



**FRANKONIA**  
www.frankoniagroup.com

- ANECHOIC CHAMBERS & SHIELDED ROOMS
- ACCESSORIES FOR ANECHOIC CHAMBERS / SHIELDED ROOMS
- RADIATED IMMUNITY TEST SYSTEMS
- **RF-POWER-AMPLIFIERS**
- BROADBAND ANTENNAS
- EMC TEST & MEASUREMENT INSTRUMENTS
- GTEM-CELLS



## AMPLIFIER SELECTION BOOK

10 KHz – 6GHz



### Broadband RF-Power Amplifiers

Frequency-Range: 10 kHz – 6 GHz

# THE FRANKONIA GROUP

1



## Frankonia Group

The FRANKONIA GROUP was founded in 1987 as a solution provider for EMC laboratories to meet the increasing demand for highly specialized testing environments for the electronic and automotive industry. With more than 25 years of experience to date, FRANKONIA maintains its leading position in EMC solutions worldwide. Without limitations in capabilities and resources, FRANKONIA develops future-oriented concepts for EMC laboratories, which guarantees an optimal use of resources as well as the best possible customized solutions.

- FRANKONIA demonstrates a global presence in cooperation, with a well-structured network of productions, representations and service units.
- FRANKONIA strives to be the preferred partner for customized and state-of-the-art solutions.
- FRANKONIA provides fundamental knowledge to operate as a complete solution provider.
- FRANKONIA implements innovative technologies to enhance the efficiency and improve the outcomes and quality along with customers' needs.

We are proud of our highly specialized team that is putting our customers' demands into practice. It is our philosophy to improve the products, to realize new ideas, and to complete our product range within our broad scope of business. The fact that FRANKONIA is able to offer complete solutions from the first sketch to the final handover makes FRANKONIA a unique and trustworthy partner worldwide.

3





- 1 Frankonia EMC Test-Systems GmbH
- 2 FRANKONIA GmbH
- 3 FRANKONIA – POLAND Sp. z o.o.
- 4 FRANKONIA Huize Co., Ltd.
- 5 Jiashan FRANKONIA EMC Co., Ltd.



## Frankonia's authenticity

FRANKONIA stands for latest technologies, highest quality, innovative concepts and materials and reliable solutions. Due to its easy and efficient usability along with its time-saving configuration, Frankonia's Anechoic Chambers set new standards for innovative and complete EMC testing solutions and offer a real added value to our customers.

## Frankonia solutions

FRANKONIA as a turnkey solution provider and manufacturer offers a complete range of anechoic chambers and RF-shielded enclosures, test equipment, instruments, software and accessories.

# BROADBAND RF-POWER AMPLIFIERS – 10 KHZ – 6 GHZ



## Application areas

FRANKONIA offers RF-power amplifiers whose frequency range and output power have been tailored especially to the applications in immunity test systems like:

### Radiated immunity test systems acc. to

- IEC / EN 61000-4-3
- ISO 11452-2
- MIL-STD 461, RS 103

### Conducted immunity test systems acc. to

- IEC / EN 61000-4-6

### BCI-test-systems acc. to

- ISO 11452-4
- MIL-STD 461, CS 114

### Available versions of V-type models Class A:

2U and 4U amplifiers are available in four versions:

-S	Standard amplifier
-SD	Standard amplifier + integrated directional coupler
-D	Standard amplifier + display + digital control + IEEE 488 GPIB communication
-DC	D version with integrated directional coupler and display of instantaneous power

7U and 8U amplifiers are available in two versions:

-D	Standard amplifier + display + digital control + IEEE 488 GPIB communication
-DC	D version with integrated directional coupler and display of instantaneous power

18U and larger than 18U amplifiers are only available as DC version.

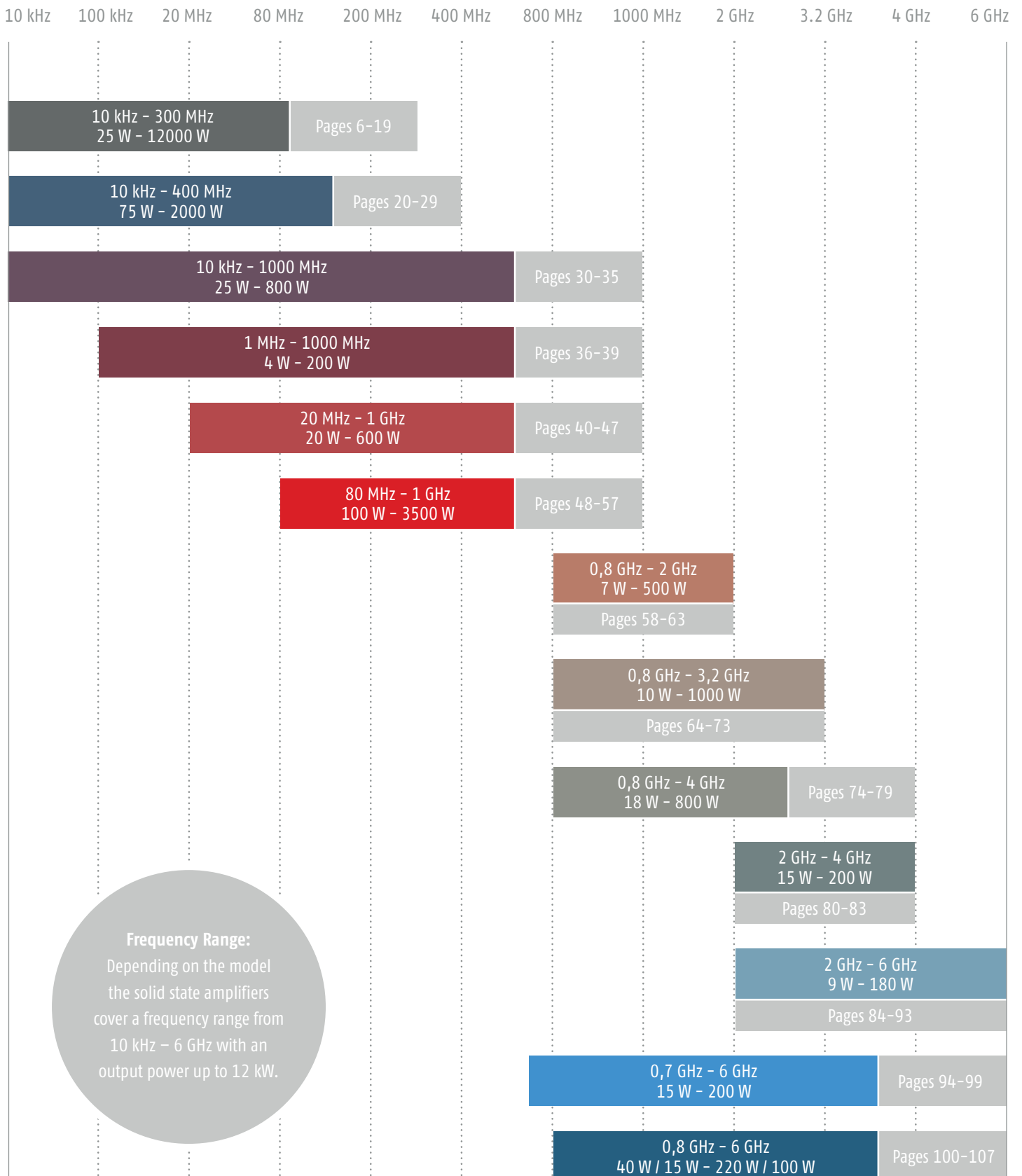
### Available versions of F-type models Class A / AB:

-S	Standard amplifier
-E	Standard amplifier + display + digital control + communication interface + circuit protection

### Special features

- Modular design
- Easy repair by change of modules
- Rapid remote diagnostics
- Output power of many models upgradeable
- 3 years standard warranty
- Upgrade of the output power over the operational frequency range is possible for most models

# PRODUCT RANGE – CONTENT

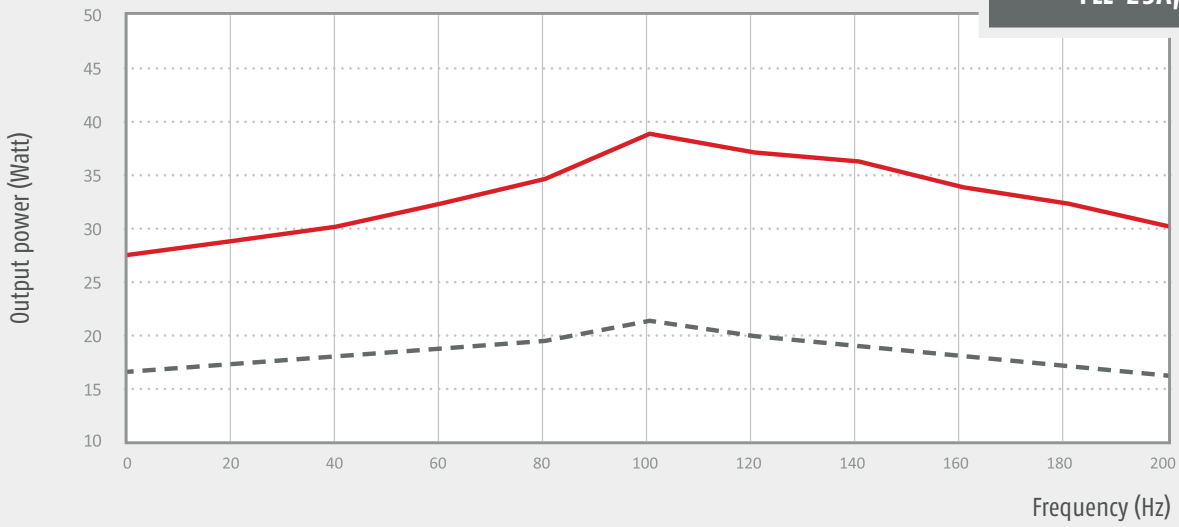


# 10 KHz – 300 MHz

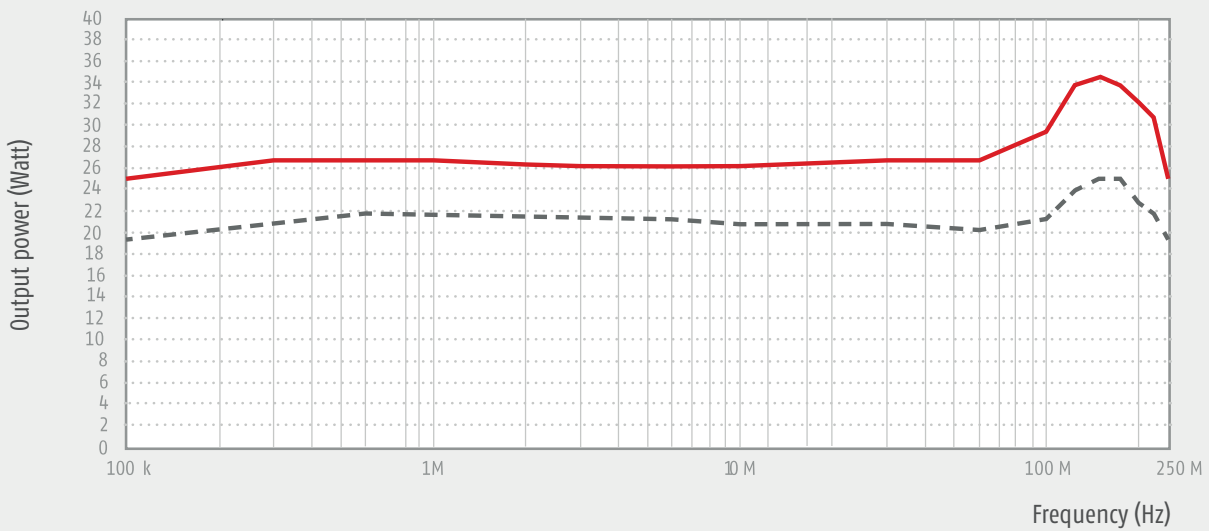
Part Number		FLL-25A	FLL-25	FLL-75
Frequency range		10kHz-230MHz	100kHz-250MHz	100kHz-300MHz
Output Power typ.		25 W	25 W	75 W
Output Power @ 1dB Compression, typ. min		see diagramm	see diagramm	see diagramm
RF Input, max.		+3 dBm	0 dBm	0 dBm
Gain, typ.		+43 dB	+46 dB	+51 dB
Flatness, typ.		±2 dB	±1.5 dB	±1.5 dB
IP3, typ.		+48 dBm	+48 dBm	+52 dBm
Input VSWR, max.		2:1	1.5:1	1.5:1
Harmonics @ 1 dB com., typ.		-15 dBc @ 15 W	-20 dBc @ 20 W	-20 dBc @ 20 W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 15 W	-75 dBc @ 20 W	-75 dBc @ 75 W
Input Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")	483 (19")
	H	134 (3 HU)	134 (3 HU)	134 (3 HU)
	D	508	436	436
Weight		16 kg	8 kg	10 kg
AC Power Input (W)		300	150	400
Power Supply (VAC)		100-240	88-264	100-240
Phases		1	1	1
Operating Humidity Non-Condensing (%)		95	95	95
Cooling		Internal forced air	Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S	S

## FLL-25A

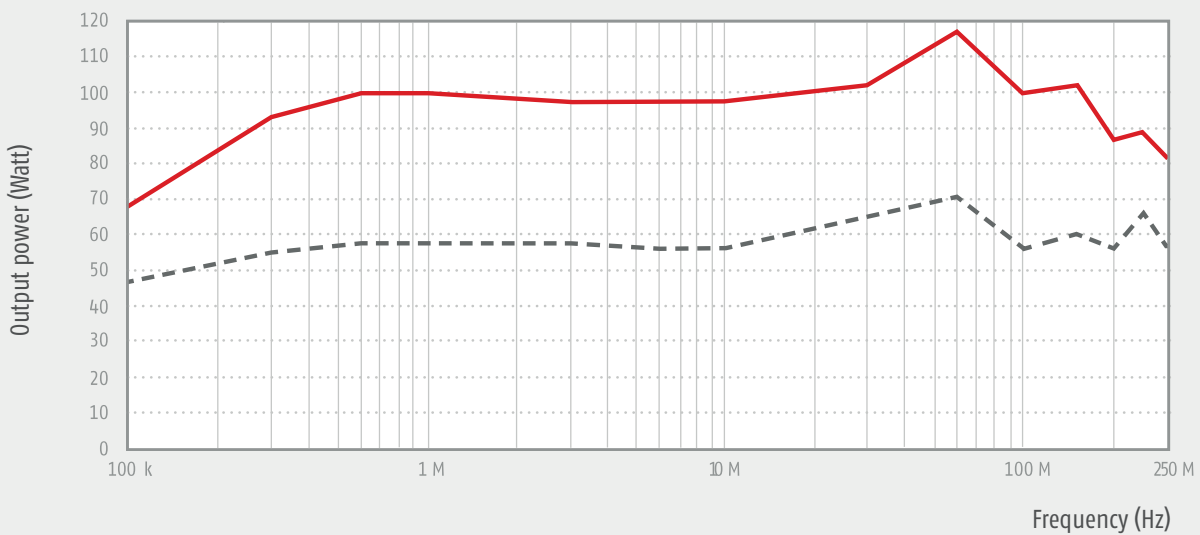
FLL-25A, FLL-25, FLL-75



## FLL-25



## FLL-75



Output Power (compression max. = 1dB)



Output Power (compression max. = 3dB)

