIN 7/16 , N or EIA 7/8"
<i>output</i>	DIN 7/16 , N or EIA 7/8"

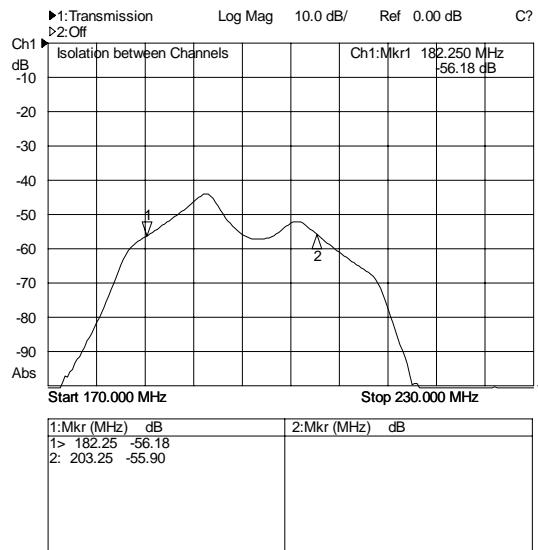
Overall dimensions [WxDxH] [mm.] 250x204x440

Temperature range [C°] -10 ÷ 50

Weight [kg.] 13

Electrical Characteristics

Frequency Range [MHz]	170÷230
Insertion Loss [dB] @ V.C.	< 0.4
Return loss by Channels [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	2 guard channels
Insulation Between Channels [dB]	> 35
Maximum Channel Input Power [W]	500
Maximum Output Power [W]	1000
Max. Group Delay Variation [ns]	25



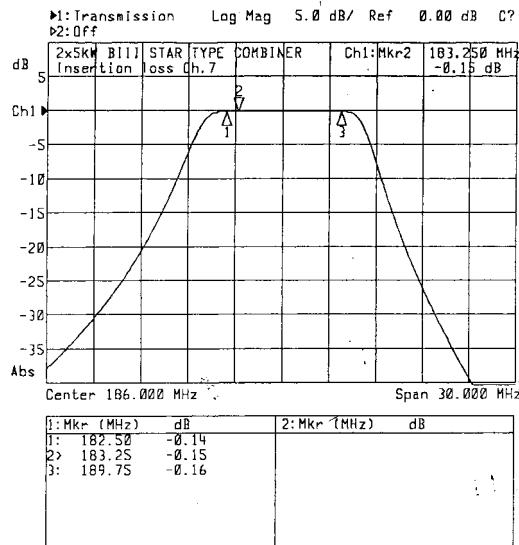
Technical data sheet

Part Number **1473-S2**

Band III

2x5kW Star Combiner - 4 Cavities Band Pass Filter

Star type configuration



Mechanical Characteristics

Connections

<i>Input</i>	EIA 1 5/8"
<i>output</i>	EIA 3 1/8"

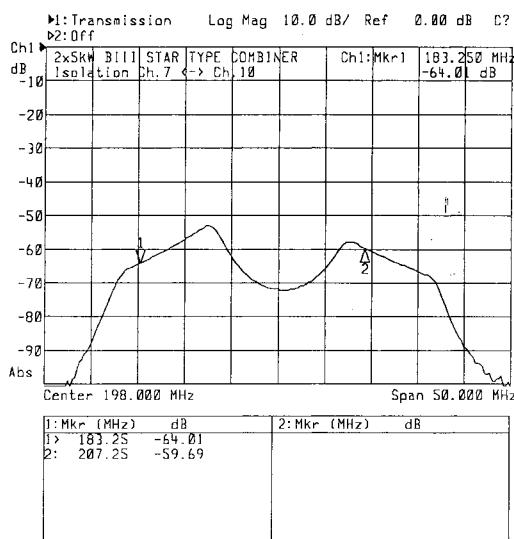
Overall dimensions [WxDxH] [mm.] 860x560x650

Temperature range [C°] -10 ÷ 50

Weight [kg.] 50

Electrical Characteristics

Frequency Range [MHz]	170÷230
Insertion Loss [dB] @ V.C.	< 0.3
Return loss by Channels [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	2 guard channels
Insulation Between Channels [dB]	> 30
Maximum Channel Input Power [W]	5000
Maximum Output Power [W]	10000
Max. Group Delay Variation [ns]	10



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Data updating 11/02/2005

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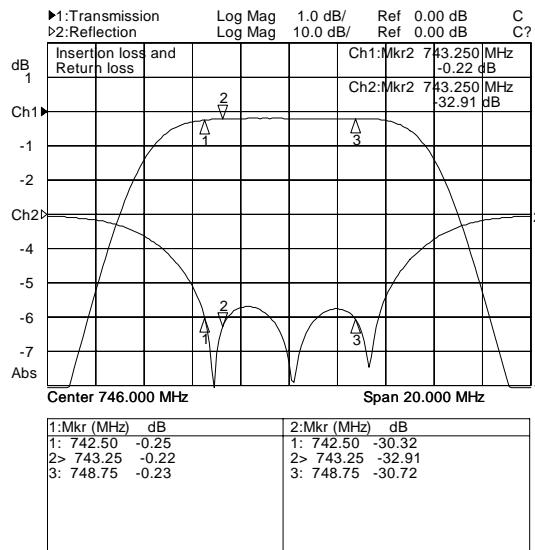
Technical data sheet

Part Number **1445-3-S2**

Star type configuration

Band IV/V

2x1kW Star Combiner - 3 Cavities Band Pass Filter



Mechanical Characteristics

Connections

Input DIN 7/16 , or EIA 7/8"
output EIA 7/8"

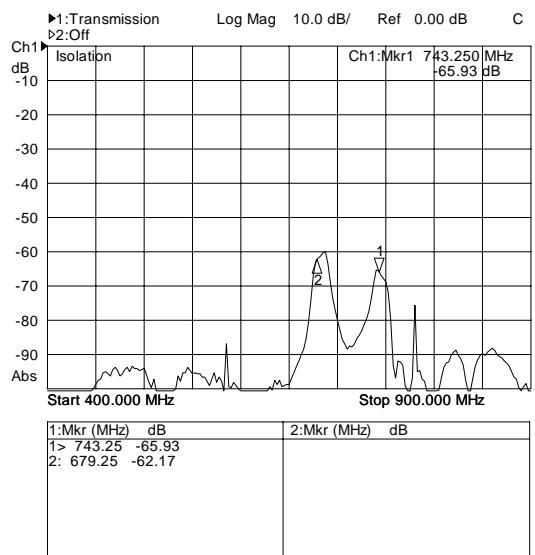
Overall dimensions [WxDxH] [mm.] 286x216x295

Temperature range [C°] -10 ÷ 50

Weight [kg.] 13

Electrical Characteristics

Frequency Range [MHz] 470÷862
Insertion Loss [dB] @ V.C. < 0.3
Return loss by Channels [dB] > 26
Input/Output Impedance [Ohm] 50
Minimum Distance Between Channels 2 guard channels
Insulation Between Channels [dB] > 35
Maximum Channel Input Power [W] 1000
Maximum Output Power [W] 2000
Max. Group Delay Variation [ns] 10



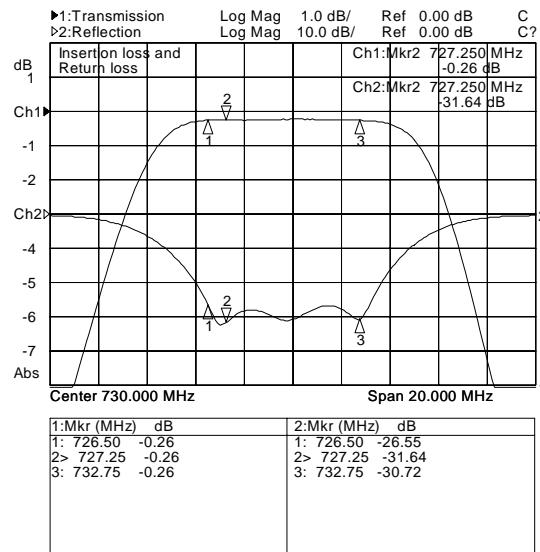
Technical data sheet

Part Number **1421-3-S2**

Star point configuration

Band IV-V

2x2kW Star Combiner - 3 Cavities Band Pass Filter



Mechanical Characteristics

Connections

<i>Input</i>	EIA 7/8"
<i>output</i>	EIA 1 5/8"

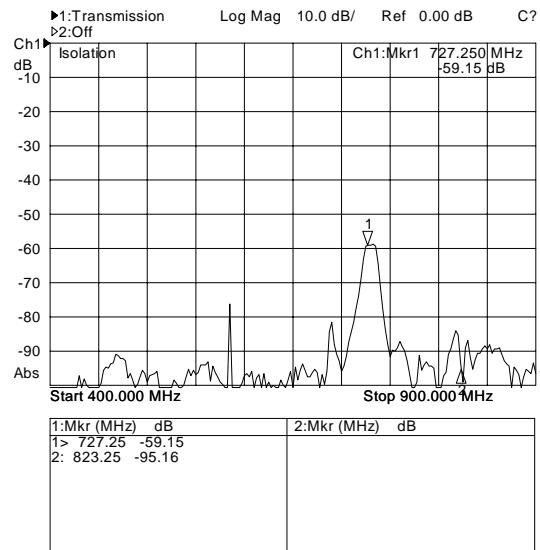
Overall dimensions [WxDxH] [mm.] 313x348x450

Temperature range [C°] -10 ÷ 50

Weight [kg.] 22

Electrical Characteristics

Frequency Range [MHz]	470÷862
Insertion Loss [dB] @ V.C.	< 0.3
Return loss by Channels [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	2 guard ch.
Insulation Between Channels [dB]	> 30
Maximum Channel Input Power [W]	2000
Maximum Output Power [W]	4000
Max. Group Delay Variation [ns]	10



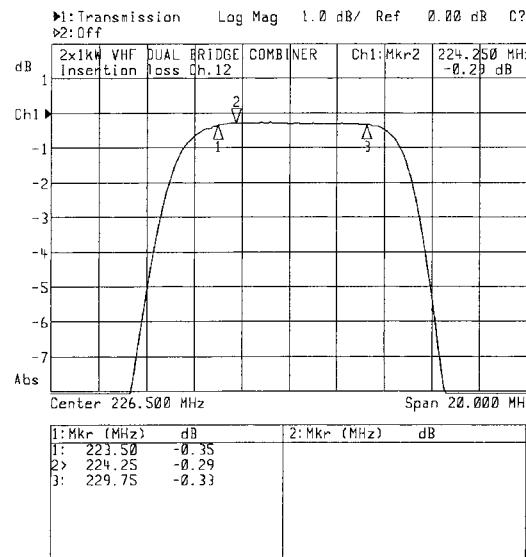
Technical data sheet

Part Number 1463-4-DP

Constant impedance configuration

Band III

1+2 kW VHF Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	DIN 7/16 or EIA 7/8"
<i>Input broadband output</i>	DIN 7/16 or EIA 7/8" EIA 7/8"

Overall dimensions [WxDxH] [mm.] 251x454x590

Temperature range [C°] -10 ÷ 50

Weight [kg.] 20

Electrical Characteristics

Frequency Range [MHz] 170 ÷ 230

Bandwidth [MHz] 6 ÷ 8

Narrow-band Insertion Loss [dB] < 0.4

Broad-band Insertion Loss [dB] < 0.1

Narrow-band Return Loss [dB] > 26

Broad-band Return Loss [dB] > 26

Input/Output Impedance [Ohm] 50

Minimum Distance Between Channels 1 guard ch.

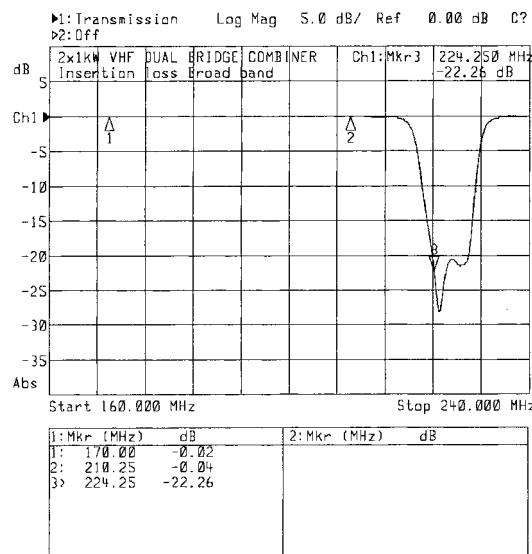
Insulation NB>BB [dB] > 30

Insulation BB>NB [dB] > 30

Narrow-band Maximum Power [W] 1000

Broad-band Maximum Power [W] 2000

Max. Group Delay Variation [ns]



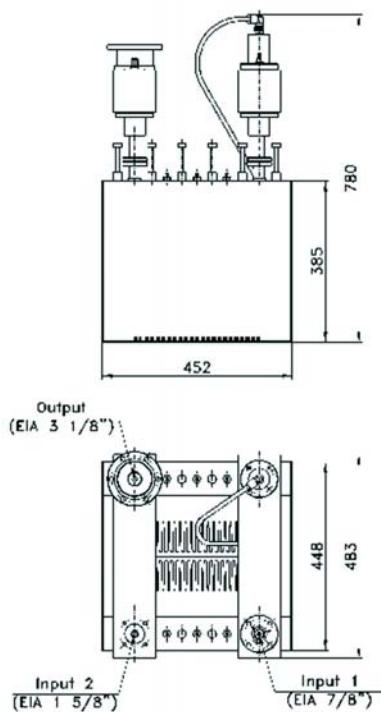
Technical data sheet

Part Number **1431-DP**

Constant impedance configuration

Band III

1+10kW VHF Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	EIA 7/8"
<i>Input broadband</i>	EIA 1 5/8"
<i>output</i>	EIA 3 1/8"

Overall dimensions [WxDxH] [mm.] 452x483x780

Temperature range [C°] -10 ÷ 50

Weight [kg.] 44

Electrical Characteristics

Frequency Range [MHz]	170 ÷ 230
Bandwidth [MHz]	6 ÷ 8 MHz
Narrow-band Insertion Loss [dB]	< 0.4
Broad-band Insertion Loss [dB]	< 0.05
Narrow-band Return Loss [dB]	> 26
Broad-band Return Loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	1 guard channel
Insulation NB>BB [dB]	> 32
Insulation BB>NB [dB]	> 32
Narrow-band Maximum Power [W]	1000
Broad-band Maximum Power [W]	10000
Max. Group Delay Variation [ns]	35

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Data updating 03/10/2005

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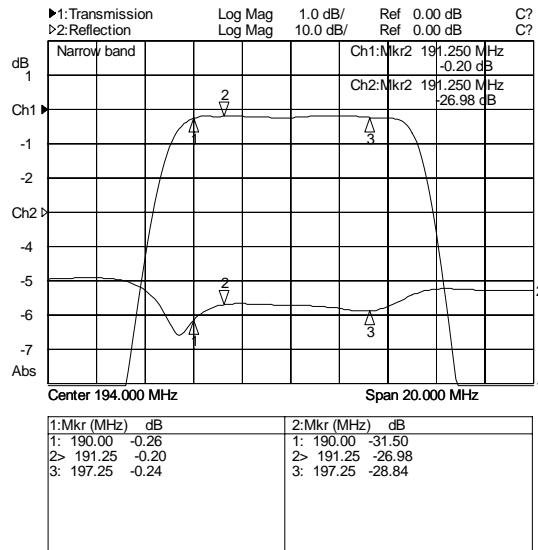
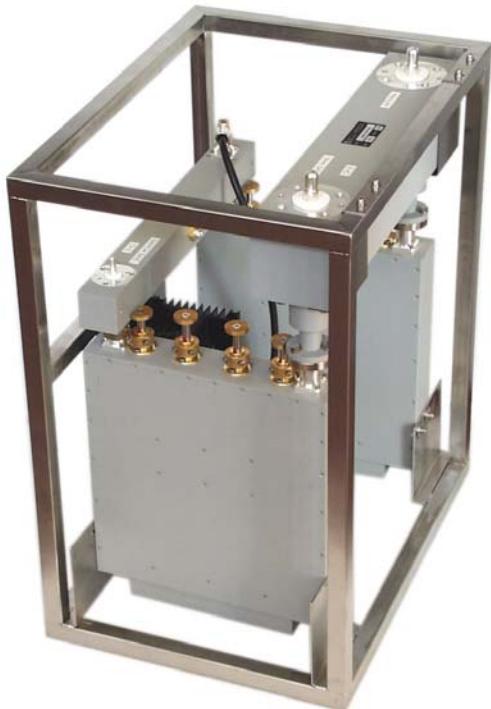
Technical data sheet

Part Number **1448-4-DP158**

Constant impedance configuration

Band III

3+7 kW Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	EIA 7/8"
<i>Input broadband output</i>	EIA 1 5/8"

Overall dimensions [WxDxH] [mm.] 410x550x690

Temperature range [C°] -10 ÷ 50

Weight [kg.] 43

Electrical Characteristics

Frequency Range [MHz] 170 ÷ 230

Bandwidth [MHz] 6÷8

Narrow-band Insertion Loss [dB] < 0.3

Broad-band Insertion Loss [dB] < 0.1

Narrow-band Return Loss [dB] > 26

Broad-band Return Loss [dB] > 26

Input/Output Impedance [Ohm] 50

Minimum Distance Between Channels 1 guard channel

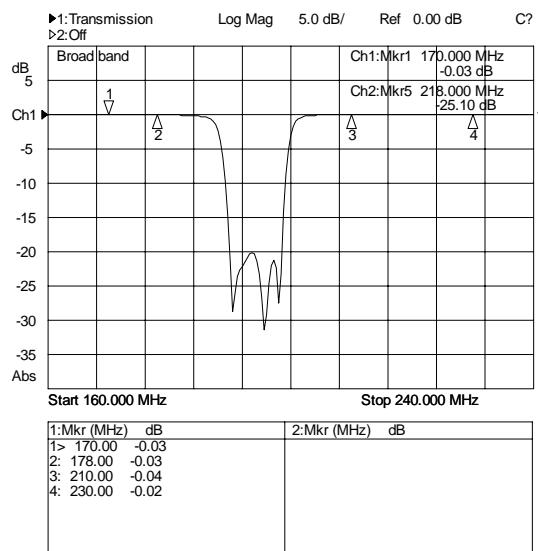
Insulation NB>BB [dB] > 40

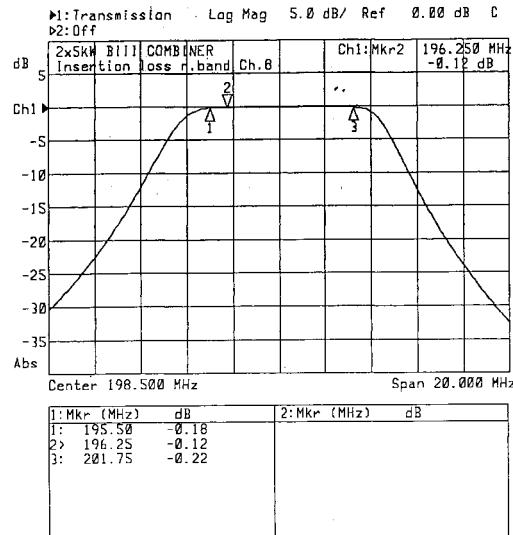
Insulation BB>NB [dB] > 50

Narrow-band Maximum Power [W] 3000

Broad-band Maximum Power [W] 7000

Max. Group Delay Variation [ns] 20



Band III
5+5kW VHF Double Bridge Combiner


Mechanical Characteristics

Connections

<i>Input narrowband</i>	EIA 1 5/8"
<i>Input broadband</i>	EIA 1 5/8"
<i>output</i>	EIA 1 5/8"

Overall dimensions [WxDxH] [mm.] 1005x440x1000

Temperature range [C°] -10 ÷ 50

Weight [kg.] 60

Electrical Characteristics

Frequency Range [MHz] 170 ÷ 230

Bandwidth [MHz] 6 ÷ 8

Narrow-band Insertion Loss [dB] < 0.25

Broad-band Insertion Loss [dB] < 0.1

Narrow-band Return Loss [dB] > 26

Broad-band Return Loss [dB] > 26

Input/Output Impedance [Ohm] 50

Minimum Distance Between Channels 1 guard ch.