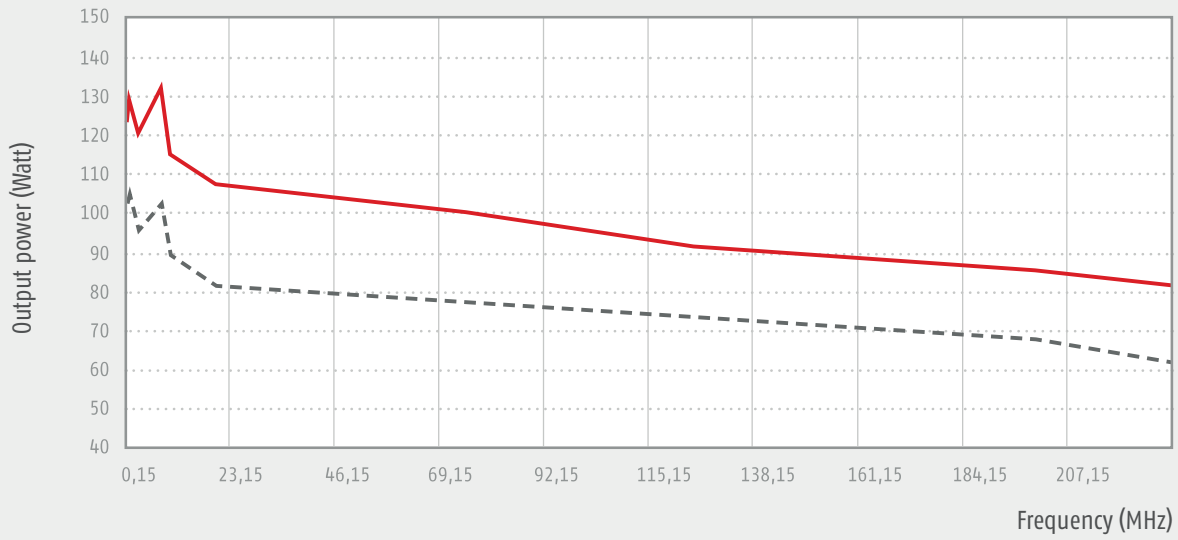


# 10 KHz – 300 MHz

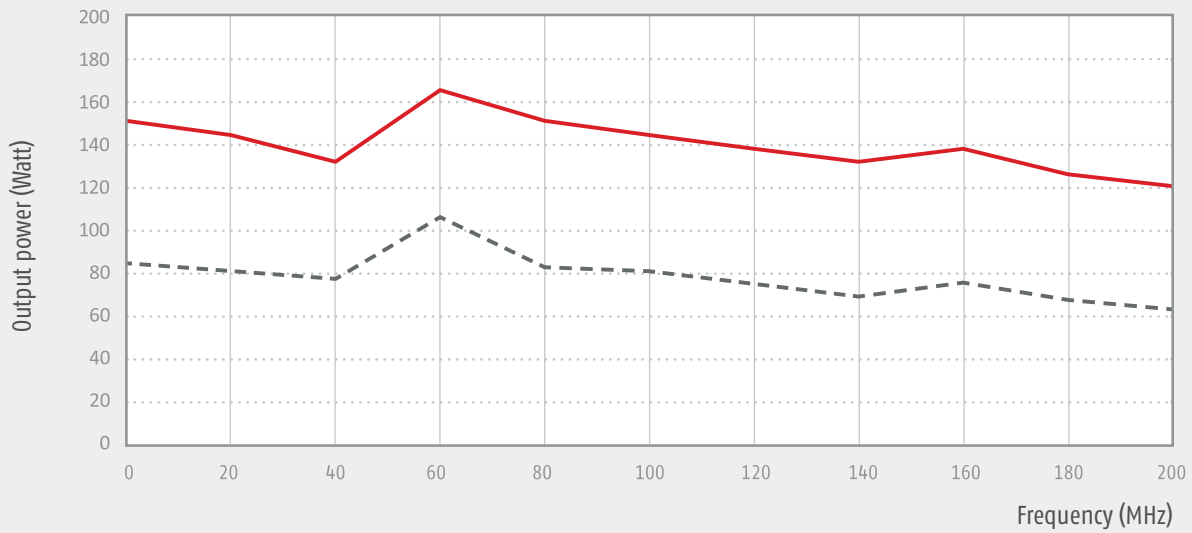
Part Number		FLL-75A	FLL-100A
Frequency range		150kHz-230MHz	10kHz-250MHz
Output Power typ.		75	100
Output Power @ 1dB Compression, typ. min		see diagramm	see diagramm
RF Input, max.		0 dBm	0 dBm
Gain, typ.		+51 dB	+50 dB
Flatness, typ.		±1.5 dB	±2.5 dB
IP3, typ.		+54	+54
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB com., typ.		-20 dBc @ 45W	-20 dBc @ 60W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 45W	<-60 dBc @ 60W
Input Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	134 (3 HU)	223 (5 HU)
	D	508	660
Weight		17,5 kg	26 kg
AC Power Input (W)		400	700
Power Supply (VAC)		100-240	100-240
Phases		1	1
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E



### FLL-75A



### FLL-100A

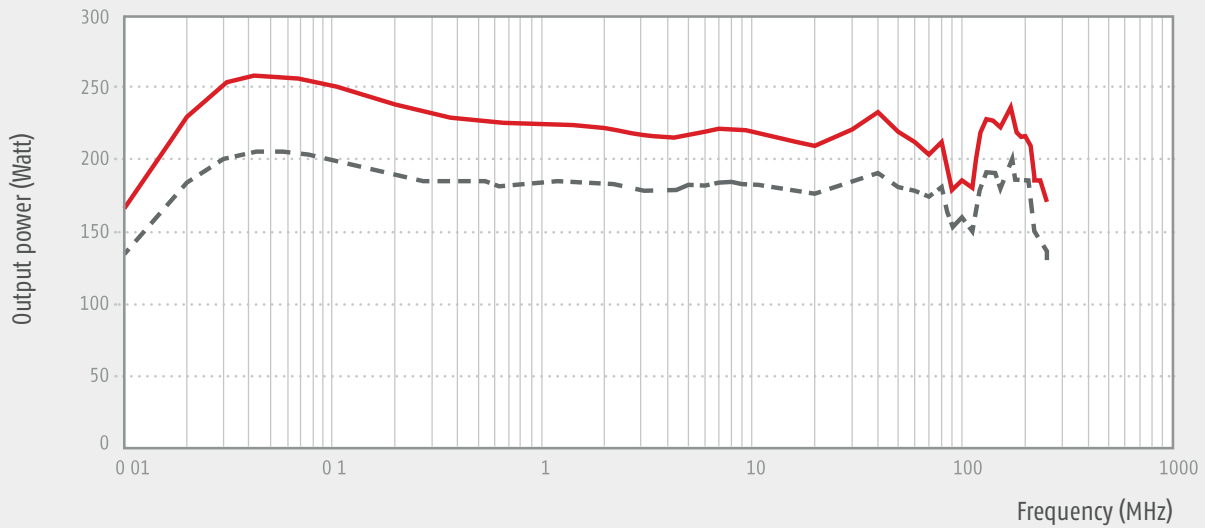


- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

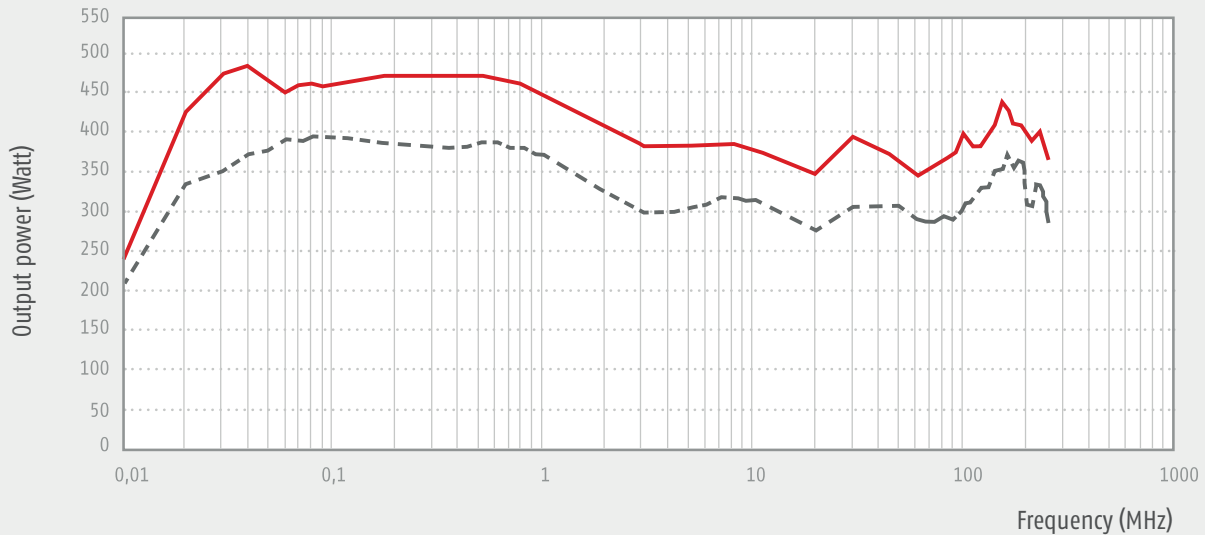
# 10 KHz – 300 MHz

Part Number	VLL-140	VLL-300
Frequency range	10kHz-250MHz	10kHz-250MHz
Output Power typ.	140 W	300 W
Output Power @ 1dB Compression, typ. min	see diagramm	see diagramm
RF Input, max.	+10 dBm	+10 dBm
Gain, typ.	+ 49 dB	+ 53 dB
Flatness, typ.	±3 dB	±2.5 dB
Input VSWR	2:1	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type	A	A
Input / Output Impedance	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out	N(f)N(f)	N(f)N(f)
Dimensions (mm)		
W	450	450
H	178 ( 4 HU)	178 (4 HU)
D	640	640
Weight	33 kg	35 kg
Rated current	7.5A @ 110VAC, 3.2A @ 230VAC	13.2A @ 110VAC, 6.3A @ 230VAC
Power Supply (VAC)	90-250, 47-63 Hz	90-250, 47-63 Hz
Phases	1	1
Operating Temperature (°C) 0/+50	0 / +35	0 / +35
Room temperature storage (°C)	-20 / +70	-20 / +70
Cooling / Forced air	Self contained fans 60l / sec. max.	Self contained fans 60l / sec. max.
Following types available:	S, SC, D, DC	S, SC, D, DC

### VLL-140



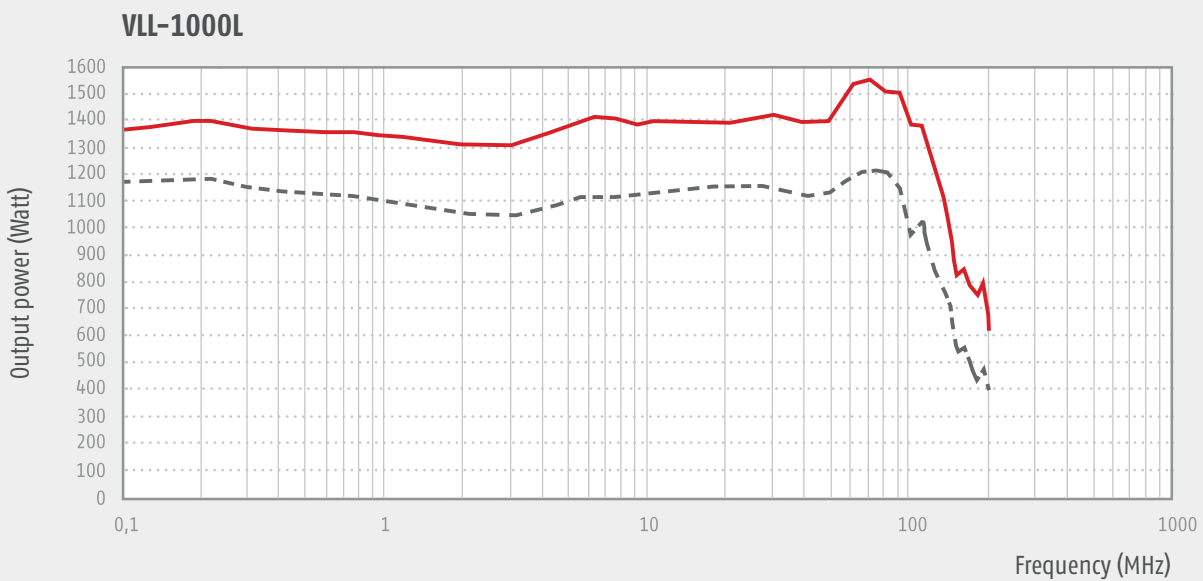
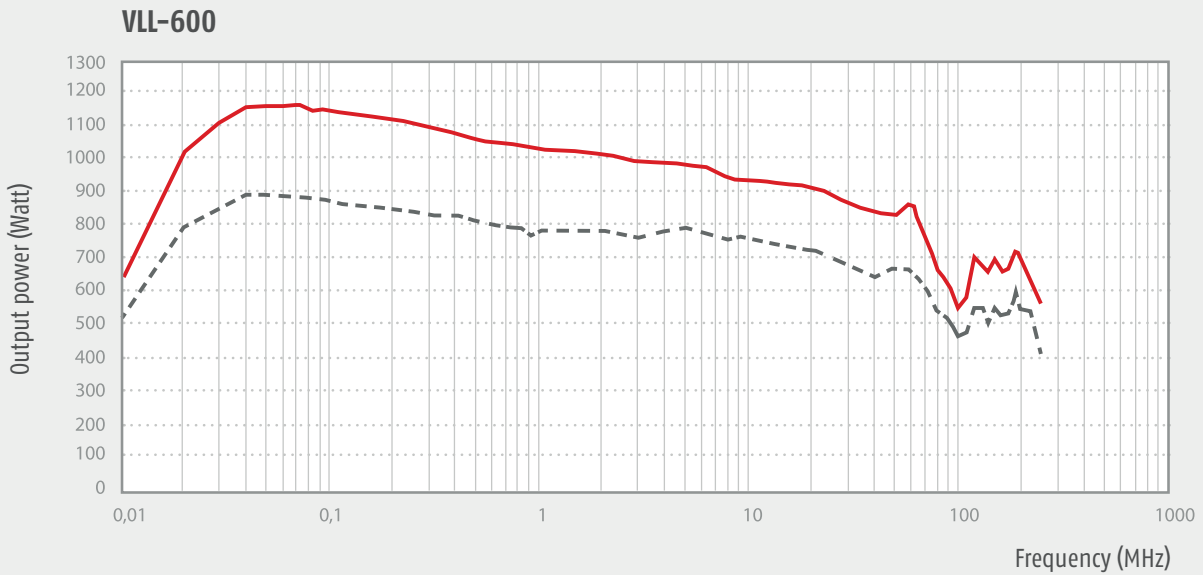
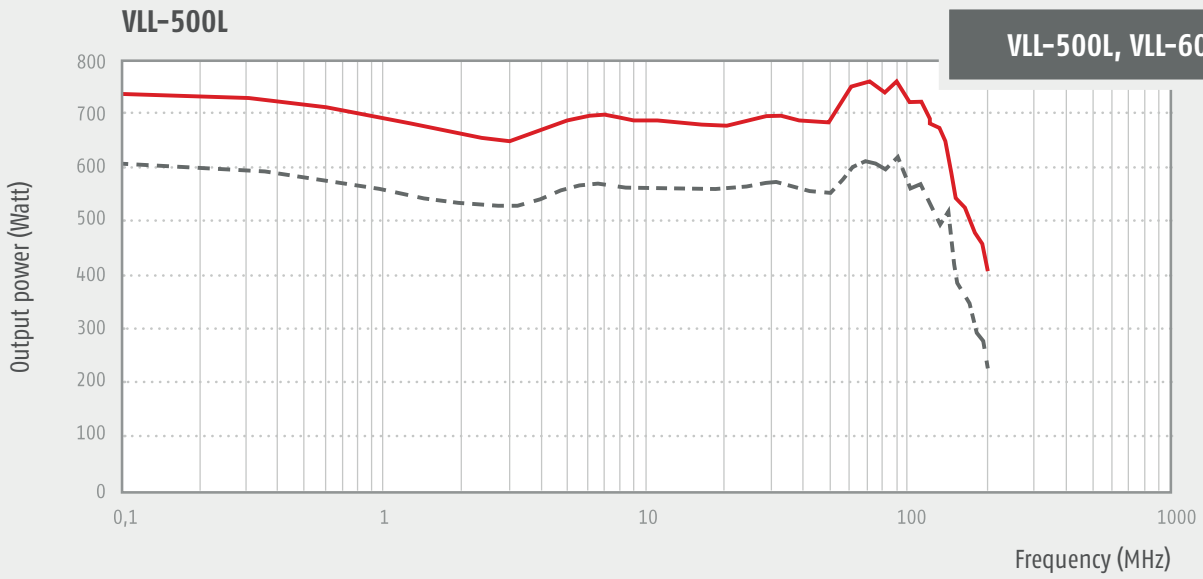
### VLL-300



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 10 KHz – 300 MHz

Part Number		VLL-500L	VLL-600	VLL-1000L
Frequency range		100kHz-200MHz	10kHz-250MHz	100kHz-200MHz
Output Power typ.		500 W	600 W	1000 W
Output Power @ 1dB Compression, typ. min.		see diagramm	see diagramm	see diagramm
RF Input, max.		+10 dBm	+10 dBm	+10 dBm
Gain, typ.		+55 dB	+57 dB	+58 dB
Flatness, typ.		±3 dB	±3 dB	±3 dB
Input VSWR		2:1	2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f) N(f)
Dimensions (mm)	W	640	640	640
	H	312 (7 HU)	360 (8 HU)	360 (8 HU)
	D	840	450	450
Weight		44 kg	51 kg	54 kg
Rated current		8.7 A @ 230 VAC	11.1A @ 230VAC	15.2A @ 230VAC
Power Supply (VAC)		200-250, 47-63 Hz	200-250, 47-63 Hz	200-250, 47-63 Hz
Phases		1	1	1
Operating Temperature (°C) 0/+50		0 / +35	0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70	-20 / +70
Cooling / Forced Air		Self contained fans, 240l / sec. max.	Self contained fans, 120l / sec. max.	Self contained fans, 240l / sec. max.
Following types available:		D, DC	D, DC	D, DC



Output Power (compression max. = 1dB)



Output Power (compression max. = 3dB)