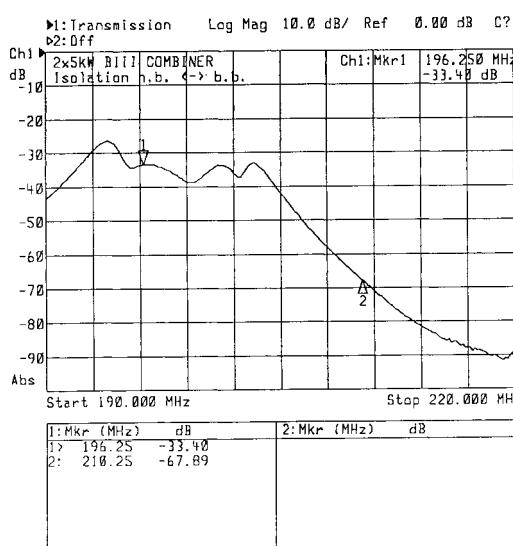
Insulation NB>BB [dB] > 30

Insulation BB>NB [dB] > 30

Narrow-band Maximum Power [W] 5000

Broad-band Maximum Power [W] 5000

Max. Group Delay Variation [ns] 35



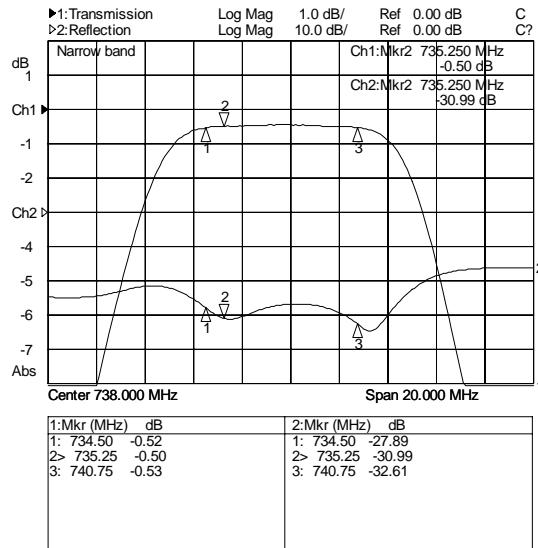
Technical data sheet

Part Number **1425-3-DP**

Constant impedance configuration

Band IV/V

300+1700W UHF Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	N or DIN 7/16
<i>Input broadband</i>	DIN 7/16 or EIA 7/8"
<i>output</i>	DIN 7/16 or EIA 7/8"

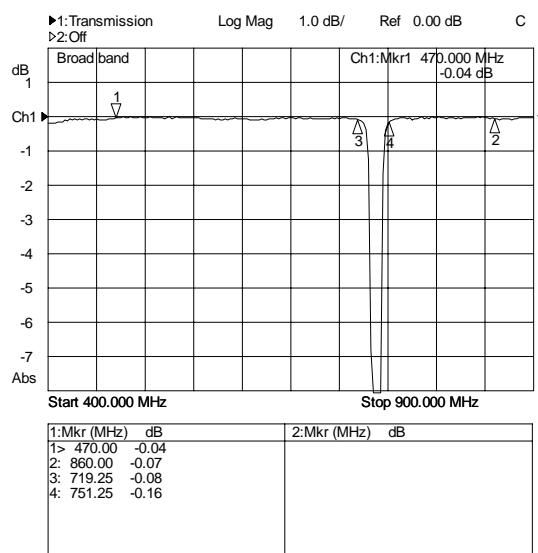
Overall dimensions [WxDxH] [mm.] 170x190x315

Temperature range [C°] -10 ÷ 50

Weight [kg.] 5

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6-8
Narrow-band Insertion Loss [dB]	< 0.6
Broad-band Insertion Loss [dB]	< 0.2 max
Narrow-band Return Loss [dB]	> 26
Broad-band Return Loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	1 guard channel
Insulation NB>BB [dB]	> 30
Insulation BB>NB [dB]	> 40
Narrow-band Maximum Power [W]	300
Broad-band Maximum Power [W]	1700
Max. Group Delay Variation [ns]	25



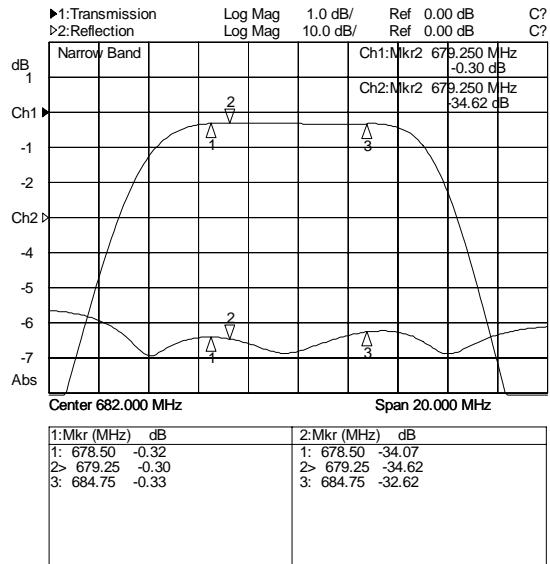
Technical data sheet

Part Number **1423-DP**

Constant impedance configuration

Band IV/V

1+1kW UHF Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	N, DIN 7/16 or EIA 7/8"
<i>Input broadband output</i>	N, DIN 7/16 or EIA 7/8" EIA 7/8"

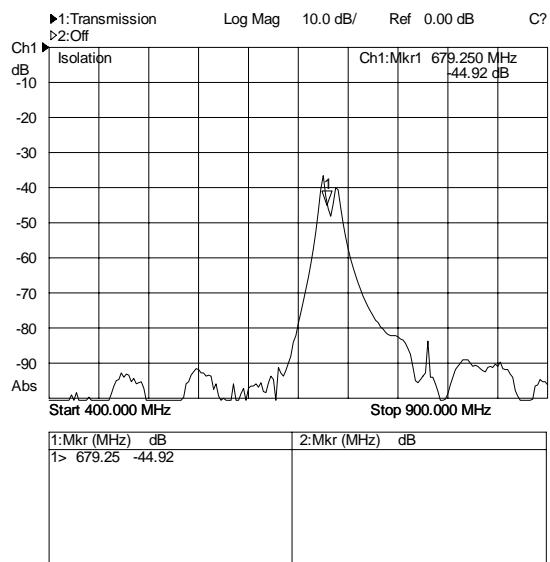
Overall dimensions [WxDxH] [mm.] 236x214x438

Temperature range [C°] -10 ÷ 50

Weight [kg.] 9

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6-8
Narrow-band Insertion Loss [dB]	< 0.45
Broad-band Insertion Loss [dB]	< 0.2 max
Narrow-band Return Loss [dB]	> 26
Broad-band Return Loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	1 guard channel
Insulation NB>BB [dB]	> 40
Insulation BB>NB [dB]	> 40
Narrow-band Maximum Power [W]	1200
Broad-band Maximum Power [W]	1200
Max. Group Delay Variation [ns]	20



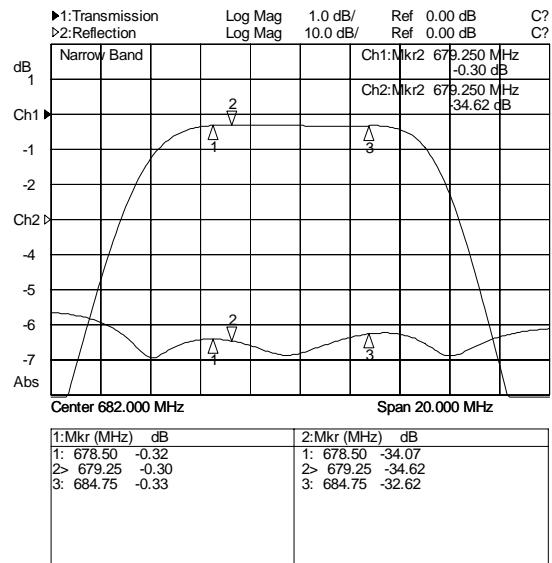
Technical data sheet

Part Number 1423-DP-R

Constant impedance configuration

Band IV/V

1+1kW UHF Double Bridge Combiner (Rack Version)



Mechanical Characteristics

Connections

<i>Input narrowband</i>	N, DIN 7/16 or EIA 7/8"
<i>Input broadband output</i>	N, DIN 7/16 or EIA 7/8"

Overall dimensions [WxDxH] [mm.] 483x480x222

Temperature range [C°] -10 ÷ 50

Weight [kg.] 14

Electrical Characteristics

Frequency Range [MHz] 470 ÷ 862

Bandwidth [MHz] 6÷8

Narrow-band Insertion Loss [dB] < 0.45

Broad-band Insertion Loss [dB] < 0.2 max

Narrow-band Return Loss [dB] > 26

Broad-band Return Loss [dB] > 26

Input/Output Impedance [Ohm] 50

Minimum Distance Between Channels 1 guard channel

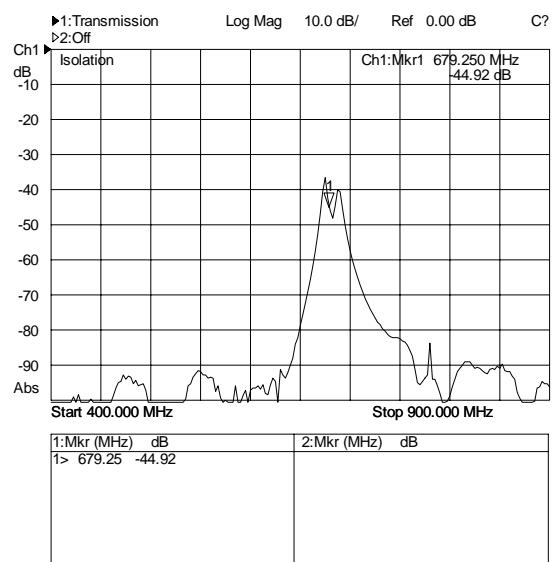
Insulation NB>BB [dB] > 40

Insulation BB>NB [dB] > 40

Narrow-band Maximum Power [W] 1200

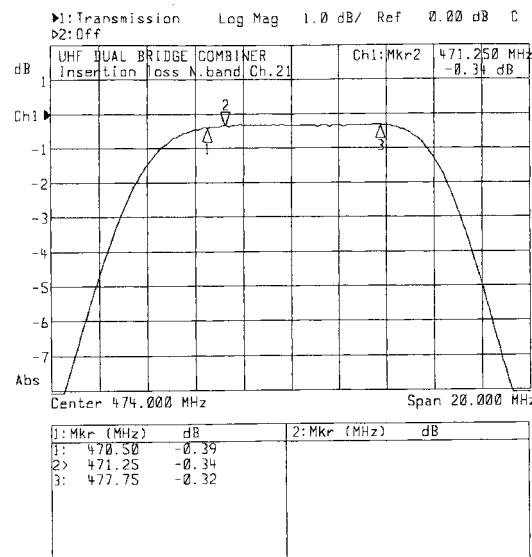
Broad-band Maximum Power [W] 1200

Max. Group Delay Variation [ns] 20



Band IV/V

1+4kW UHF Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	7/16 DIN or EIA 7/8"
<i>Input broadband output</i>	EIA 7/8" or EIA 1 5/8"