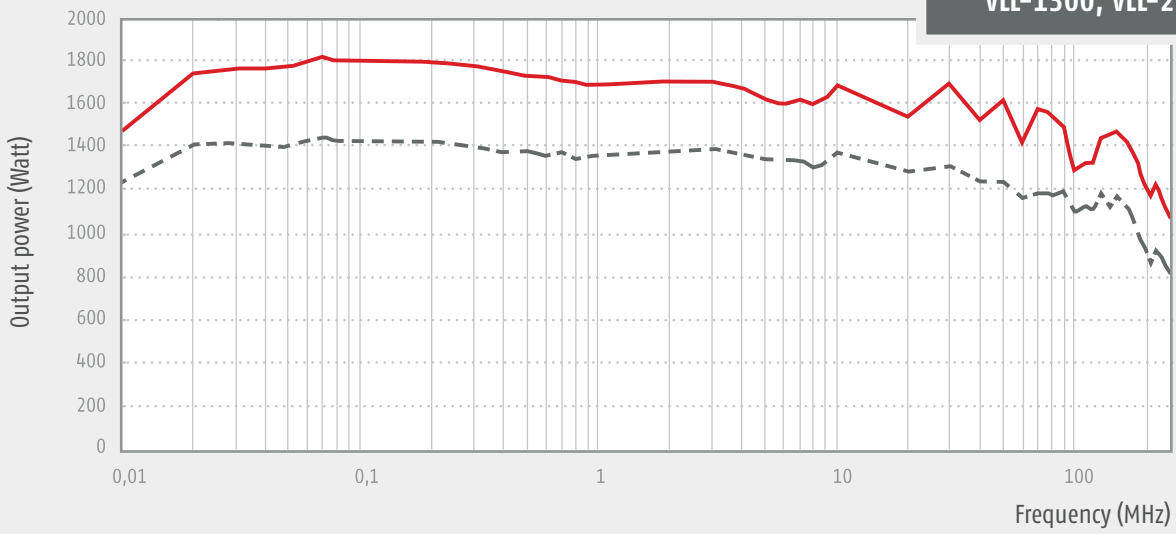


# 10 KHz – 300 MHz

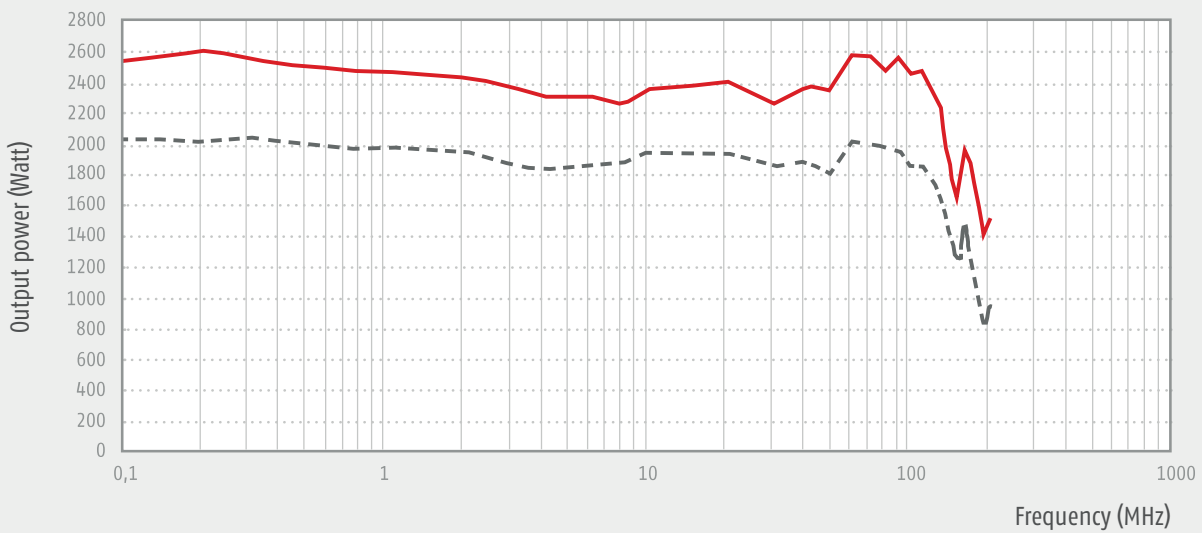
Part Number	VLL-1300	VLL-2000L	VLL-2500
Frequency range	10kHz-250MHz	100kHz-200MHz	10kHz-250MHz
Output Power typ.	1300 W	2000 W	2500 W
Output Power @ 1dB Compression, typ. min.	see diagramm	see diagramm	see diagramm
RF Input, max.	+10 dBm	+10 dBm	+10 dBm
Gain, typ.	+60 dB	+60 dB	+63 dB
Flatness, typ.	±2.5 dB	±3 dB	±3 dB
Input VSWR	2:1	2:1	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type	A	A	A
Input / Output Impedance	50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out	N(f) 7/16(f)	N(f) 7/16(f)	N(f) 7/16(f)
Dimensions (mm)	W H D	600 1050 (18 HU) 840	600 1050 (18 HU) 840
Weight	230 kg	230 kg	390 kg
Rated current	5,4kVA	7.2 KVA	10.35 KVA
Power Supply (VAC)	47-63 Hz	47-63 Hz	47-63 Hz
Phases	3	3	3
Operating Temperature (°C) 0/+50	0 / +35	0 / +35	0 / +35
Room temperature storage (°C)	-20 / +70	-20 / +70	-20 / +70
Cooling / Forced Air	Self contained fans 240l / sec. max.	Self contained fans 240l / sec. max.	Self contained fans 480l / sec. max.
Following types available:	DC	DC	DC

## VLL-1300

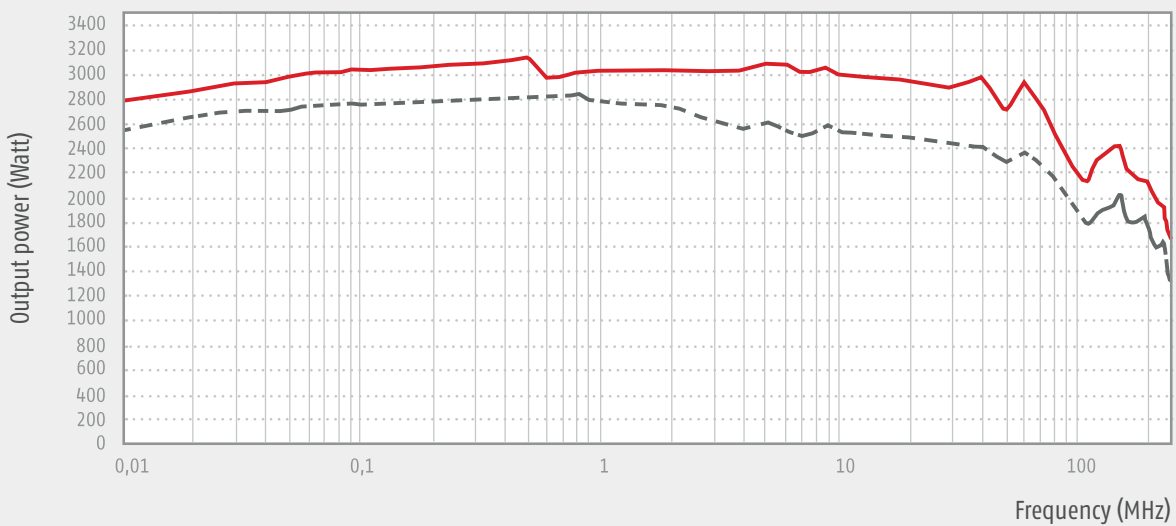
VLL-1300, VLL-2000L, VLL-2500



## VLL-2000L



## VLL-2500



Output Power (compression max. = 1dB)

Output Power (compression max. = 3dB)



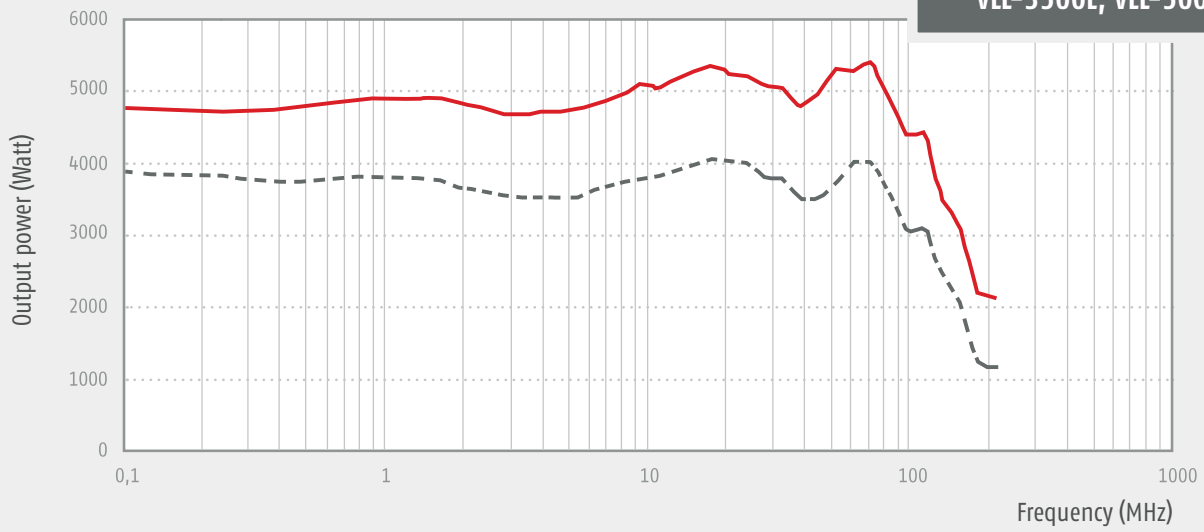
# 10 KHz – 300 MHz

Part Number	VLL-3500L	VLL-5000	VLL-7000L
Frequency range	100kHz-200MHz	10kHz-250MHz	100kHz-200MHz
Output Power typ.	3500 W	5000 W	7000 W
Output Power @ 1dB Compression, typ. min.	see Diagramm	see Diagramm	see Diagramm
RF Input, max.	+10 dBm	+10 dBm	+10 dBm
Gain, typ.	+65 dB	+67 dB	+65 dB
Flatness, typ.	±3 dB	±4 dB	±3.5 dB
Input VSWR	2:1	2:1	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type	A	A	A
Input / Output Impedance	50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out	N(f) 7/16(f)	N(f) 7/16(f)	N(f) EIA 1-5/8
Dimensions (mm)	W H D	800 840 (42 HU) 1590	800 840 (42 HU) 2120
Weight	390 kg	590 kg	400kg + 340kg
Rated current	15 kVA	21 kVA	29 kVA
Power Supply (VAC)	47-63 Hz	47-63 Hz	47-63Hz
Phases	3	3	3
Operating Temperature (°C)	0 / +35	0 / +35	0 / +35
Room temperature storage (°C)	-20 / +70	-20 / +70	-20 / +70
Cooling / Forced Air	Self contained fans 480 l / sec. max.	Self contained fans 960 l / sec. max.	Self contained fans 2 x 480l / sec. max.
Following types available:	DC	DC	DC

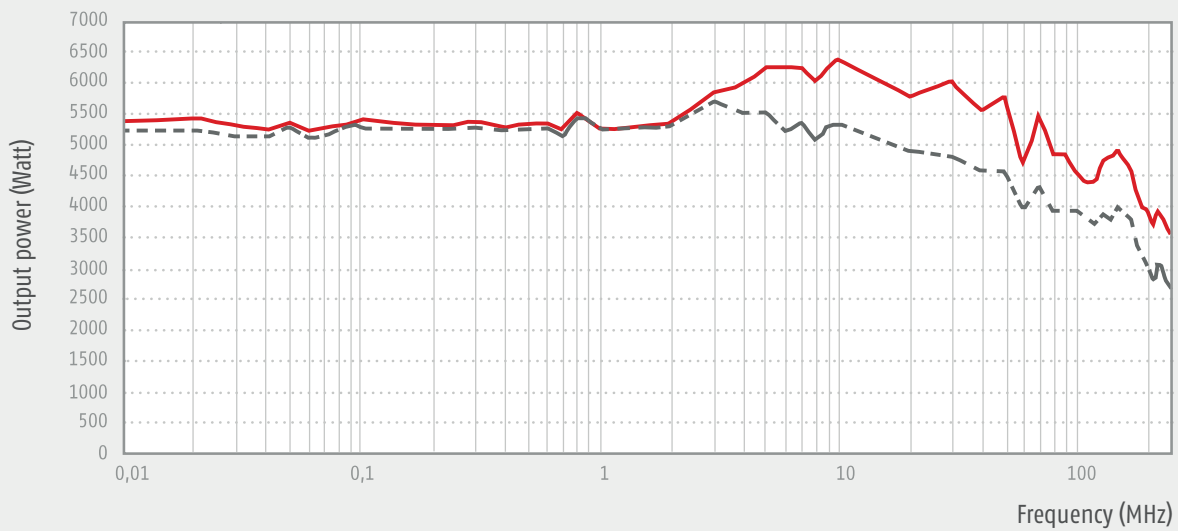


VLL-3500L

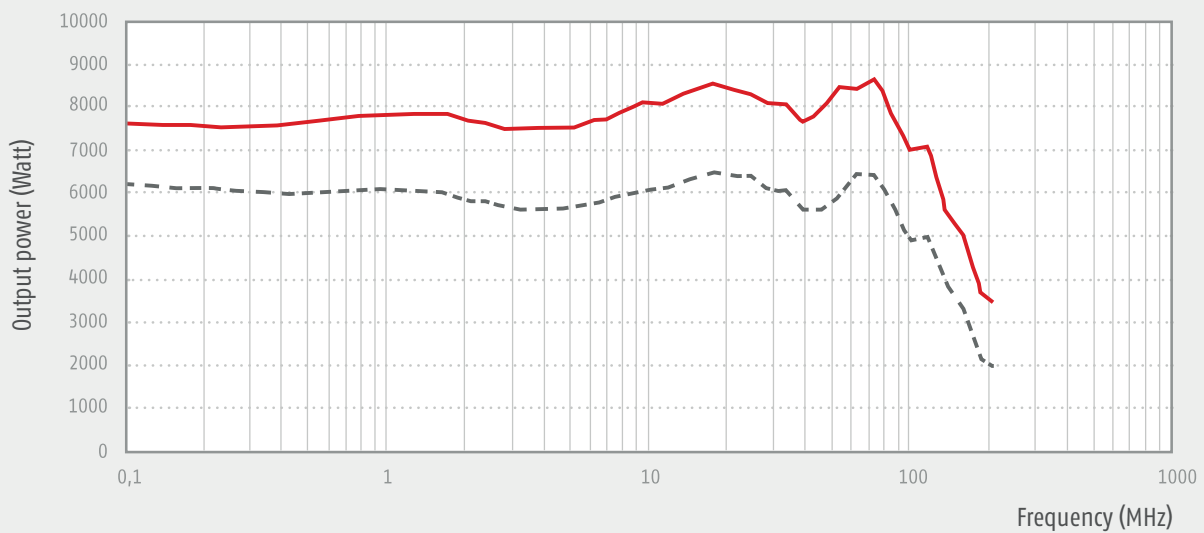
VLL-3500L, VLL-5000, VLL-7000L



VLL-5000



VLL-7000L



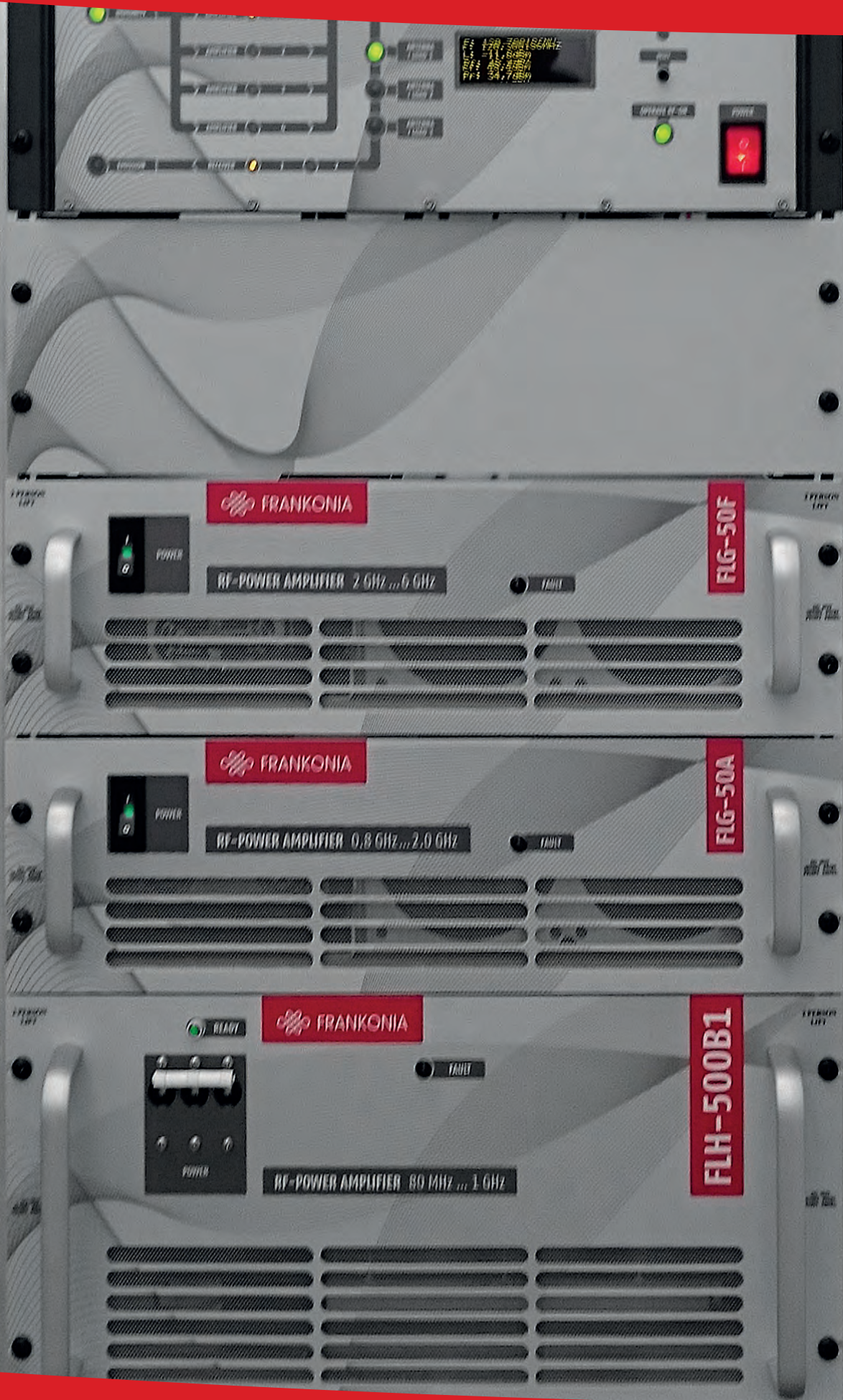
Output Power (compression max. = 1dB)