Overall dimensions [WxDxH] [mm.] 310x290x470

Temperature range [C°] -10 ÷ 50

Weight [kg.] 20

Electrical Characteristics

Frequency Range [MHz] 470 ÷ 862

Bandwidth [MHz] 6-8

Narrow-band Insertion Loss [dB] < 0.45

Broad-band Insertion Loss [dB] < 0.2 MAX

Narrow-band Return Loss [dB] > 26

Broad-band Return Loss [dB] > 26

Input/Output Impedance [Ohm] 50

Minimum Distance Between Channels 1 guard channel

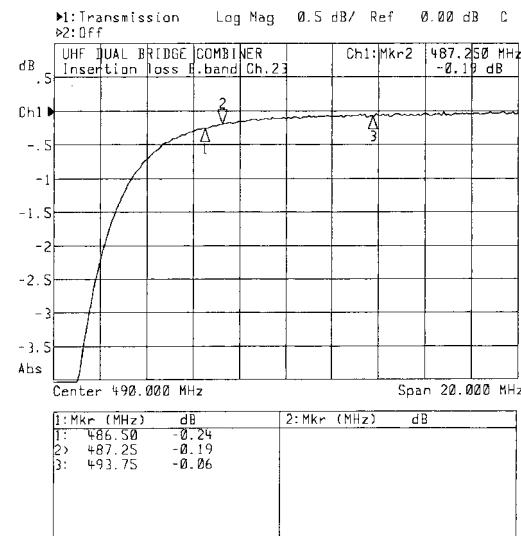
Insulation NB>BB [dB] > 40

Insulation BB>NB [dB] > 40

Narrow-band Maximum Power [W] 1000

Broad-band Maximum Power [W] 4000

Max. Group Delay Variation [ns] 20



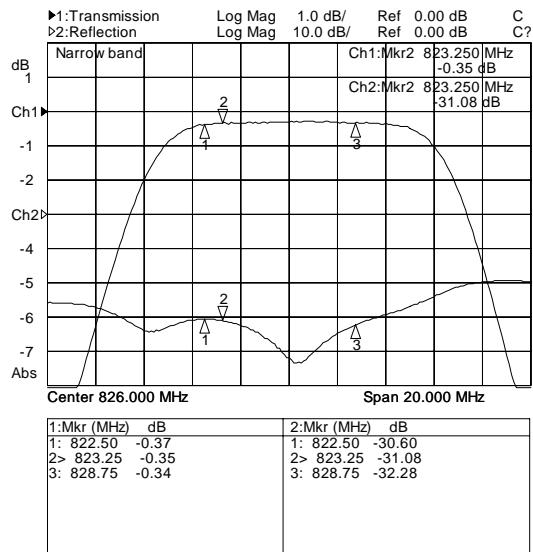
Technical data sheet

Part Number **1423-DP318**

Constant impedance configuration

Band IV/V

1+10kW UHF Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	EIA 7/8" or DIN 7/16
<i>Input broadband output</i>	EIA 3 1/8"

Overall dimensions [WxDxH] [mm.] 400x355x500

Temperature range [C°] -10 ÷ 50

Weight [kg.] 25

Electrical Characteristics

Frequency Range [MHz] 470 ÷ 862

Bandwidth [MHz] 6÷8

Narrow-band Insertion Loss [dB] < 0.45

Broad-band Insertion Loss [dB] < 0.2 MAX

Narrow-band Return Loss [dB] > 26

Broad-band Return Loss [dB] > 26

Input/Output Impedance [Ohm] 50

Minimum Distance Between Channels 1 guard channel

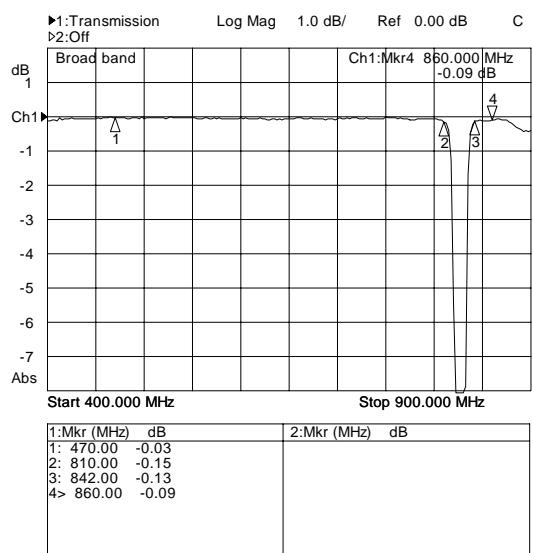
Insulation NB>BB [dB] > 40

Insulation BB>NB [dB] > 40

Narrow-band Maximum Power [W] 1000

Broad-band Maximum Power [W] 10000

Max. Group Delay Variation [ns] 20



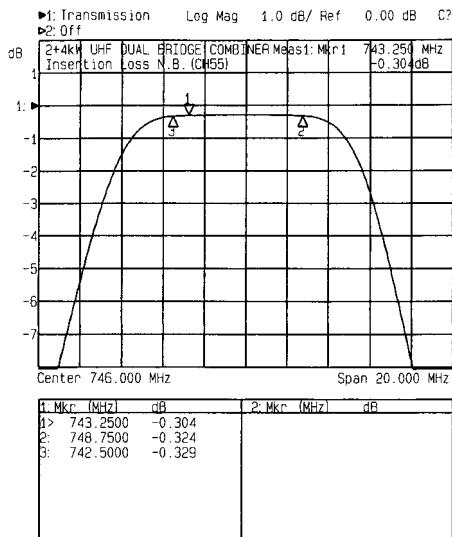
Technical data sheet

Part Number **1445-3-DP158**

Constant impedance configuration

Band IV/V

2+4kW UHF Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	EIA 7/8"
<i>Input broadband output</i>	EIA 1 5/8"
	EIA 1 5/8"

Overall dimensions [WxDxH] [mm.] 365x355x590

Temperature range [C°] -10 ÷ 50

Weight [kg.] 25

Electrical Characteristics

Frequency Range [MHz] 470 ÷ 862

Bandwidth [MHz] 6-8

Narrow-band Insertion Loss [dB] < 0.35

Broad-band Insertion Loss [dB] < 0.2 max

Narrow-band Return Loss [dB] > 26

Broad-band Return Loss [dB] > 26

Input/Output Impedance [Ohm] 50

Minimum Distance Between Channels 1 guard channel

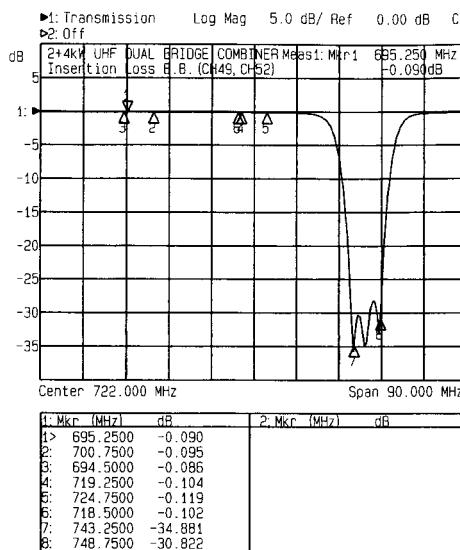
Insulation NB>BB [dB] > 40

Insulation BB>NB [dB] > 40

Narrow-band Maximum Power [W] 2000

Broad-band Maximum Power [W] 4000

Max. Group Delay Variation [ns] 20



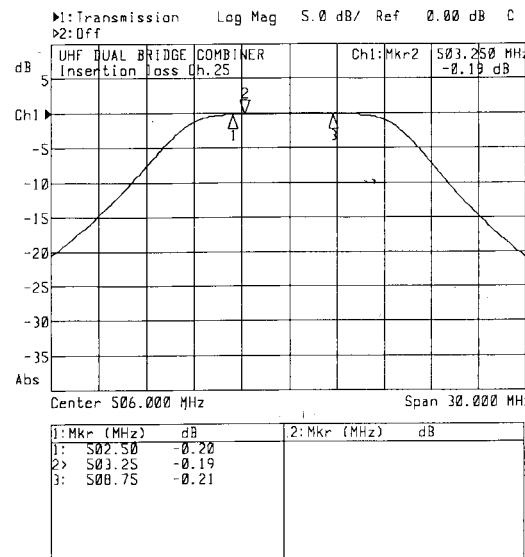
Technical data sheet

Part Number 1421-3-DP318

Constant impedance configuration

Band IV/V

4+8kW Double Bridge Combiner



Mechanical Characteristics

Connections

Input narrowband	EIA 1 5/8"
Input broadband output	EIA 1 5/8" ,or EIA 3 1/8"

Overall dimensions [WxDxH] [mm.] 380x490x600

Temperature range [C°] -10 ÷ 50

Weight [kg.] 50

Electrical Characteristics

Frequency Range [MHz] 470 ÷ 862

Bandwidth [MHz] 6-8

Narrow-band Insertion Loss [dB] < 0.25

Broad-band Insertion Loss [dB] < 0.15

Narrow-band Return Loss [dB] > 26

Broad-band Return Loss [dB] > 26

Input/Output Impedance [Ohm] 50

Minimum Distance Between Channels 1 guard channel

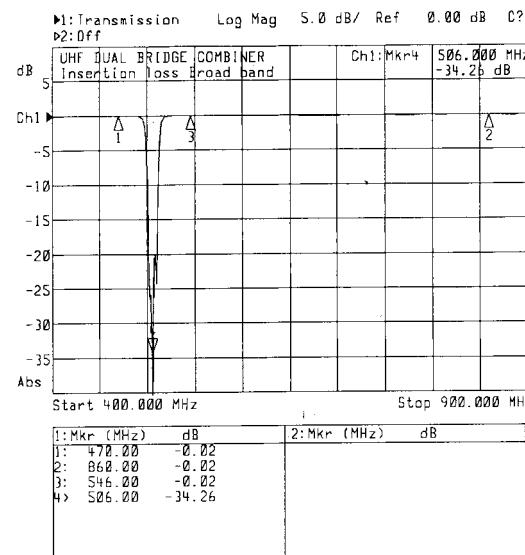
Insulation NB>BB [dB] > 40

Insulation BB>NB [dB] > 40

Narrow-band Maximum Power [W] 4000

Broad-band Maximum Power [W] 8000

Max. Group Delay Variation [ns] 20



All data contained in this technical sheet are not binding and can be changed without notice

Data updating 28/03/2006

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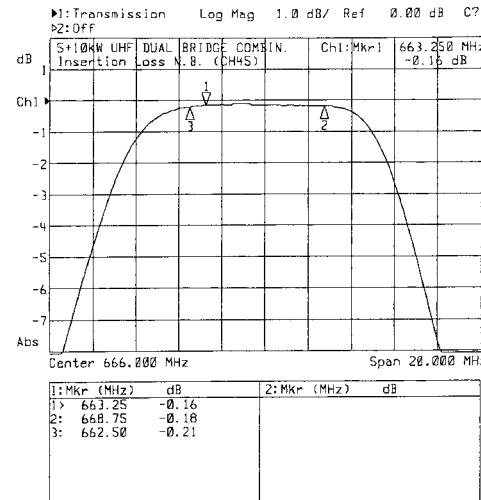
Technical data sheet

Part Number 1428-3-DP

Constant impedance configuration

Band IV/V

6+6kW Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	EIA 1 5/8", or EIA 3 1/8"
<i>Input broadband output</i>	EIA 1 5/8", or EIA 3 1/8"

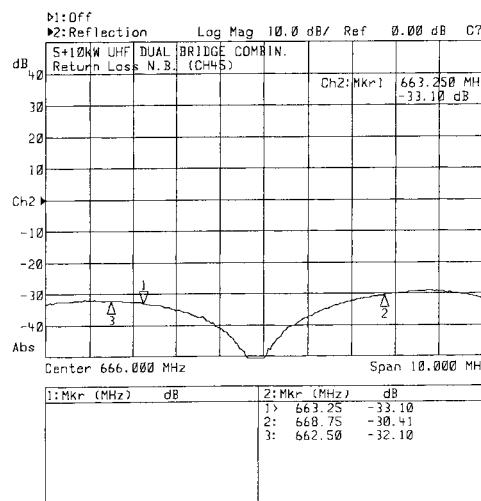
Overall dimensions [WxDxH] [mm.] 390x570x800

Temperature range [C°] -10 ÷ 50

Weight [kg.] 65

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6÷8
Narrow-band Insertion Loss [dB]	< 0.2
Broad-band Insertion Loss [dB]	< 0.15
Narrow-band Return Loss [dB]	> 26
Broad-band Return Loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	1 guard channel
Insulation NB>BB [dB]	> 40
Insulation BB>NB [dB]	> 40
Narrow-band Maximum Power [W]	6000
Broad-band Maximum Power [W]	6000
Max. Group Delay Variation [ns]	20



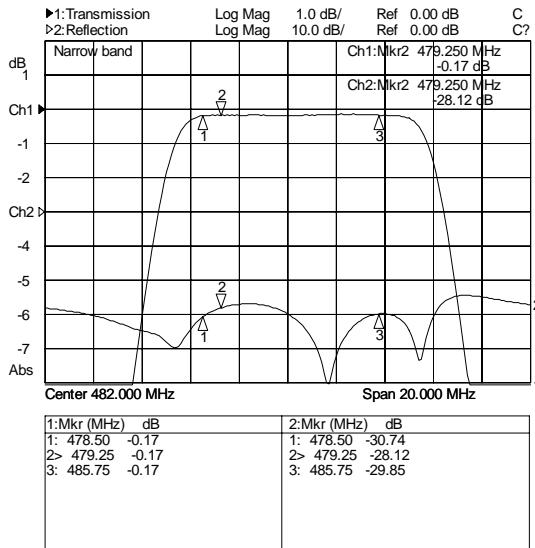
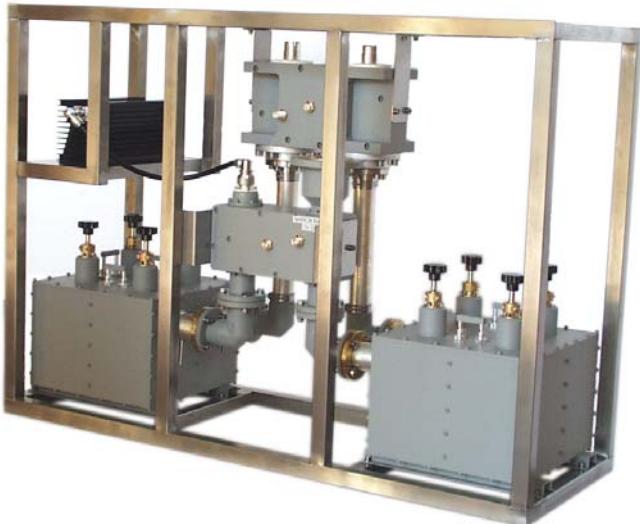
Technical data sheet

Part Number **1604-4-DP**

Constant impedance configuration

Band IV/V

10+10kW UHF Double Bridge Combiner



Mechanical Characteristics

Connections

<i>Input narrowband</i>	EIA 3 1/8"
<i>Input broadband</i>	EIA 3 1/8"
<i>output</i>	EIA 3 1/8"

Overall dimensions [WxDxH] [mm.] 1120x400x800

Temperature range [C°] -10 ÷ 50

Weight [kg.] 120

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Narrow-band Insertion Loss [dB]	< 0.25
Broad-band Insertion Loss [dB]	< 0.1
Narrow-band Return Loss [dB]	> 26
Broad-band Return Loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	1 guard ch.
Insulation NB>BB [dB]	> 40
Insulation BB>NB [dB]	> 40
Narrow-band Maximum Power [W]	10000
Broad-band Maximum Power [W]	10000
Max. Group Delay Variation [ns]	20

All data contained in this technical sheet are not binding and can be changed without notice

Data updating 14/03/2005

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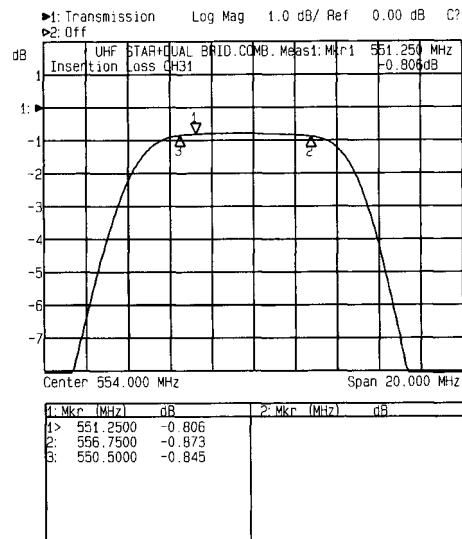
UHF Low Power Multiplexer

Technical data sheet

Part Number **1425-3-S2+3x1425-3-DP1-1610**

Band IV/V

5x100W UHF Combiner Mixed Configuration



Mechanical Characteristics

Connections

<i>Input</i>	N
<i>output</i>	DIN 7/16

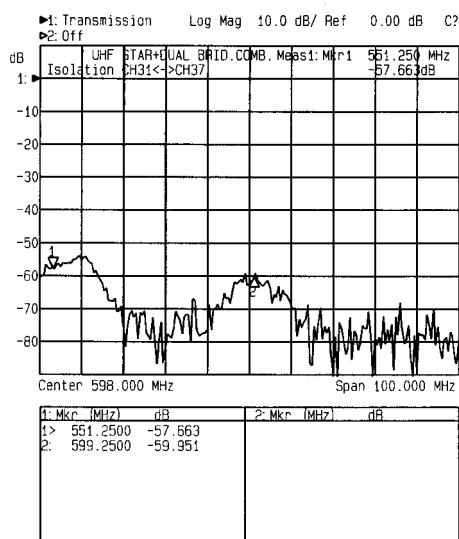
Overall dimensions [WxDxH] [mm.] 1010x210x325

Temperature range [C°] -10 ÷ 50

Weight [kg.] 20

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Insertion Loss [dB]	< 0.85
Return Loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	1 guard channel
Insulation Between Channels [dB]	> 30
Maximum Input Power [W]	100
Maximum Power [W]	500

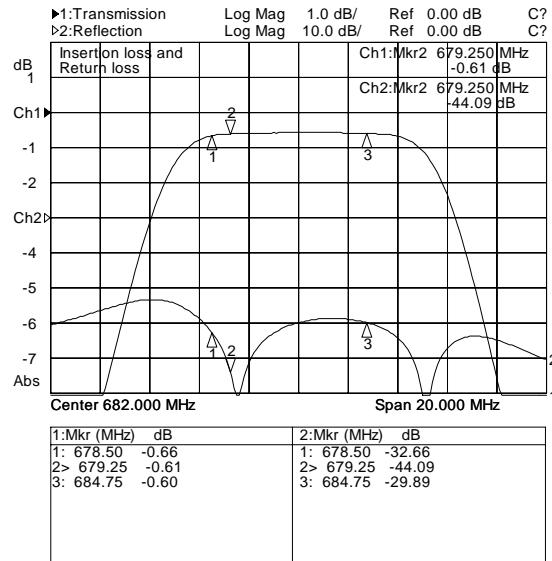
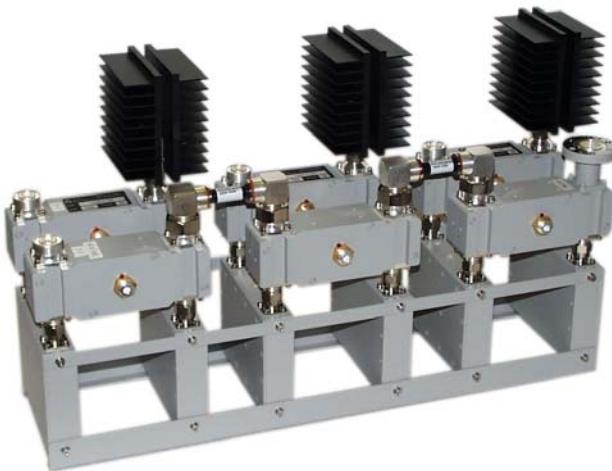


Technical data sheet

Part Number 3x1425-3-DP

Band IV/V

4x200W UHF Contant Impedance Configuration



Mechanical Characteristics

Connections

Input	DIN 7/16
output	EIA 7/8"

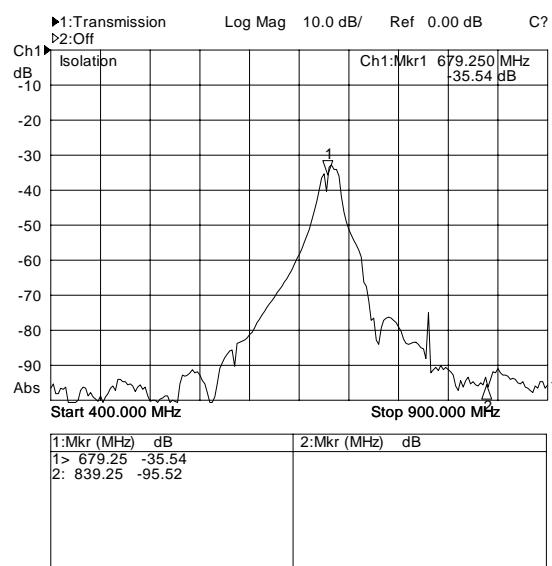
Overall dimensions [WxDxH] [mm.] 610x200x380

Temperature range [C°] -10 ÷ 50

Weight [kg.] 18

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Insertion Loss [dB]	< 0.7
Return Loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	1 guard channel
Insulation Between Channels [dB]	> 30
Maximum Input Power [W]	200
Maximum Power [W]	800



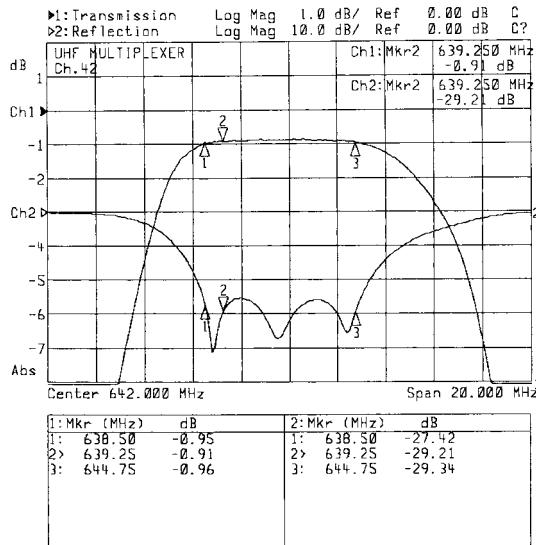
Technical data sheet

Part Number **(1425-3-S2+2x1425-3-DP1-1610)-R**

Multiplexer

Band IV-V

4x200W UHF mixed configuration combiner -rack version-



Mechanical Characteristics

Connections

<i>Input</i>	N
<i>output</i>	DIN 7/16

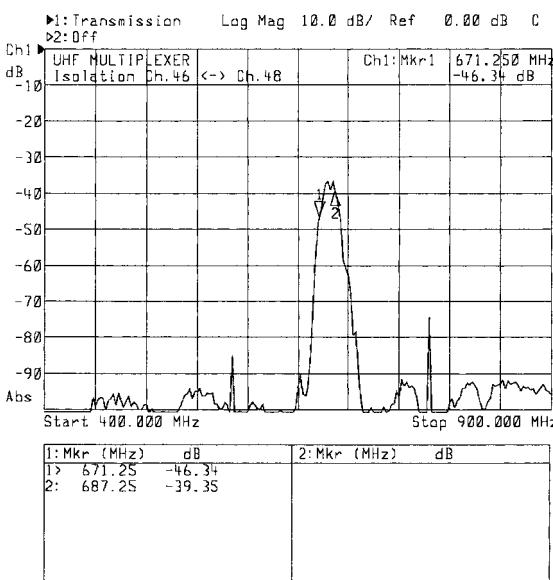
Overall dimensions [WxDxH] [mm.] 483x300x265.9(6HE)