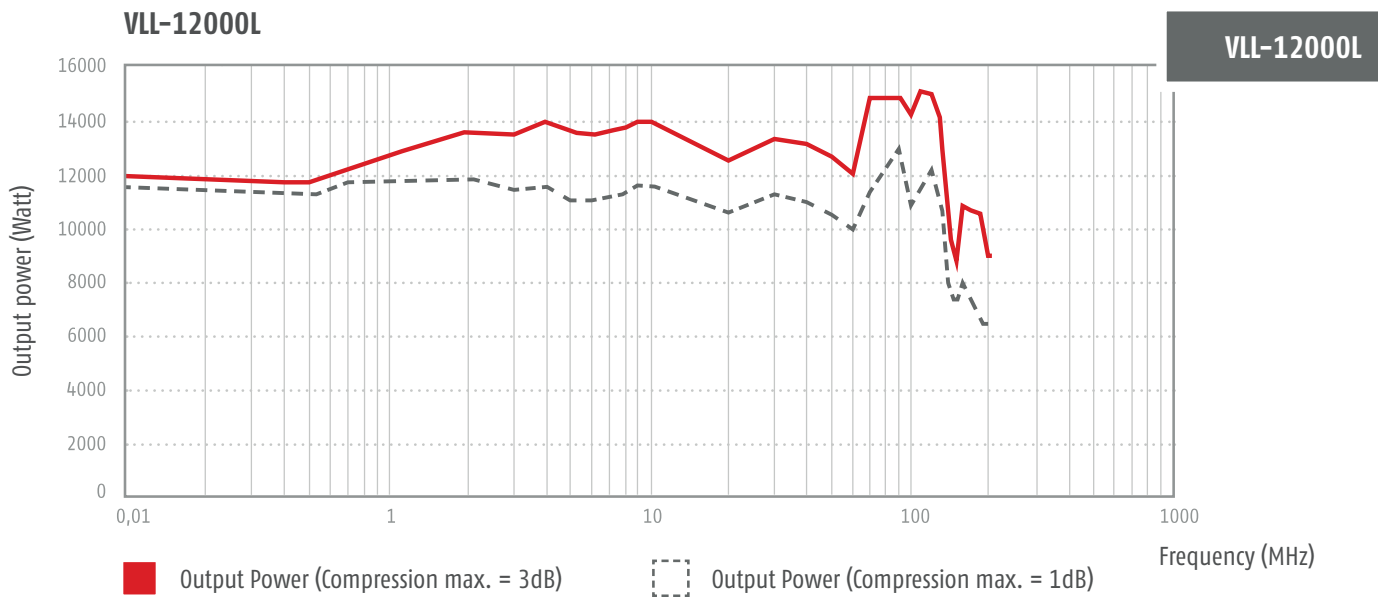


Output Power (compression max. = 3dB)



10 KHz - 300 MHz



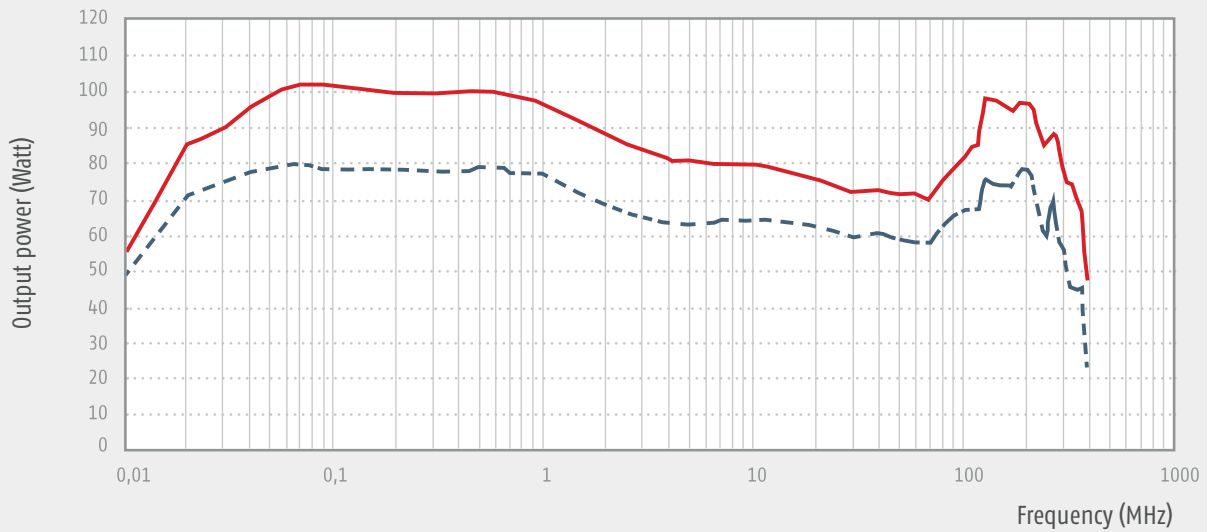


Part Number	VLL-12000L
Frequency range	100kHz-200MHz
Output Power typ.	12000 W
Output Power @ 1dB Compression, typ. min.	see Diagramm
RF Input, max.	+10 dBm
Gain, typ.	+68 dB
Flatness, typ.	±3 dB
Input VSWR	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc
Class type	A
Input / Output Impedance	50 Ω / 50 Ω
Connectors In / Out	N(f) EIA 1-5/8
Dimensions (mm) W x H x D	2200 x 1950 (38 HU) x 840
Weight	1350 kg
Rated current	51 kVA
Power Supply (VAC)	47-63Hz
Phases	3
Operating Temperature (°C)	0 / +35
Room temperature storage (°C)	-20 / +70
Cooling / Forced air	Self contained fans 3 x 960l / sec. max.
Following types available:	DC

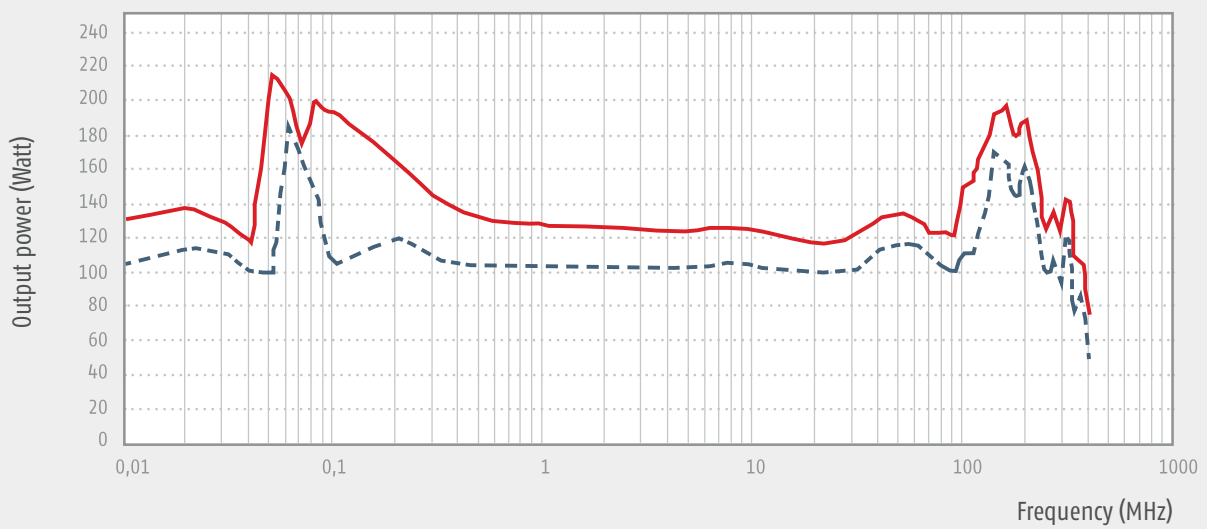
# 10 KHz – 400 MHz

Part Number	VLC-60	VLC-110
Frequency range	10kHz-400MHz	10kHz-400MHz
Output Power typ.	60 W	110 W
Output Power @ 1dB Compression, typ. min.	see Diagramm	see Diagramm
RF Input, max.	+10 dBm	+10 dBm
Gain, typ.	+48 dB	+50 dB
Flatness, typ.	±2.5 dB	±2.5 dB
Input VSWR	2:1	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type	A	A
Input / Output Impedance	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W H D	450 89 (2 HU) 640
Weight	12 kg	33 kg
Rated current	3.5A @ 110VAC 1.7A @ 230VAC	7.5A @ 110VAC 3.2A @ 230VAC
Power Supply (VAC)	90-250, 47-63 Hz	90-250, 47-63 Hz
Phases	1	1
Operating Temperature (°C)	0 / +35	0 / +35
Room temperature storage (°C)	-20 / +70	-20 / +70
Cooling / Forced air	Self contained fans 20l / sec. max.	Self contained fans 60l / sec. max.
Following types available:	S, SC, D, DC	S, SC, D, DC

### VLC-60



### VLC-110



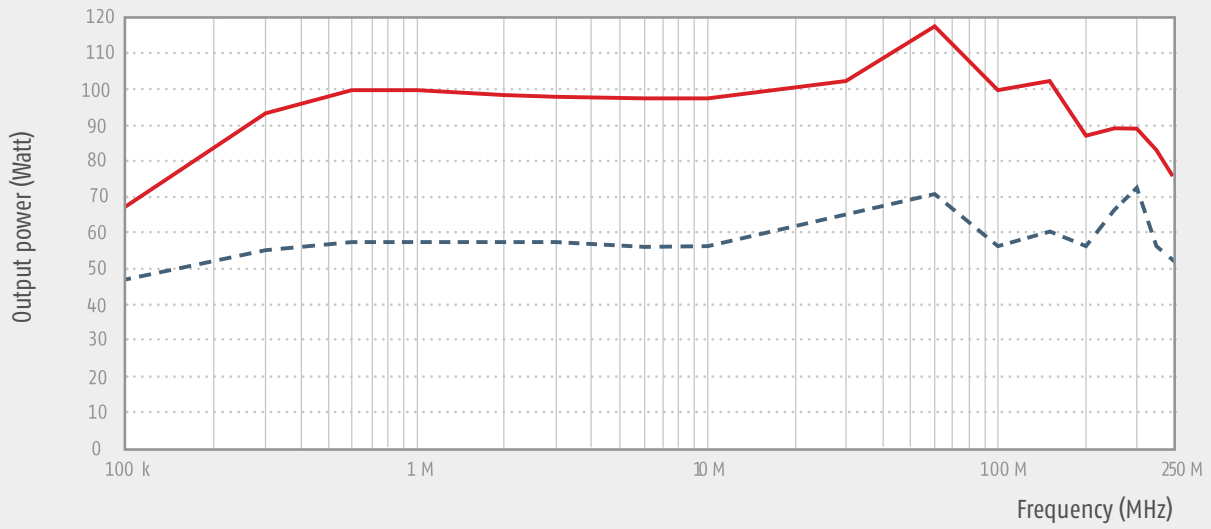
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 10 KHz – 400 MHz

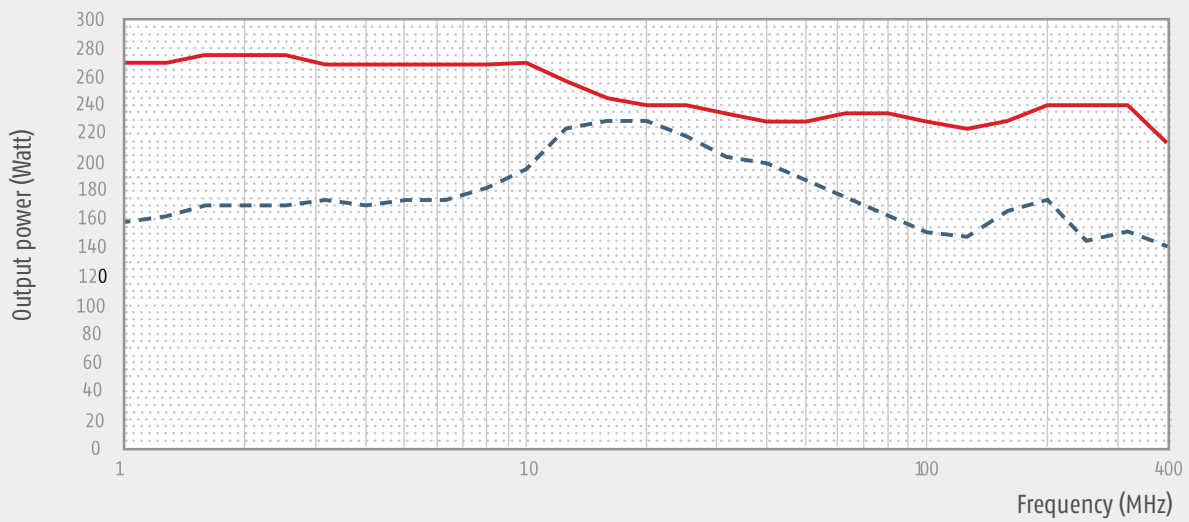
Part Number		FLC-75	FLC-180
Frequency range		100kHz-400MHz	1MHz-400MHz
Output Power typ.		75 W	180 W
Output Power @ 1dB Compression, typ. min		see diagramm	see diagramm
RF Input, max.		0 dBm	0 dBm
Gain, typ.		+51 dB	+56 dB
Flatness, typ.		±1.5 dB	±1.5 dB
IP3, typ.		+48 dBm	+48 dBm
Input VSWR, max.		1.5:1	1.5:1
Harmonics @ 1 dB com., typ.		<-20 dBc @ 20 W	<-20 dBc @ 100 W
Spurious Signals @ 1 dB comp., typ.		<-75 dBc @ 20 W	<-75 dBc @ 100 W
Input Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	133 (3 HU)	133 (3 HU)
	D	436	436
Weight		10 kg	15 kg
AC Power Input (W)		150	150
Power Supply (VAC)		88-264	88-264
Phases		1	1
Operating Humidity Non-Condensing (%)		80 %	80 %
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current	Thermal Overload Over Current
Following types available:		S	S