Temperature range [C°] -10 ÷ 50

Weight [kg.] 15

Electrical Characteristics

Frequency Range [MHz]	470 ÷ 862
Bandwidth [MHz]	6 ÷ 8
Insertion Loss [dB]	< 1
Return Loss [dB]	> 26
Input/Output Impedance [Ohm]	50
Minimum Distance Between Channels	1 guard channel
Insulation Between Channels [dB]	>30
Maximum Input Power [W]	200
Maximum Power [W]	800



All data contained in this technical sheet are not binding and can be changed without notice

Data updating 18/09/2006

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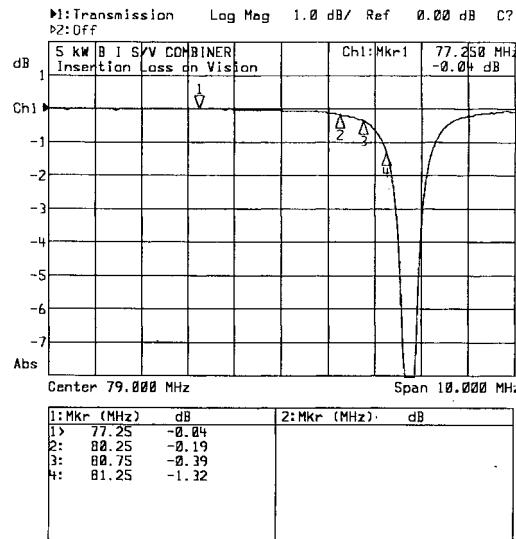
AUDIO/VIDEO COMBINERS

Technical data sheet

Part Number 1369-2

Band I

10kW AUDIO/VIDEO COMBINER Monosound



Mechanical Characteristics

Connections

Audio EIA 1 5/8"

Video and Output EIA 1 5/8"

Overall dimensions [WxDxH] [mm.] 540x510x1050

Temperature range [C°] -10 ÷ 50

Weight [kg.] 35

Air cooling System [m³/h] N.A.

Electrical Characteristics

Frequency Range [MHz] 54 ÷ 88

Sound Mono

Bandwidth [MHz] 6 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.1

Video Insertion Loss [dB] @ V.C. + 4.5 MHz < 0.5

Video Insertion Loss [dB] @ V.C. + 5 MHz < 1.5

Insertion Loss [dB] @ S.C. < 0.5

Video Input Return loss [dB] > 30

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 30

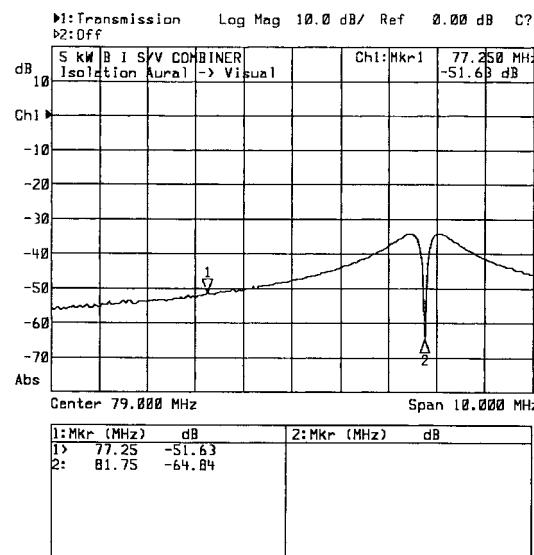
Insulation Video>Audio [dB] > 50

Maximum Vision Power [W] 10000

Maximum Sound Power [W] 1000

Max. Group Delay Variation [ns] 100

Data updating



All data contained in this technical sheet are not binding and can be changed without notice

Data updating 18/02/2004

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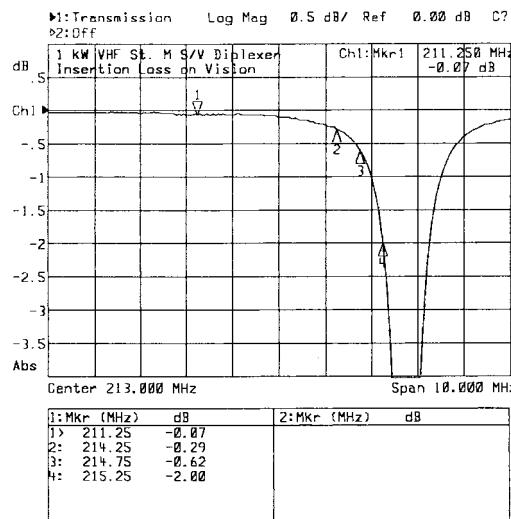
e-mail info@deltameccanica.com - web www.deltameccanica.com

Technical data sheet

Part Number 1332-2

Band III

2.5kW AUDIO/VIDEO COMBINER Monosound



Mechanical Characteristics

Connections

Audio EIA 7/8"

Video and Output EIA 7/8"

Overall dimensions [WxDxH] [mm.] 150x505x780

Temperature range [C°] -10 ÷ 50

Weight [kg.] 21

Air cooling System [m³/h] N.A

Electrical Characteristics

Frequency Range [MHz] 170 ÷ 230

Sound Mono

Bandwidth [MHz] 7 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.2

Video Insertion Loss [dB] @ V.C. + 4.5 MHz < 0.5

Video Insertion Loss [dB] @ V.C. + 5 MHz < 2

Insertion Loss [dB] @ S.C. < 0.7

Video Input Return loss [dB] > 26

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 35

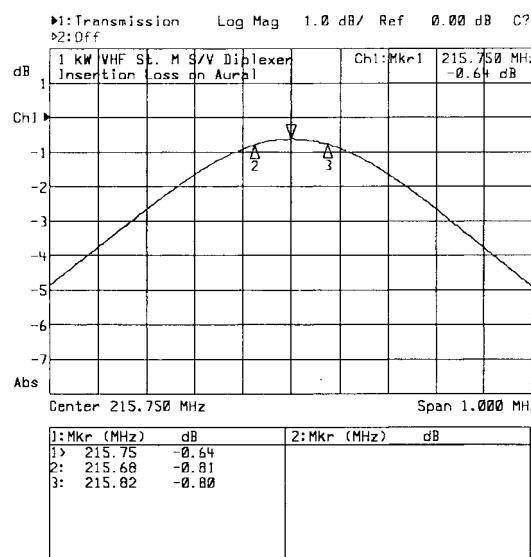
Insulation Video>Audio [dB] > 50

Maximum Vision Power [W] 2500

Maximum Sound Power [W] 250

Max. Group Delay Variation [ns] 150

Data updating



All data contained in this technical sheet are not binding and can be changed without notice

Data updating 20/04/2004

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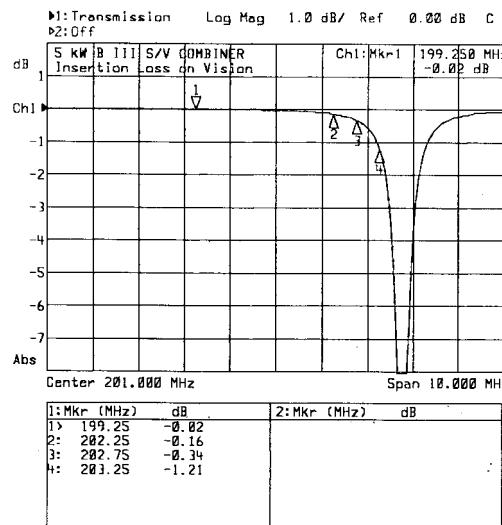
Technical data sheet

Part Number 1347-2

Double bridge configuration

Band III

5kW AUDIO/VIDEO COMBINER Monosound



Mechanical Characteristics

Connections

Audio EIA 1 5/8"

Video and Output EIA 1 5/8"

Overall dimensions [WxDxH] [mm.] 214x569x710

Temperature range [C°] -10 ÷ 50

Weight [kg.] 25

Air cooling System [m³/h] N.A.

Electrical Characteristics

Frequency Range [MHz] 170 ÷ 230

Sound Mono

Bandwidth [MHz] 7 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.15

Video Insertion Loss [dB] @ V.C. + 4.5 MHz < 0.5

Video Insertion Loss [dB] @ V.C. + 5 MHz < 1.5

Insertion Loss [dB] @ S.C. < 0.7

Video Input Return loss [dB] > 26

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 30

Insulation Video>Audio [dB] > 45

Maximum Vision Power [W] 5000

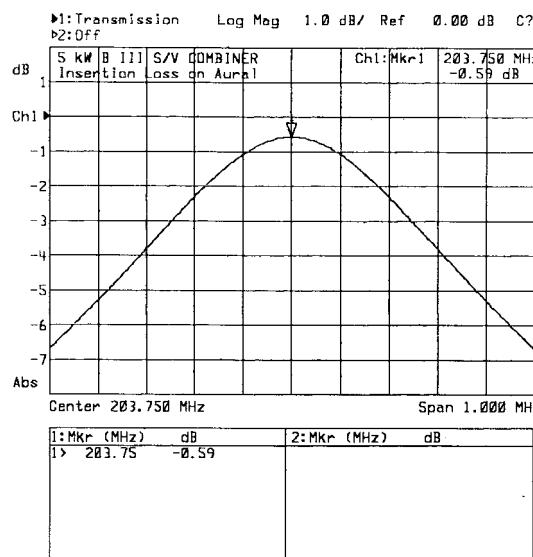
Maximum Sound Power [W] 500

Max. Group Delay Variation [ns] 150

Data updating

All data contained in this technical sheet are not binding and can be changed without notice

Data updating 18/02/2004



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Technical data sheet

Part Number **1347-4**

Double bridge configuration

Band III

5kW AUDIO/VIDEO COMBINER Stereo



Mechanical Characteristics

Connections

Audio EIA 1 5/8"

Video and Output EIA 1 5/8"

Overall dimensions [WxDxH] [mm.] 406x504x710

Temperature range [C°] -10 ÷ 50

Weight [kg.] 45

Air cooling System [m³/h] N.A.