FLC-75, FLC-180

**FLC-75**



**FLC-180**



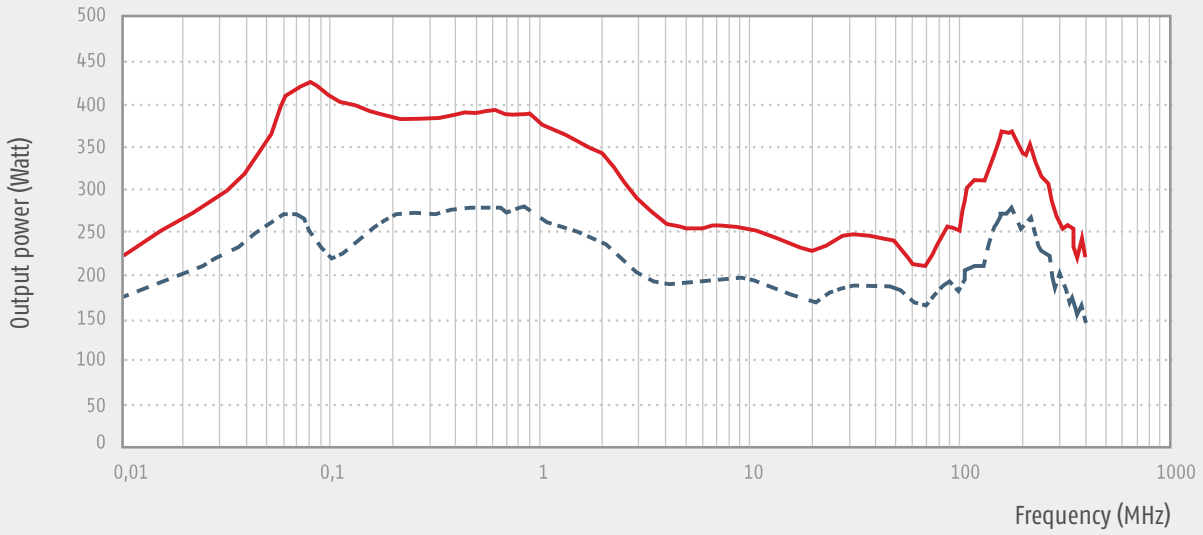
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 10 KHz – 400 MHz

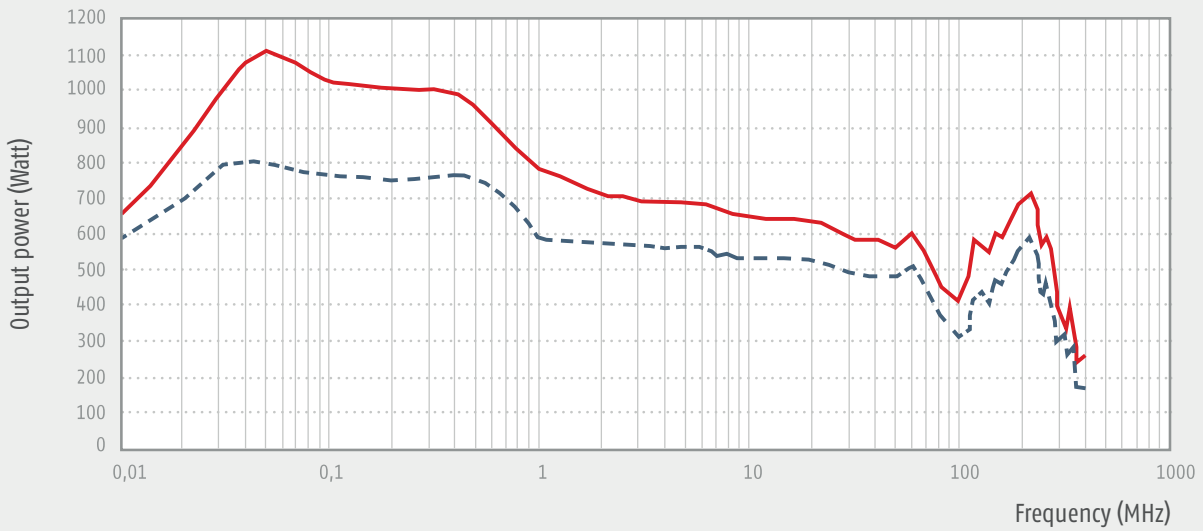
Part Number	VLC-220	VLC-400
Frequency range	10kHz-400MHz	10kHz-400MHz
Output Power typ.	220 W	400 W
Output Power @ 1dB Compression, typ. min.	see Diagramm	see Diagramm
RF Input, max.	+10 dBm	+10 dBm
Gain, typ.	+53 dB	+54 dB
Flatness, typ.	±2.5 dB	±2.5 dB
Input VSWR	2:1	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type	A	A
Input / Output Impedance	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out	N(f)N(f)	N(f)N(f)
Dimensions (mm)		
W	450	450
H	178 (4 HU)	360 (8 HU)
D	640	640
Weight	28 kg	51 kg
Rated current	11.4A @ 110VAC 5.5A @ 230VAC	10.4A @ 230VAC
Power Supply (VAC)	90-250, 47-63 Hz	200-250, 47-63Hz
Phases	1	1
Operating Temperature (°C)	0 / +35	0 / +35
Room temperature storage (°C)	-20 / +70	-20 / +70
Cooling / Forced Air	Self contained fans 60l / sec. max.	Self contained fans 120l / sec. max.
Following types available:	S, SC, D, DC	D, DC



**VLC-220**



**VLC-400**



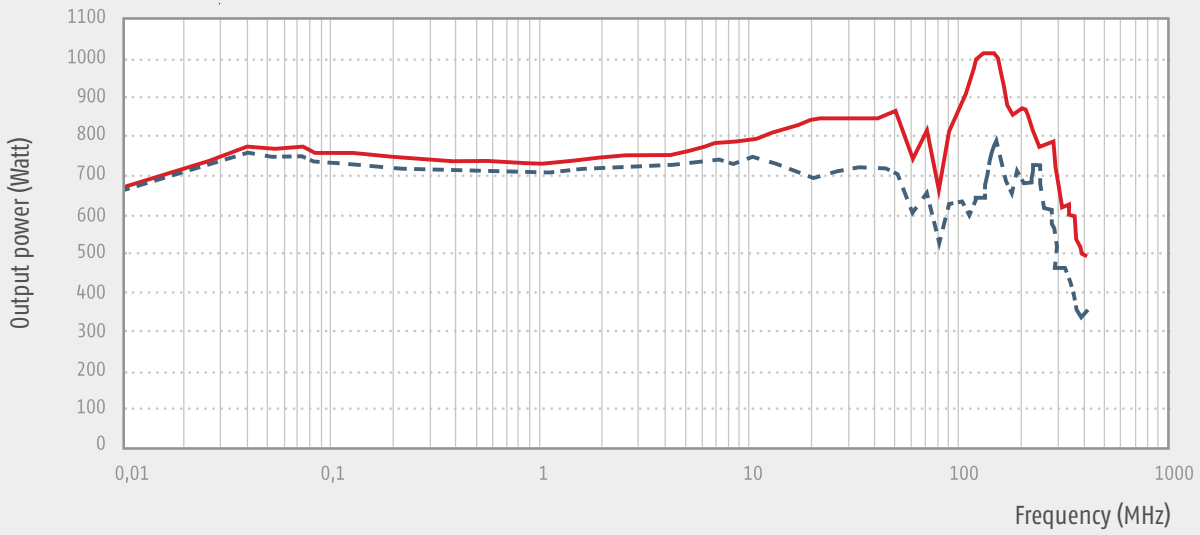
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 10 KHz – 400 MHz

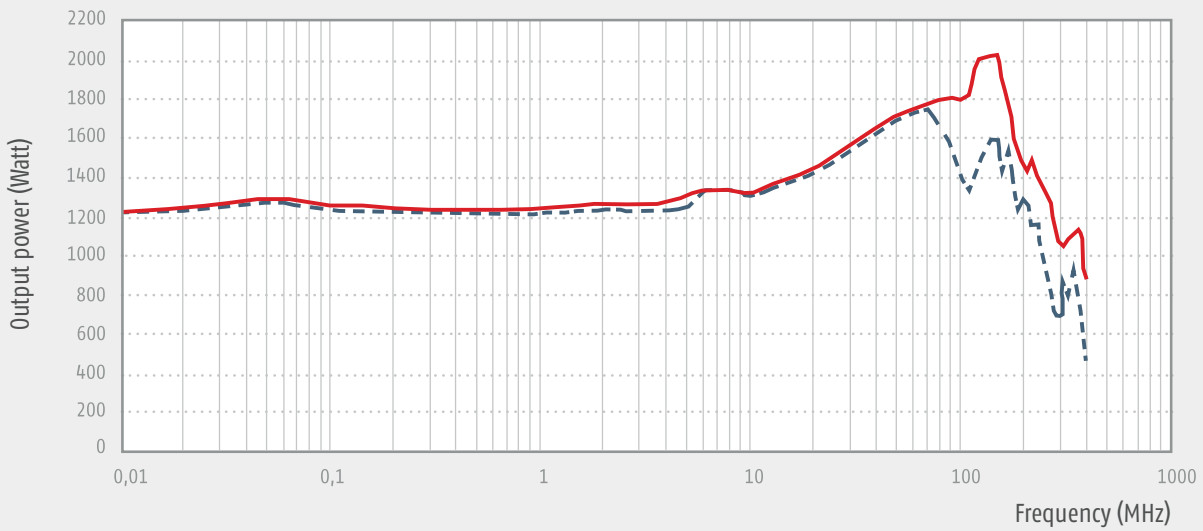
Part Number	VLC-600	VLC-1200
Frequency range	10kHz-400MHz	10kHz-400MHz
Output Power typ.	600 W	1200 W
Output Power @ 1dB Compression, typ. min.	see Diagramm	see Diagramm
RF Input, max.	+10 dBm	+10 dBm
Gain, typ.	+56 dB	+60 dB
Flatness, typ.	±2.5 dB	±2.5 dB
Input VSWR	2:1	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type	A	A
Input / Output Impedance	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out	N(f) 7/16(f)	N(f) 7/16(f)
Dimensions (mm)	W H D	600 1050 (18 HU) 840
Weight	230 kg	390 kg
Rated current	5.4 kVA	10.35 kVA
Power Supply (VAC)	47-63 Hz	47-63 Hz
Phases	3	3
Operating Temperature (°C)	0 / +35	0 / +35
Room temperature storage (°C)	-20 / +70	-20 / +70
Cooling / Forced Air	Self contained fans 250l / sec. max.	Self contained fans 480l / sec. max.
Following types available:	DC	DC

VLC-600, VLC-1200

### VLC-600



### VLC-1200



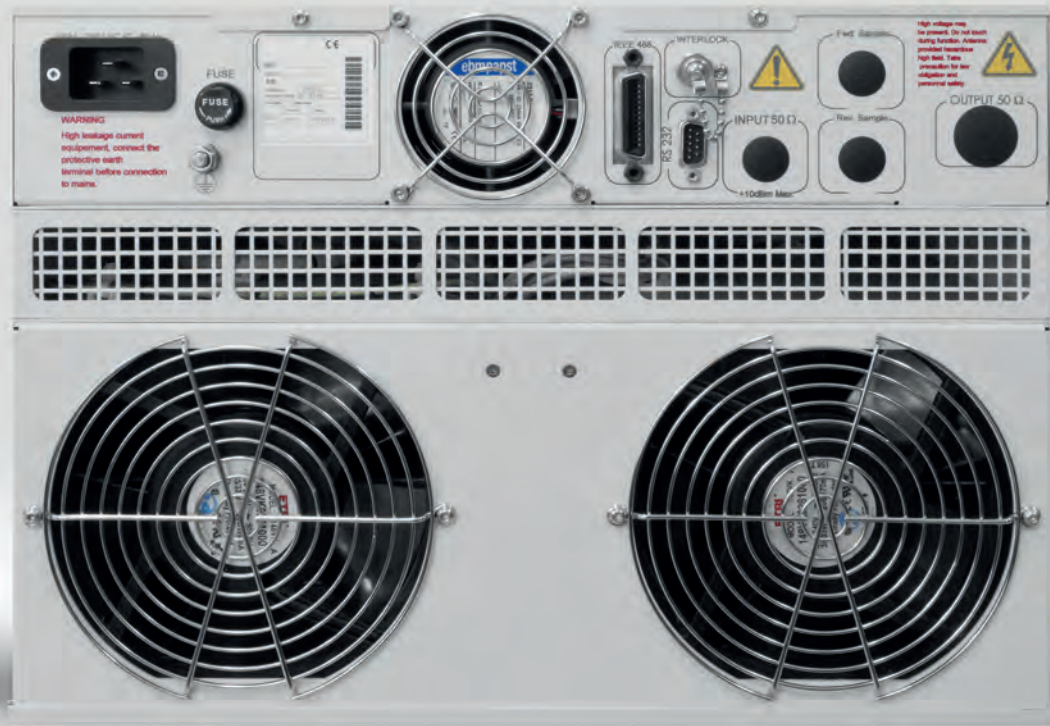
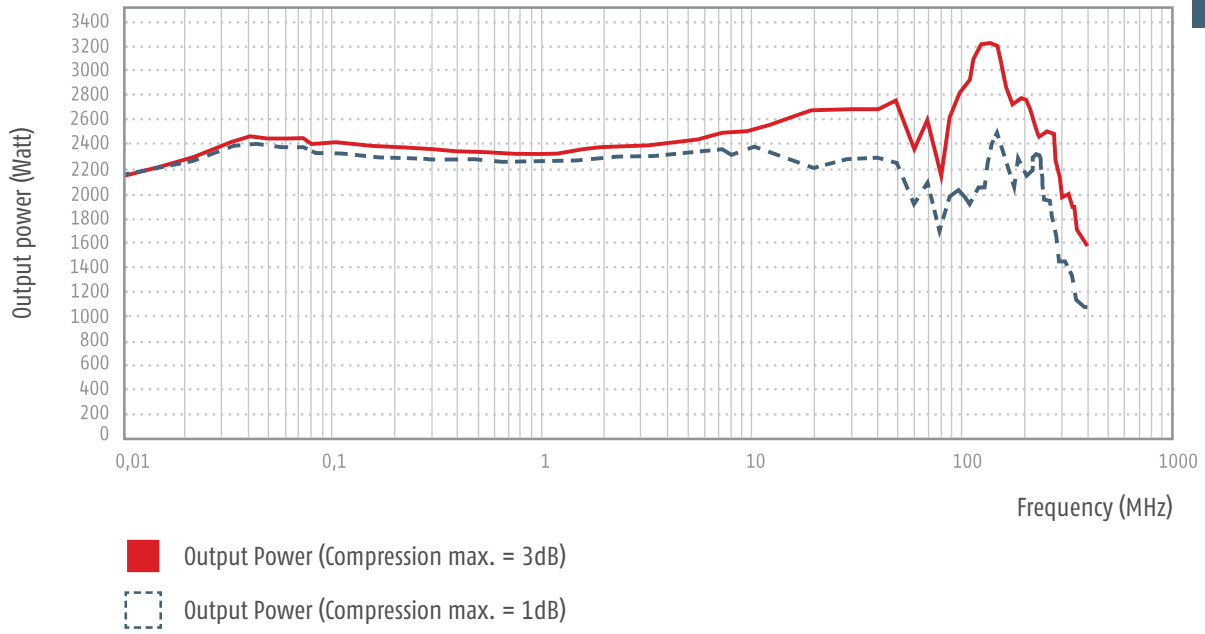
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 10 KHz – 400 MHz

Part Number		VLC-2000
Frequency range		10kHz–400MHz
Output Power typ.		2000 W
Output Power @ 1dB Compression, typ. min.		see Diagramm
RF Input, max.		+10 dBm
Gain, typ.		+60 dB
Flatness, typ.		±2.5 dB
Input VSWR		2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc
Class type		A
Input / Output Impedance		50 Ω / 50 Ω
Connectors In / Out		N(f) 7/16(f)
Dimensions (mm)	W	800
	H	2120 (42 HU)
	D	840
Weight		650 kg
Rated current		21 kVA
Power Supply (VAC)		47–63 Hz
Phases		3
Operating Temperature (°C)		0 / +35
Room temperature storage (°C)		-20 / +70
Cooling / Forced air		Self contained fans, 960l / sec. max.
Following types available:		DC

VLC-2000

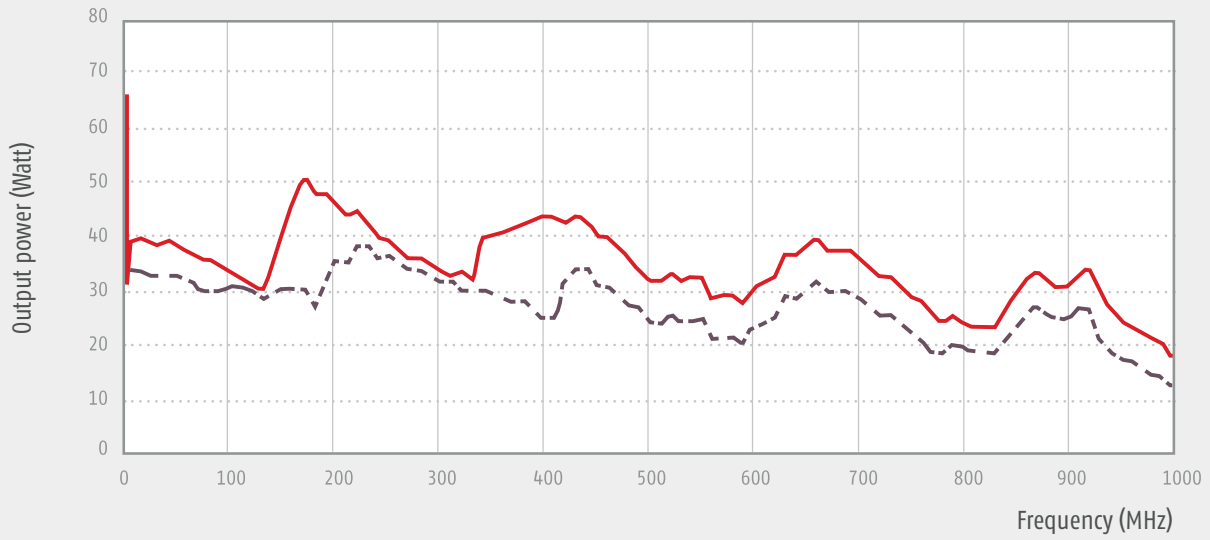
VLC-2000



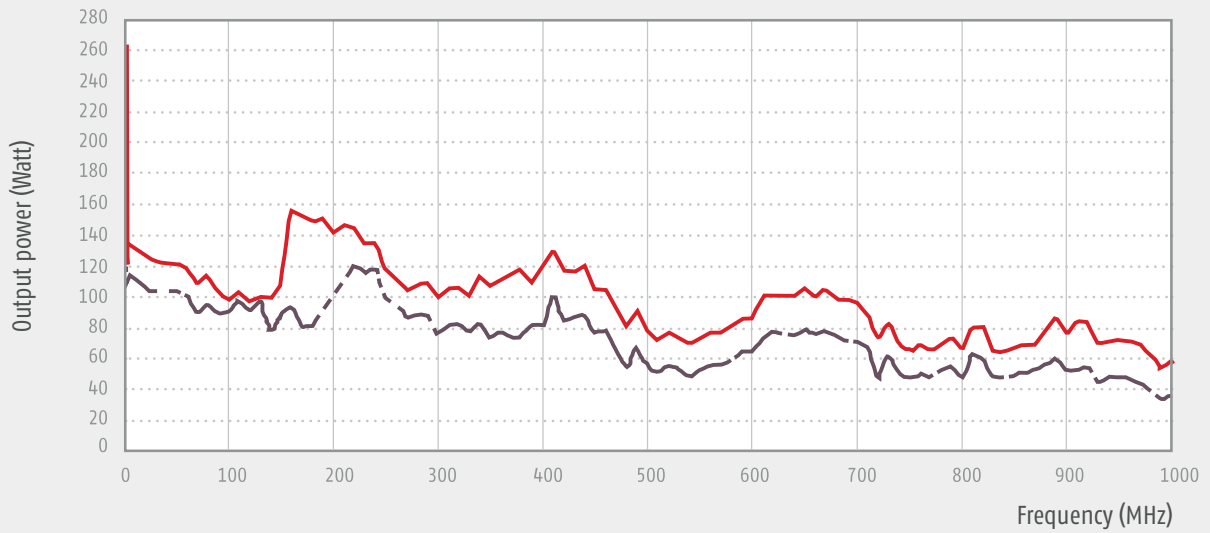
# 10 KHz – 1000 MHz

Part Number	VLLH-25	VLLH-70
Frequency range	10kHz-1000MHz	10kHz-1000MHz
Output Power typ.	25 W	70 W
Output Power @ 1dB Compression, typ. min.	see Diagramm	see Diagramm
RF Input, max.	+10 dBm	+10 dBm
Gain, typ.	+42 dB	+48 dB
Flatness, typ.	±5 dB	±5 dB
Input VSWR	2:1	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type	A	A
Input / Output Impedance	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out	N(f)N(f)	N(f)N(f)
Dimensions (mm)		
W	450	450
H	89 (2 HU)	178 (4 HU)
D	640	640
Weight	12 kg	33 kg
Rated current	2.5A @ 110VAC 1.2A @ 230VAC	8.1A @ 110VAC 3.9A @ 230VAC
Power Supply (VAC)	90-250, 47-63 Hz	90-250, 47-63 Hz
Phases	1	1
Operating Temperature (°C)	0 / +35	0 / +35
Room temperature storage (°C)	-20 / +70	-20 / +70
Cooling / Forced Air	Self contained fans 20l / sec. max.	Self contained fans 60l / sec. max.
Following types available:	S, SC, D, DC	S, SC, D, DC

### VLLH-25



### VLLH-70



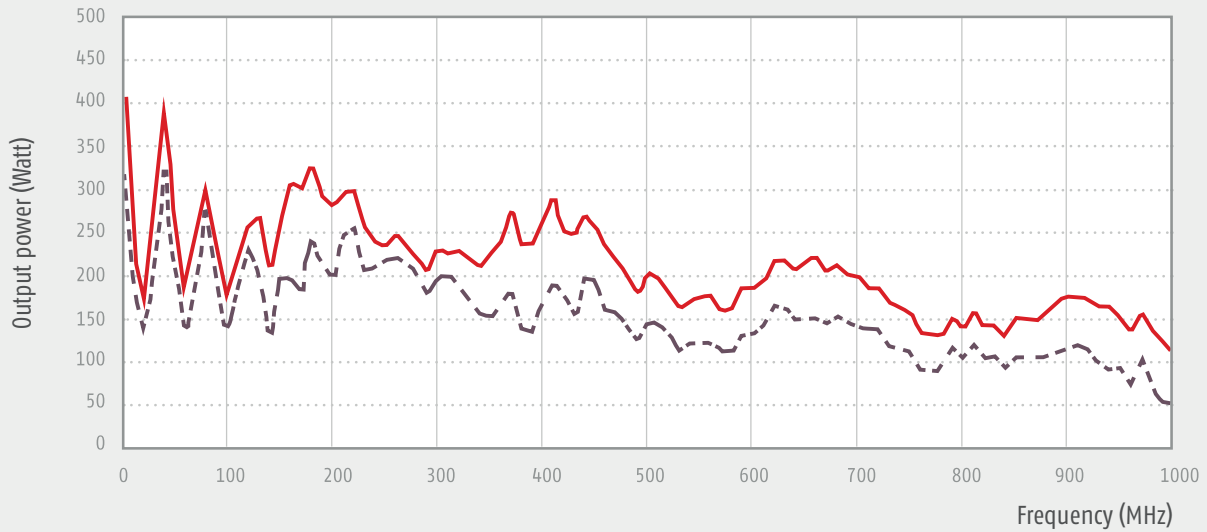
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 10 KHz – 1000 MHz

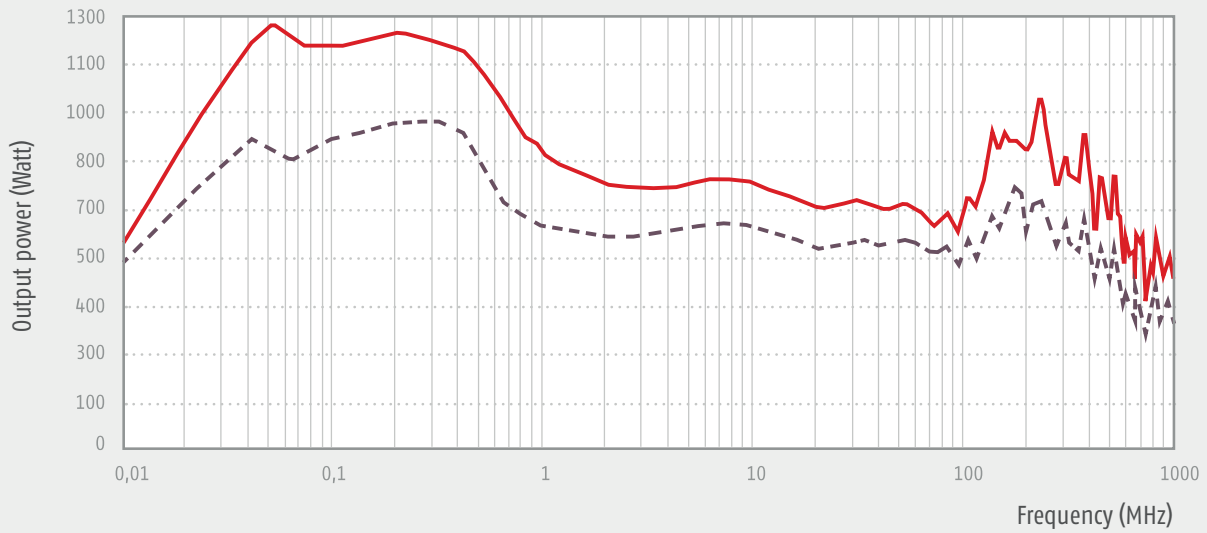
Part Number	VLLH-150	VLLH-260
Frequency range	10kHz-1000MHz	10kHz-200MHz / 200MHz-1000MHz
Output Power typ.	150W	260W
Output Power @ 1dB Compression, typ. min.	see Diagramm	see Diagramm
RF Input, max.	+10 dBm	+10 dBm
Gain, typ.	+52 dB	+52 dB
Flatness, typ.	±5 dB	±4 dB
Input VSWR	2:1	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20dBc	H2, H3 <-20 dBc
Class type	A	A
Input / Output Impedance	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out	N(f)N(f)	N(f)N(f)
Dimensions (mm)		
W	450	450
H	312 (7 HU)	360 (8 HU)
D	640	640
Weight	50 kg	44 kg
Rated current	6.7A @ 230VAC	11A @ 230VAC
Power Supply (VAC)	200-250, 47-63 Hz	200-250, 47-63 Hz
Phases	1	1
Operating Temperature (°C)	0 / +35	0 / +35
Room temperature storage (°C)	-20 / +70	-20 / +70
Cooling / Forced Air	Self contained fans 120l / sec. max.	Self contained fans 120l / sec. max.
Following types available:	D, DC	D, DC



### VLLH-150



### VLLH-260



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)



RIS 3000

FLH-200B

20MHz ... 1.0GHz

RF POWER AMP

EMC CONTROL UNIT



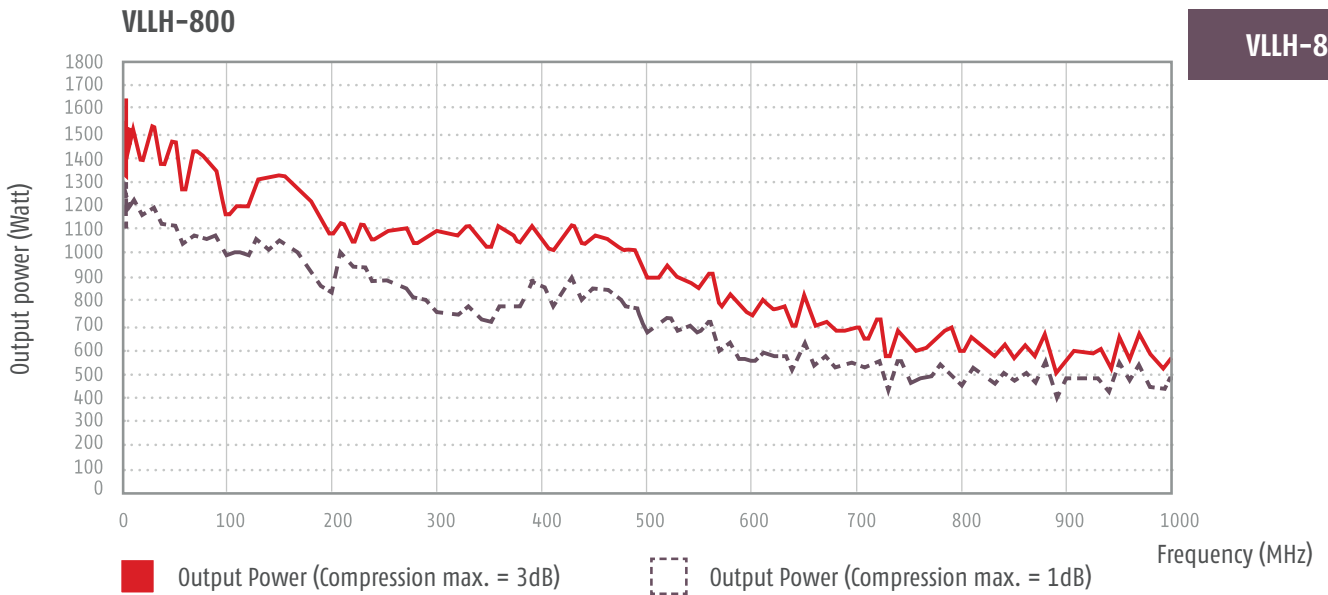
ECU

FLG-200A



RF POWER AMPLIFIER 0.8 GHz ... 2.0 GHz

RF POWER AMPLIFIER 30 MHz ... 1000 MHz



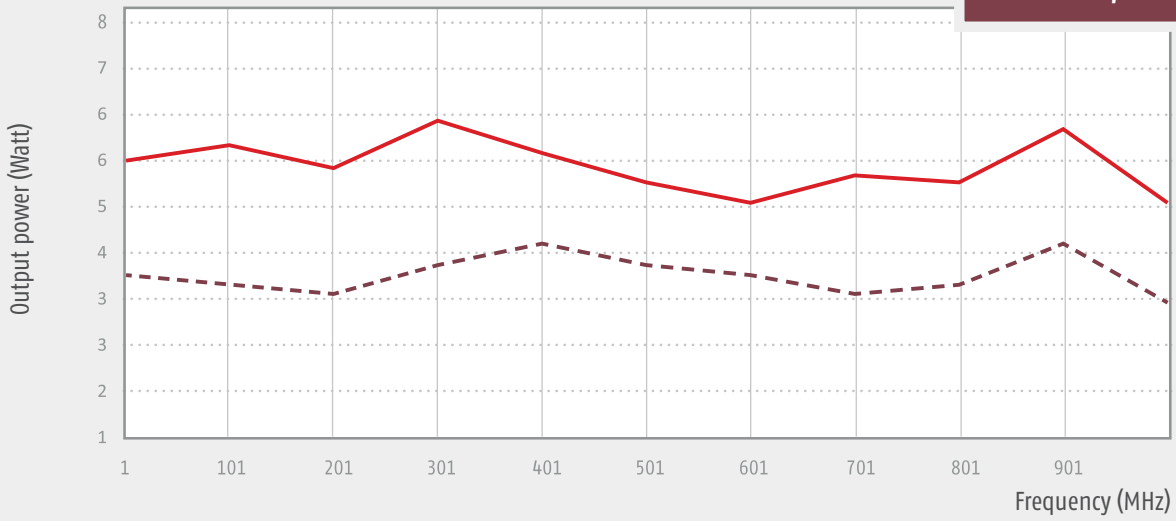
Part Number	VLLH-800
Frequency range	10kHz-200MHz / 200MHz-1000MHz
Output Power typ.	800 W
Output Power @ 1dB Compression, typ. min.	see Diagramm
RF Input, max.	+10 dBm
Gain, typ.	+56 dB
Flatness, typ.	±3.5 dB
Input VSWR	2:1
Harmonics @ 1 dB comp.	H2, H3 <-20 dBc
Class type	A
Input / Output Impedance	50 Ω / 50 Ω
Connectors In / Out	N(f)7/16(f)
Dimensions (mm) W x H x D	600 x 1500 (28 HU) x 840
Weight	360 kg
Rated current	5kVA
Power Supply (VAC)	47-63 Hz
Phases	3
Operating Temperature (°C)	0 / +35
Room temperature storage (°C)	-20 / +70
Cooling / Forced air	Self contained fans, 480l / sec. max.
Following types available:	DC

# 1 MHz – 1000 MHz

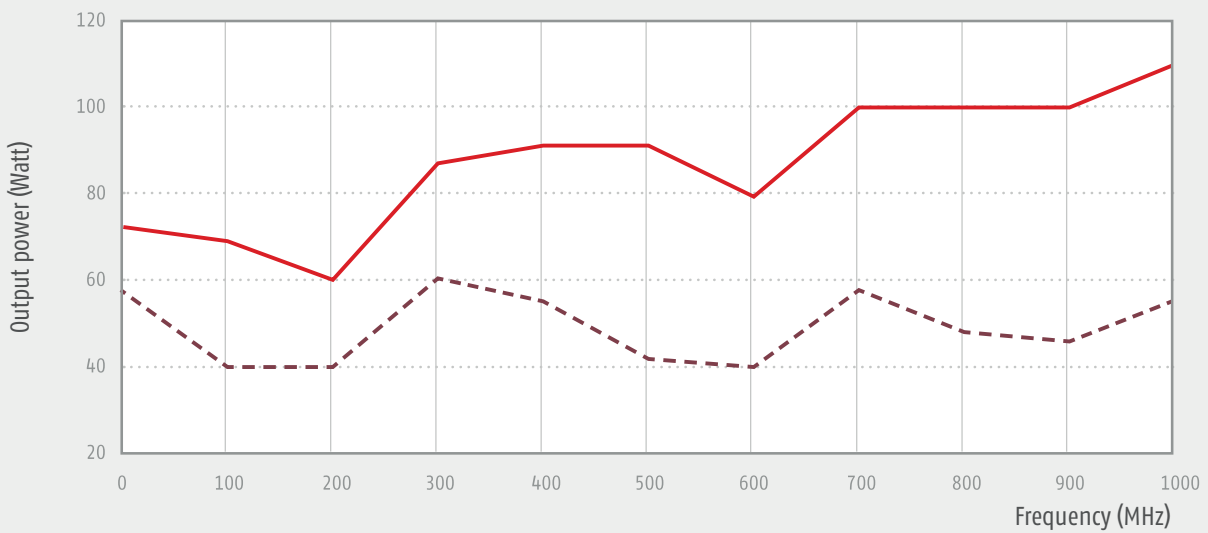
Part Number		FLH-4A	FLH-50A	FLH-100A
Frequency range		1MHz-1000MHz	1MHz-1000MHz	1MHz-1000MHz
Output Power typ.		4 W	50 W	100 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		0 dBm	0 dBm	0 dBm
Gain, typ.		+36 dB	+48 dB	+50 dB
Flatness, typ.		±1.5 dB	±2.25 dB	±2.5
IP3, typ.		+39 dBm	+51 dBm	+54 dBm
Input VSWR, max.		2:1	2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 2W	-20 dBc @ 30W	-20 dBc @ 70W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 2W	<-60 dBc @ 30W	<-60 dBc @ 70W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")	483 (19")
	H	134	134	223
	D	508	508	508
Weight		14 kg	21 kg	40 kg
AC Power Input (W)		100	1000	2500
Power Supply (VAC)		100-240	100-240	180-240
Phases		1	1	1
Operating Temperature (°C)		0/+50	0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95	95
Cooling		Internal forced air	Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E	S, E