Electrical Characteristics

Frequency Range [MHz] 170 ÷ 230

Sound Stereo

Bandwidth [MHz] 7 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.15

Video Insertion Loss [dB] @ V.C. + 4.5 Mhz < 0.5

Video Insertion Loss [dB] @ V.C. + 5 Mhz < 2

Insertion Loss [dB] @ S.C. < 0.7

Video Input Return loss [dB] > 30

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 30

Insulation Video>Audio [dB] > 50

Maximum Vision Power [W] 5000

Maximum Sound Power [W] 500

Max. Group Delay Variation [ns] 150

Data updating

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Data updating 18/02/2004

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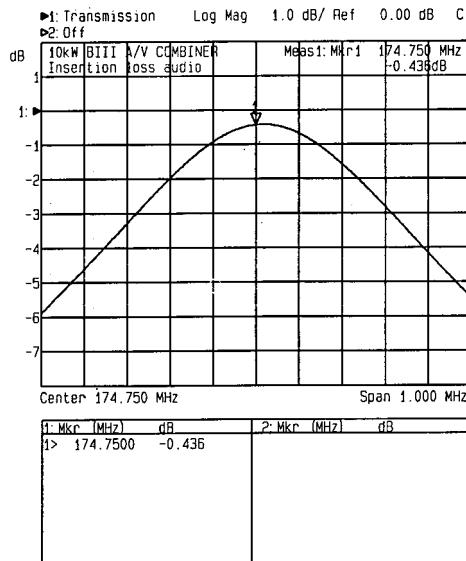
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Technical data sheet

Part Number 1337-2

Band III

10kW AUDIO/VIDEO COMBINER Monosound



Mechanical Characteristics

Connections

Audio EIA 1 5/8"

Video and Output EIA 1 5/8"

Overall dimensions [WxDxH] [mm.] 618x250x707

Temperature range [C°] -10 ÷ 50

Weight [kg.] 30

Air cooling System [m³/h] N.A.

Electrical Characteristics

Frequency Range [MHz] 170 ÷ 230

Sound Mono

Bandwidth [MHz] 7 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.1

Video Insertion Loss [dB] @ V.C. + 4.5 MHz < 0.5

Video Insertion Loss [dB] @ V.C. + 5 MHz < 1.5

Insertion Loss [dB] @ S.C. < 0.5

Video Input Return loss [dB] > 30

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 30

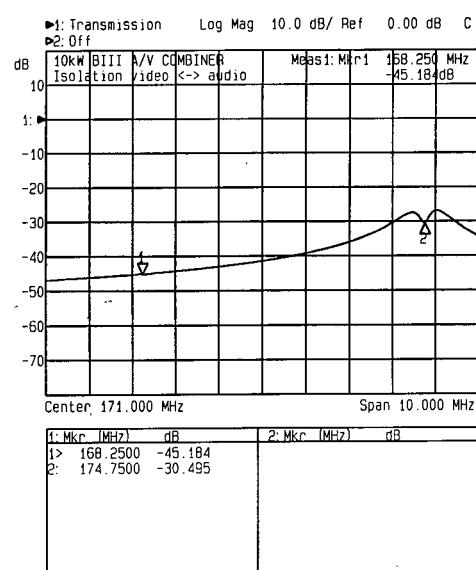
Insulation Video>Audio [dB] > 45

Maximum Vision Power [W] 10000

Maximum Sound Power [W] 1000

Max. Group Delay Variation [ns] 150

Data updating



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Data updating 18/02/2004

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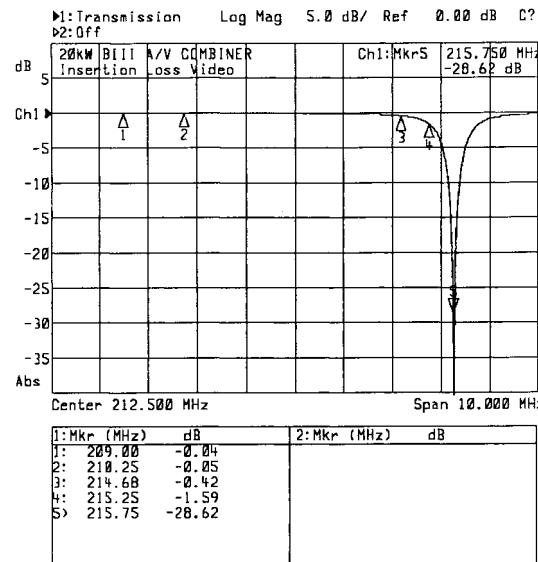
Technical data sheet

Part Number **1458**

Double bridge configuration

Band III

20kW AUDIO/VIDEO COMBINER Monosound



Mechanical Characteristics

Connections

Audio EIA 1 5/8"

Video and Output EIA 3 1/8"

Overall dimensions [WxDxH] [mm.] 624x254x8700

Temperature range [C°] -10 ÷ 50

Weight [kg.]

Air cooling System [m³/h] N.A.

Electrical Characteristics

Frequency Range [MHz] 170 ÷ 230

Sound Mono

Bandwidth [MHz] 7 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.07

Video Insertion Loss [dB] @ V.C. + 4.5 MHz < 0.5

Video Insertion Loss [dB] @ V.C. + 5 MHz < 2

Insertion Loss [dB] @ S.C. < 0.5

Video Input Return loss [dB] > 30

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 30

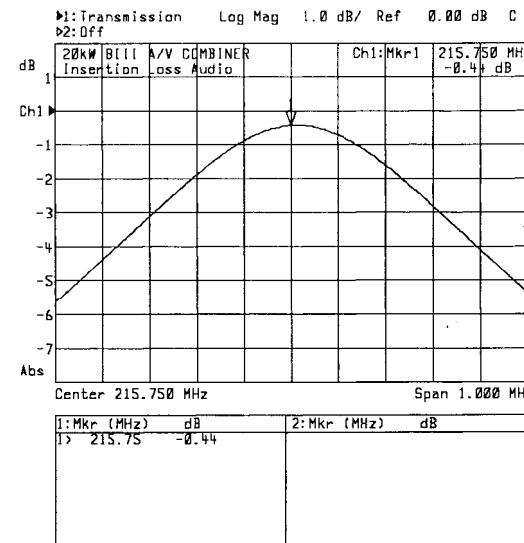
Insulation Video>Audio [dB] > 50

Maximum Vision Power [W] 20000

Maximum Sound Power [W] 2000

Max. Group Delay Variation [ns] 150

Data updating



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Data updating 18/02/2004

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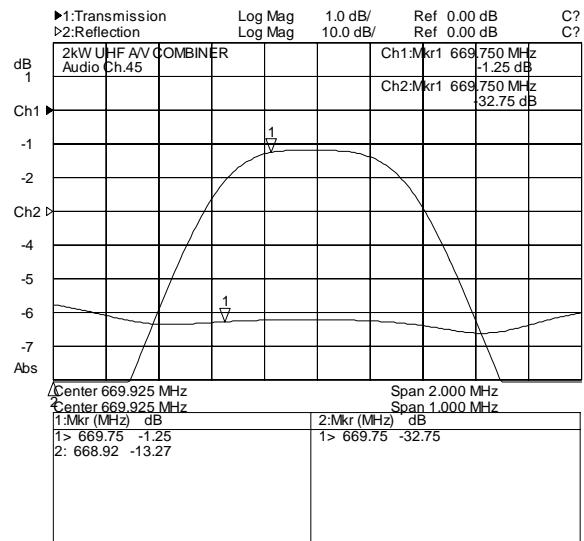
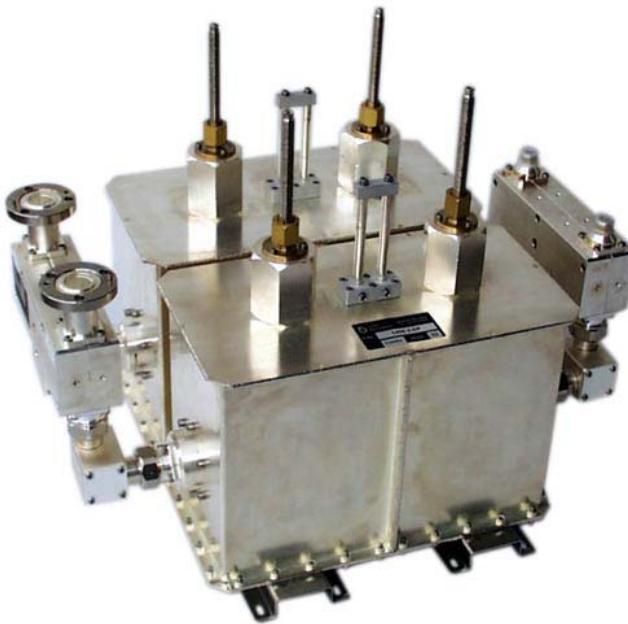
Technical data sheet

Part Number 1456-2-DP

Double bridge configuration

Band IV/V

2.5kW AUDIO/VIDEO COMBINER Stereo



Mechanical Characteristics

Connections

Audio N Female

Video and Output DIN 7/16

Overall dimensions [WxDxH] [mm.] 490x334x382

Temperature range [C°] -10 ÷ 50

Weight [kg.] 25

Air cooling System [m³/h] N.A.

Electrical Characteristics

Frequency Range [MHz] 470 ÷ 862

Sound Stereo

Bandwidth [MHz] 7 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.1

Video Insertion Loss [dB] @ V.C. + 4.5 MHz < 0.15

Video Insertion Loss [dB] @ V.C. + 5 MHz < 2

Insertion Loss [dB] @ S.C. < 1.5

Video Input Return loss [dB] > 30

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 30

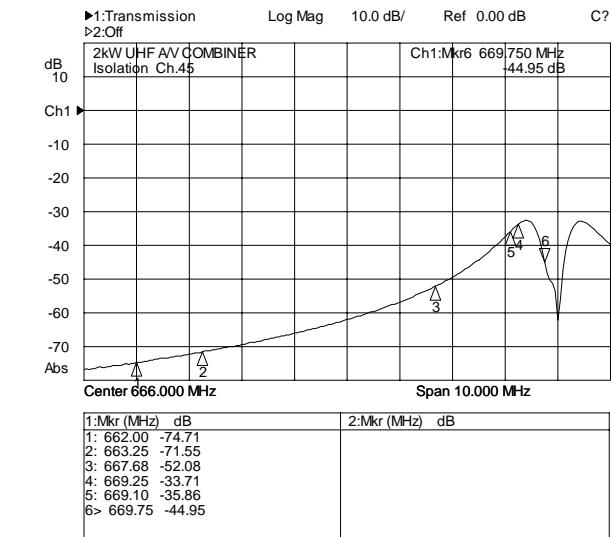
Insulation Video>Audio [dB] > 50

Maximum Vision Power [W] 2500

Maximum Sound Power [W] 250

Max. Group Delay Variation [ns] 230

Data updating



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Data updating 18/02/2004

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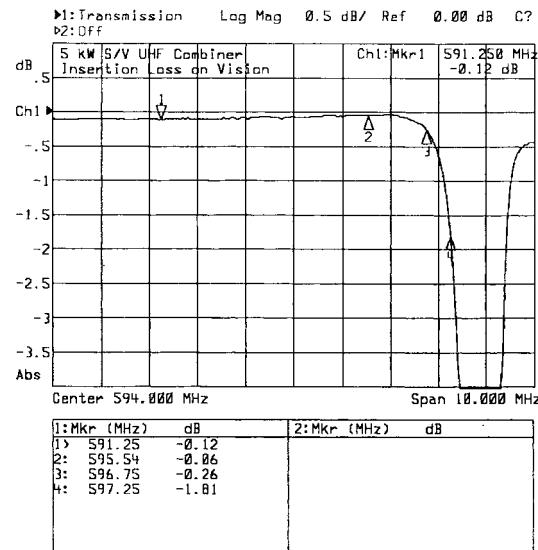
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Technical data sheet