### FLH-4A

FLH-4A, FLH-50A, FLH-100A



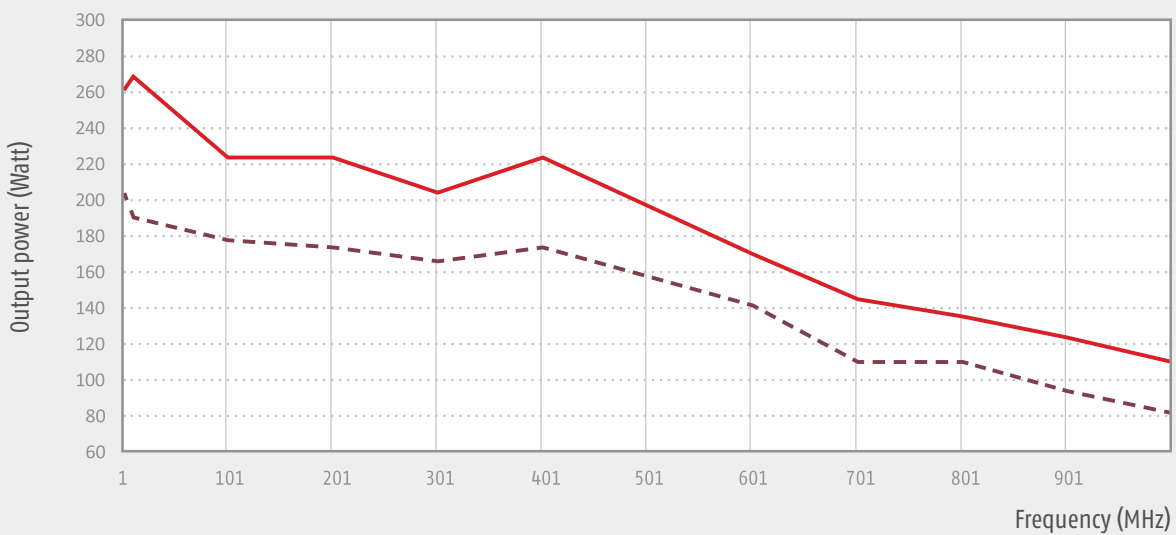
### FLH-50A



Output Power (compression max. = 1dB)



### FLH-100A



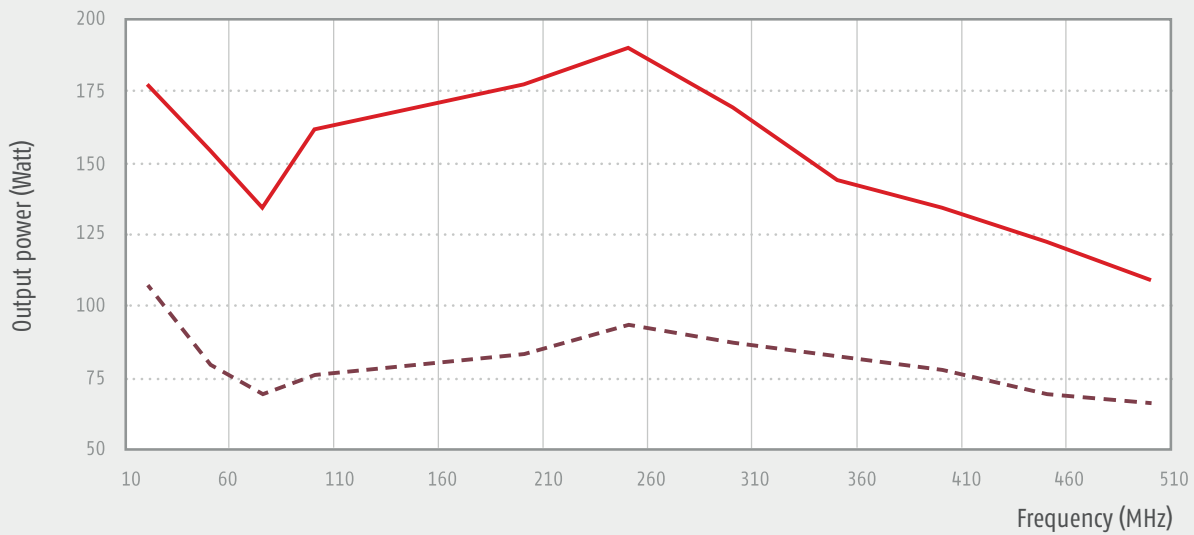
Output Power (compression max. = 3dB)



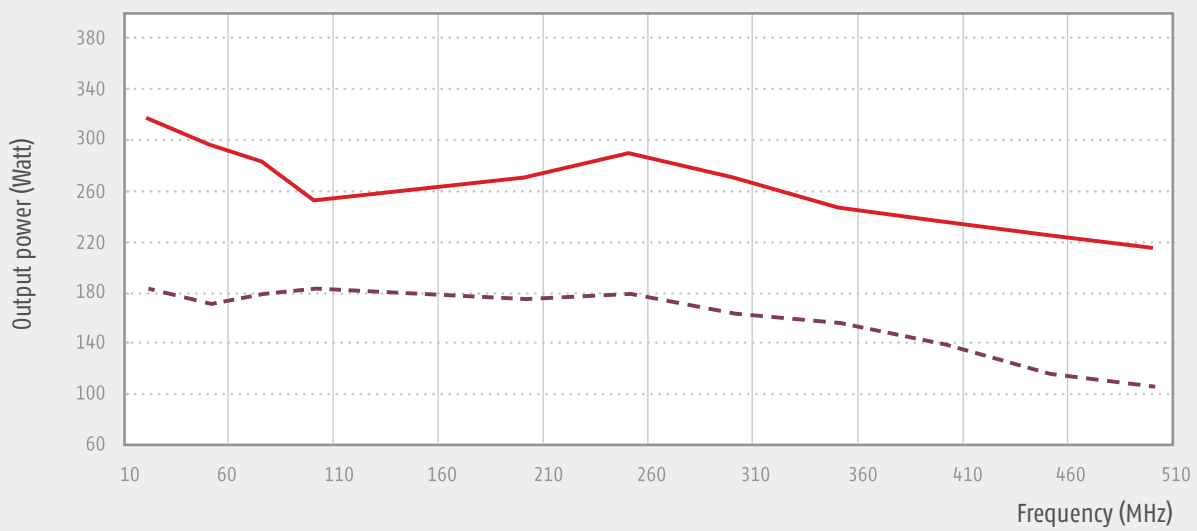
# 1 MHz – 1000 MHz

Part Number		FLH-100C	FLH-200C
Frequency range		20MHz-500MHz	20MHz-500MHz
Output Power typ.		100 W	200 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		0 dBm	0 dBm
Gain, typ.		+51 dB	+54 dB
Flatness, typ.		±3 dB	±2 dB
IP3, typ.		+59 dBm	+55 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 60W	-20 dBc @ 120W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 60W	<-60 dBc @ 120W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	89	223
	D	458	508
Weight		16 kg	30 kg
AC Power Input (W)		600	1500
Power Supply (VAC)		100-240	100-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E

### FLH-100C



### FLH-200C



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

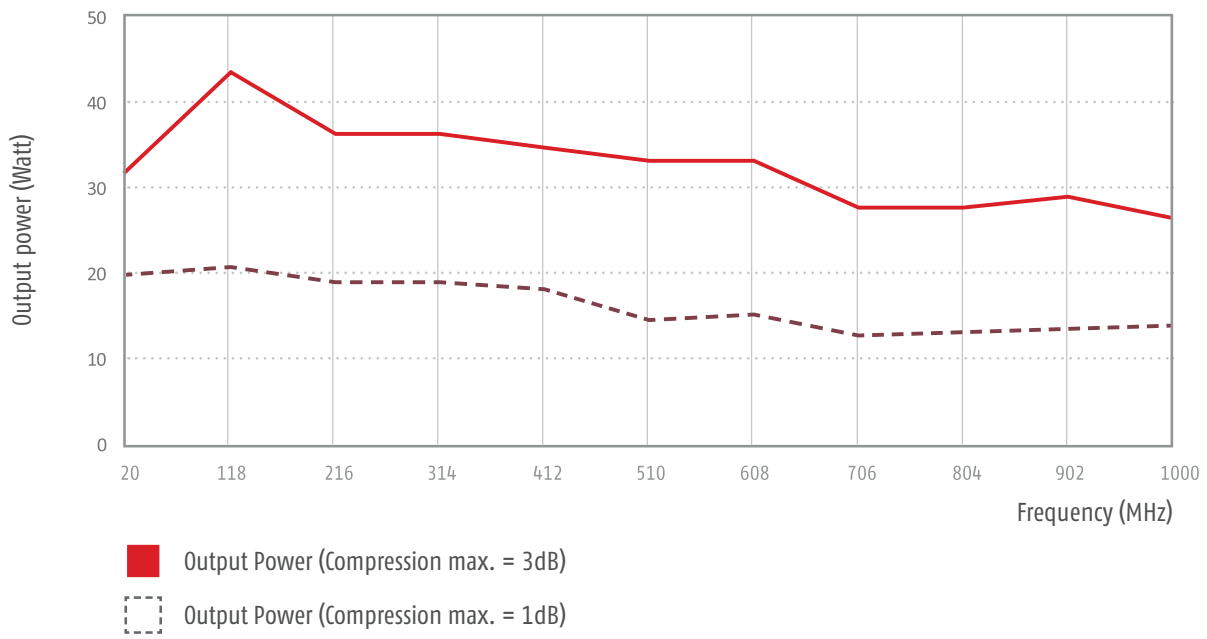
# 20 MHz – 1 GHz

Part Number		FLH-20B
Frequency range		20MHz-1GHz
Output Power typ.		20 W
Output Power @ 1dB Compression, typ. min.		see Diagramm
RF Input, max.		0 dBm
Gain, typ.		+44 dB
Flatness, typ.		±1.5 dB
IP3, typ.		+47 dBm
Input VSWR, max.		2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 10W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 10W
Input / Output Impedance		50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)
Dimensions (mm)	W	483 (19")
	H	134
	D	508
Weight		17 kg
AC Power Input (W)		350
Power Supply (VAC)		100-240
Phases		1
Operating Temperature (°C)		0/+50
Operating Humidity Non-Condensing (%)		95
Cooling		Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage
Following types available:		S, E



FLH-20B

FLH-20B

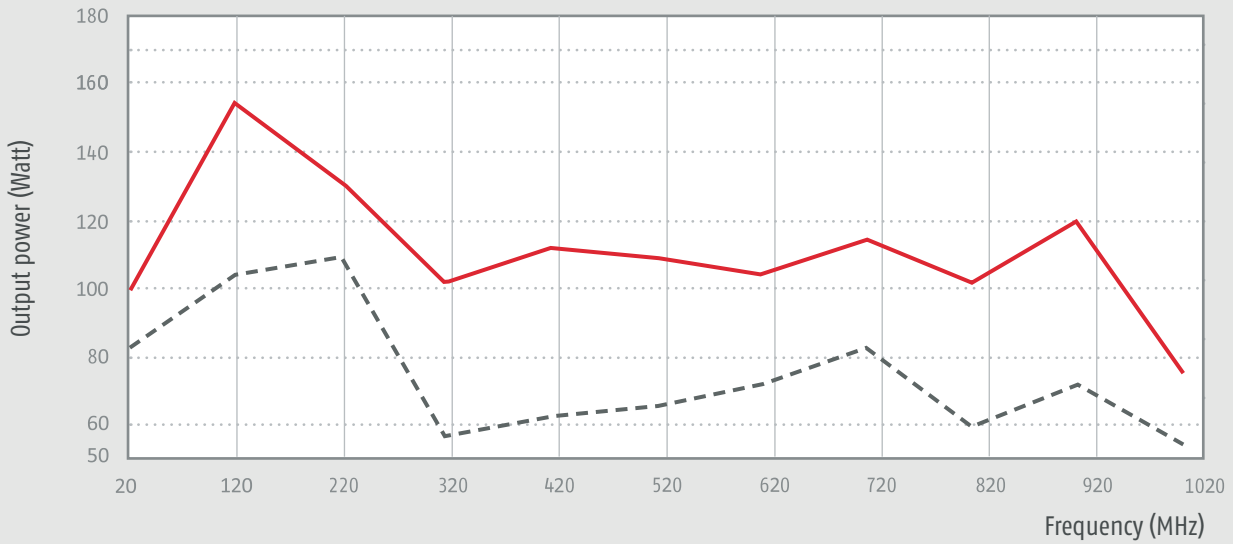


# 20 MHz – 1 GHz

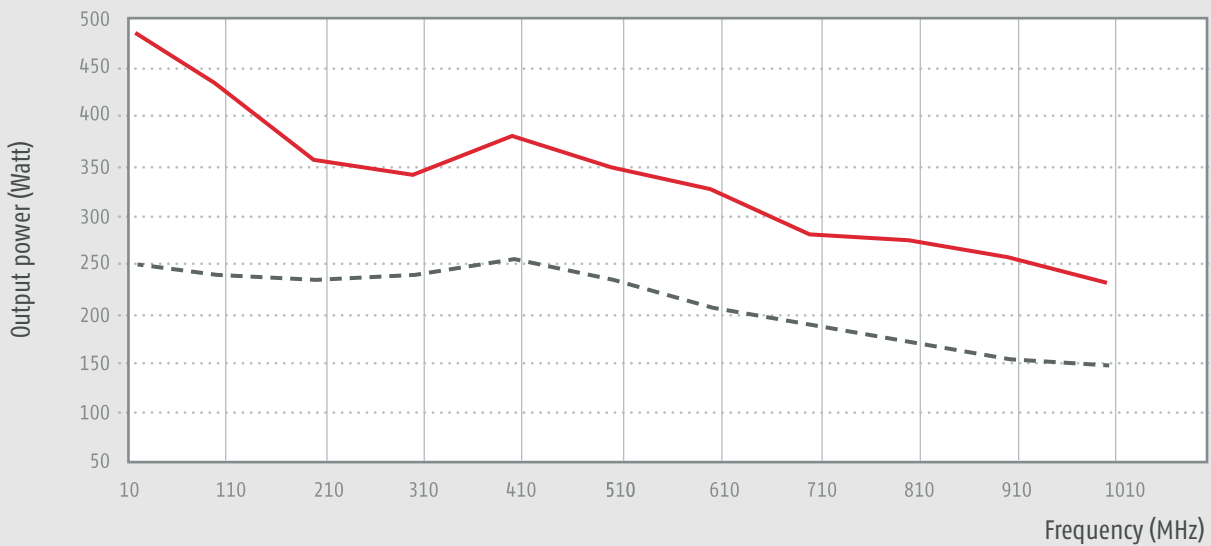
Part Number		FLH-70B	FLH-200B
Frequency range		20MHz-1GHz	20MHz-1GHz
Output Power typ.		70 W	200 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		0 dBm	0 dBm
Gain, typ.		+49 dB	+54 dB
Flatness, typ.		±2.5 dB	±3 dB
IP3, typ.		+52 dBm	+57 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 40W	-20 dBc @ 120W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 40W	<-60 dBc @ 120W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	134	223
	D	508	508
Weight		17 kg	38 kg
AC Power Input (W)		750	3000
Power Supply (VAC)		100-240	200-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage VSWR protection
Following types available:		S, E	S, E