Part Number 1321

Band IV/V

10kW AUDIO/VIDEO COMBINER C.I.N. Diplexer



Mechanical Characteristics

Connections

Audio EIA 1 5/8"

Video and Output EIA 3 1/8"

Overall dimensions [WxDxH] [mm.] 360x526x722.6

Temperature range [C°] -10 ÷ 50

Weight [kg.] 50

Air cooling System [m3/h] 300

Electrical Characteristics

Frequency Range [MHz] 470 ÷ 862

Sound Stereo

Bandwidth [MHz] 7 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.2

Video Insertion Loss [dB] @ V.C. + 4.5 MHz < 0.5

Video Insertion Loss [dB] @ V.C. + 5 MHz 2.50

Insertion Loss [dB] @ S.C. < 1.35

Video Input Return loss [dB] > 30

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 30

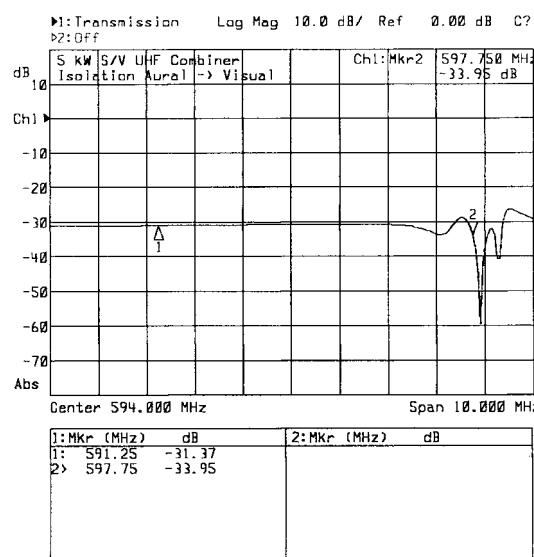
Insulation Video>Audio [dB] > 30

Maximum Vision Power [W] 10000

Maximum Sound Power [W] 1000

Max. Group Delay Variation [ns] 230

Data updating



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Data updating 17/04/2004

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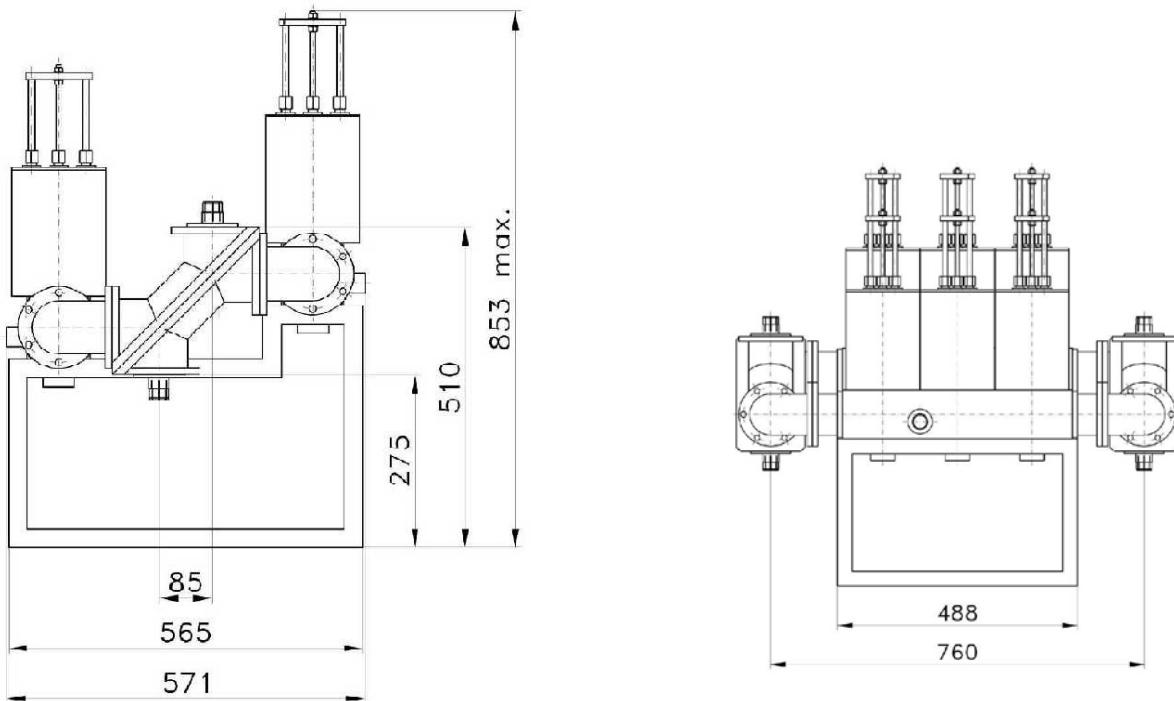
Technical data sheet

Part Number 1321-318

Constant impedance/notch configuration

Band IV/V

20kW AUDIO/VIDEO COMBINER C.I.N. Diplexer



Mechanical Characteristics

Connections

Audio EIA 3 1/8"

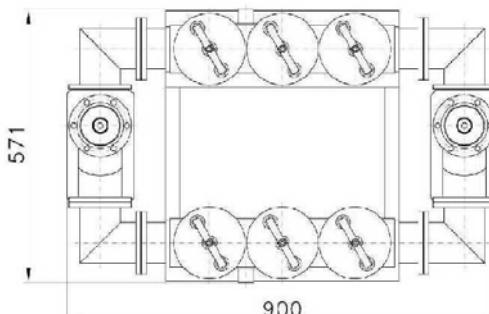
Video and Output EIA 3 1/8"

Overall dimensions [WxDxH] [mm.] 571x900x853

Temperature range [C°] -10 ÷ 50

Weight [kg.] 72

Air cooling System [m³/h] 350



Electrical Characteristics

Frequency Range [MHz] 470 ÷ 862

Sound Stereo

Bandwidth [MHz] 7 ÷ 8

Video Insertion Loss [dB] @ V.C. < 0.2

Video Insertion Loss [dB] @ V.C. + 4.5 Mhz < 0.5

Video Insertion Loss [dB] @ V.C. + 5 Mhz 2.50

Insertion Loss [dB] @ S.C. < 1.35

Video Input Return loss [dB] > 30

Sound Input Return loss [dB] > 26

Input/Output Impedance [Ohm] 50

Insulation Audio>Video [dB] > 30

Insulation Video>Audio [dB] > 30

Maximum Vision Power [W] 20000

Maximum Sound Power [W] 2000

Max. Group Delay Variation [ns] 230

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Data updating 18/02/2004

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CUSTOM PRODUCTS

YEAR
2000

PRODUCT

2X5 Kw UHF commutating Line Combiner. Integrated with a Patch Panel and a Power Divider.

A module for Forward Power and Reflected Power monitoring is included

CODE
N.A.

CUSTOMER
RAI

COUNTRY
Italy

Custom products



YEAR
2000

PRODUCT

2X2 kW UHF Bridge Diplexer - channel 21 - 23.
Integrated with a Patch Panel - 5 ports/ U-links

CODE
N.A.

CUSTOMER
Teleconsult

COUNTRY
Kosovo



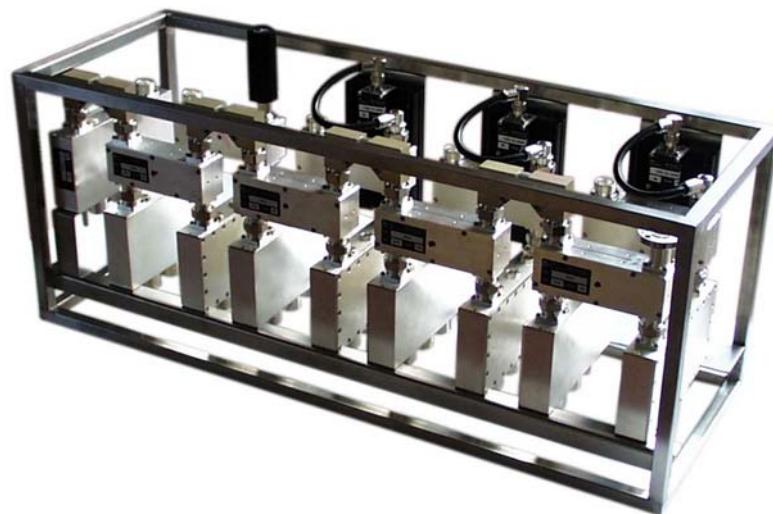
YEAR
2002

PRODUCT
5x250 Watt UHF
Constant Impedance Combiner

CODE
1423-F+4x1423

CUSTOMER
BSA

COUNTRY
Australia



YEAR
2005

PRODUCT
4x500 Watt DVB UHF
Constant Impedance Combiner

CODE
2x1494-6-DP158+1494-DP158

CUSTOMER
Electrosys

COUNTRY
Italy



YEAR
2001

PRODUCT
1+1 kW UHF Constant Impedance Combiner,
integrated with a 7/8" patch panel

CODE

CUSTOMER

COUNTRY



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Data updating 27/03/2006

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WARRANTY CONDITIONS

DELTA MECCANICA warrants its products to be free of defects in material and workmanship for one year from the date of shipment.

DELTA MECCANICA agrees to service, adjust and/or replace any defective parts of any equipment returned to its plant, freight pre-paid by customer, within one year from the date of original shipment from its plant. This warranty is subject to the conditions that notice of any defect must be given to the DELTA MECCANICA within 15 days of the discovery of the defect.

Equipments tested and tuned on customer's frequency by DELTA MECCANICA are warranted only before shipment, according to the related diagrams or specifications reported on test's document.

A careless handling and shipping can cause an alteration of tuning, for which DELTA MECCANICA will not be responsible in any way.

Notwithstanding Delta Meccanica will take the best care to tight the tuning controls , in any case before putting the devices on power, customer is requested to check that the equipments tuning is still exact, and didn't suffered any alterations during transport.

Any tampering (for example: partial disassembly) with our equipments, not authorized in writing by us, cancels, automatically, the present warranty.