## FLH-70B, FLH-200B

### FLH-70B



### FLH-200B



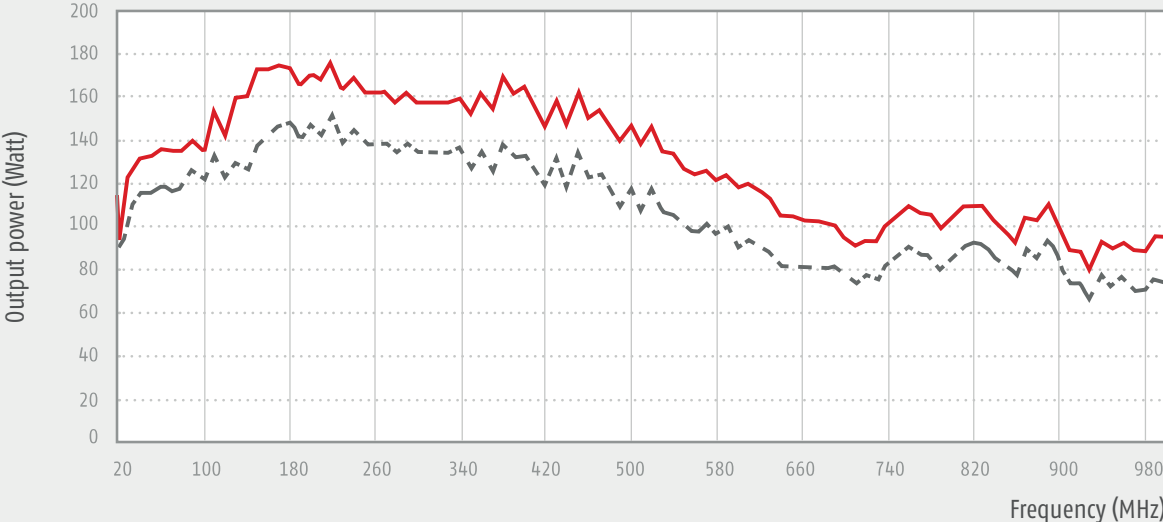
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 20 MHz – 1 GHz

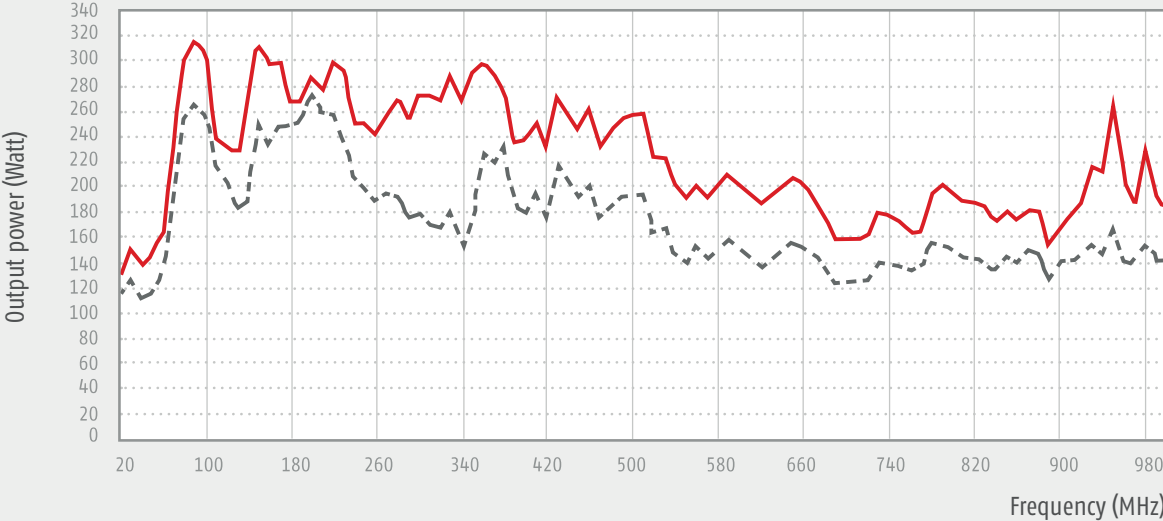
Part Number		VLH-90B	VLH-160B
Frequency range		20MHz-1GHz	20MHz-1GHz
Output Power typ.		90 W	160 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+48 dB	+51 dB
Flatness, typ.		±3 dB	±3 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	450
	H	178 (4 HU)	178 (4 HU)
	D	640	640
Weight		32 kg	34 kg
Rated current		6.4A @ 110VAC 3A @ 230VAC	10A @ 110VAC 4.8A @ 230VAC
Power Supply (VAC)		90-250, 47-63 Hz	90-250, 47-63 Hz
Phases		1	1
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 60l / sec. max.	Self contained fans 60l / sec. max.
Following types available:		S, SC, D, DC	S, SC, D, DC

VLH-90B, VLH-160B

VLH-90B



VLH-160B



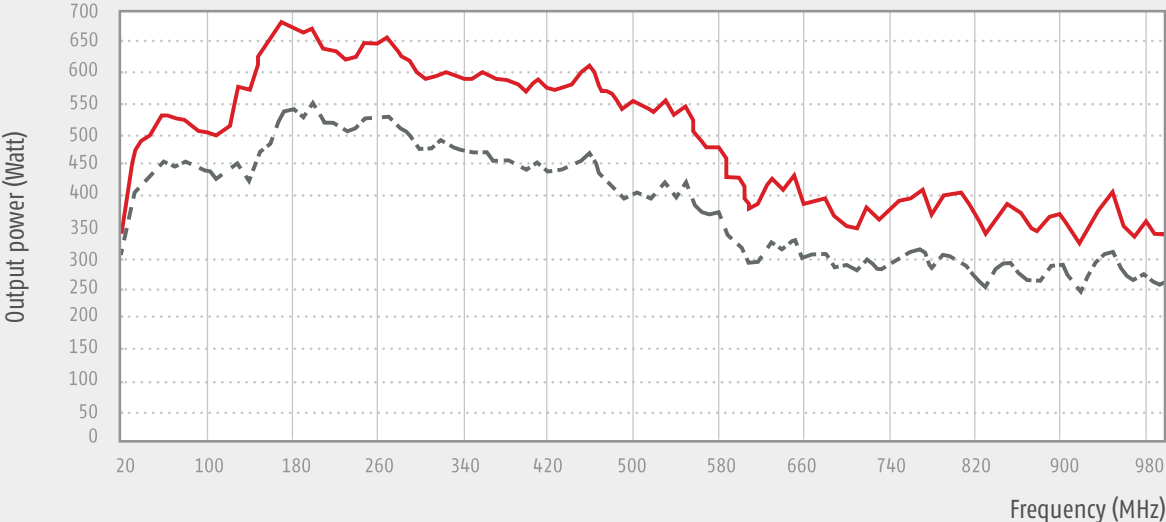
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 20 MHz – 1 GHz

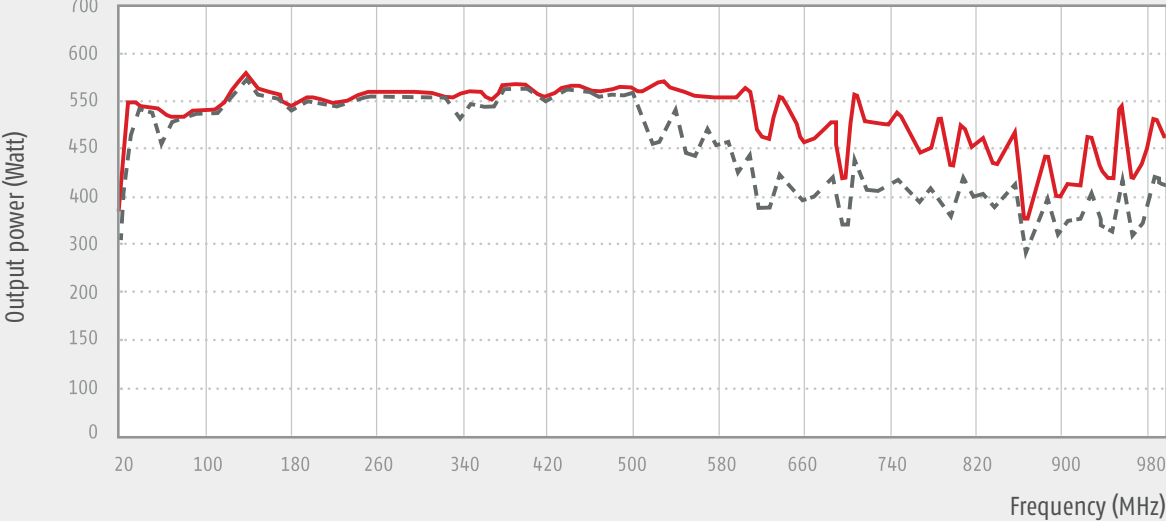
Part Number		VLH-320B	VLH-600B
Frequency range		20MHz-1GHz	20MHz-1GHz
Output Power typ.		320 W	600 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+54 dB	+56 dB
Flatness, typ.		±3.5 dB	±3 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	7/16(f) N(f)
Dimensions (mm)	W	450	840
	H	312 (7 HU)	1320 (24 HU)
	D	640	600
Weight		45 kg	205 kg
Rated current		10.2A @ 230VAC	4.6 kVA
Power Supply (VAC)		200-250, 47-63 Hz	47-63Hz
Phases		1	3
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 120l / sec. max.	Self contained fans 2400l / sec. max.
Following types available:		D, DC	DC

VLH-320B, VLH-600B

VLH-320B



VLH-600B



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

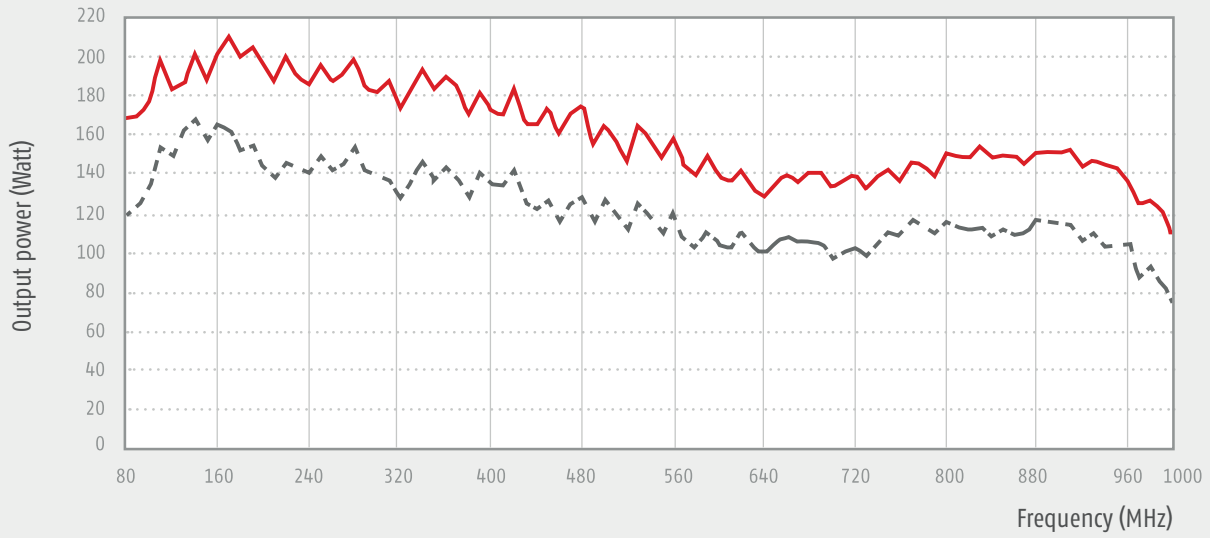
# 80 MHz – 1 GHz

Part Number		VLH-100B1	VLH-400B1
Frequency range		80MHz-1GHz	80MHz-1GHz
Output Power typ.		100 W	400 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+48 dB	+54 dB
Flatness, typ.		±3 dB	±3 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	450
	H	178 (4 HU)	312 (7 HU)
	D	640	640
Weight		32 kg	45 kg
Rated current		6.4A @ 110VAC 3A @ 230VAC	10.2 A @ 230 VAC
Power Supply (VAC)		90-250, 47-63 Hz	200-250, 47-63 Hz
Phases		1	1
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 60l / sec. max.	Self contained fans 60l / sec. max.
Following types available:		S, SC, D, DC	D, DC

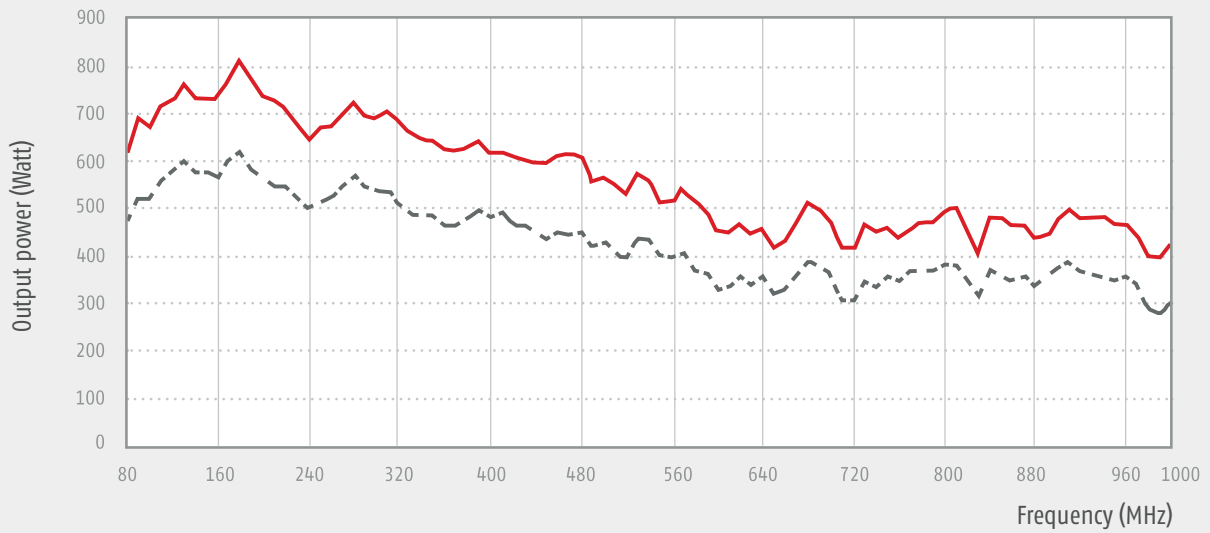


## VLH-100B1, VLH-400B1

### VLH-100B1



### VLH-400B1



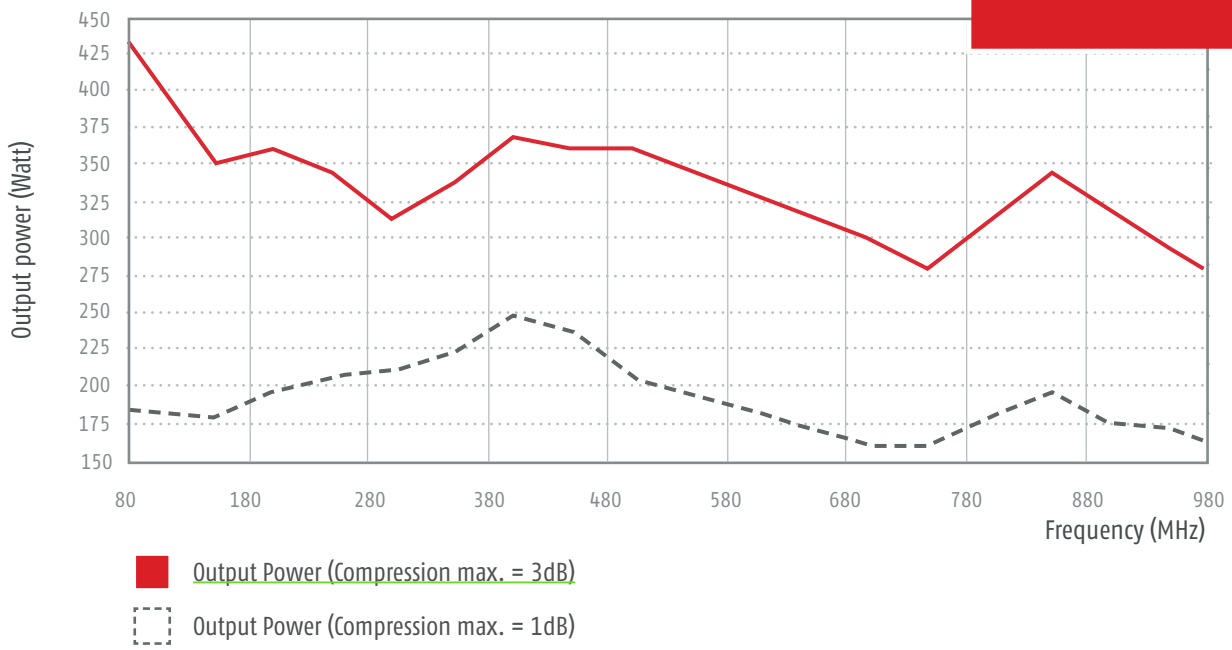
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 80 MHz – 1 GHz

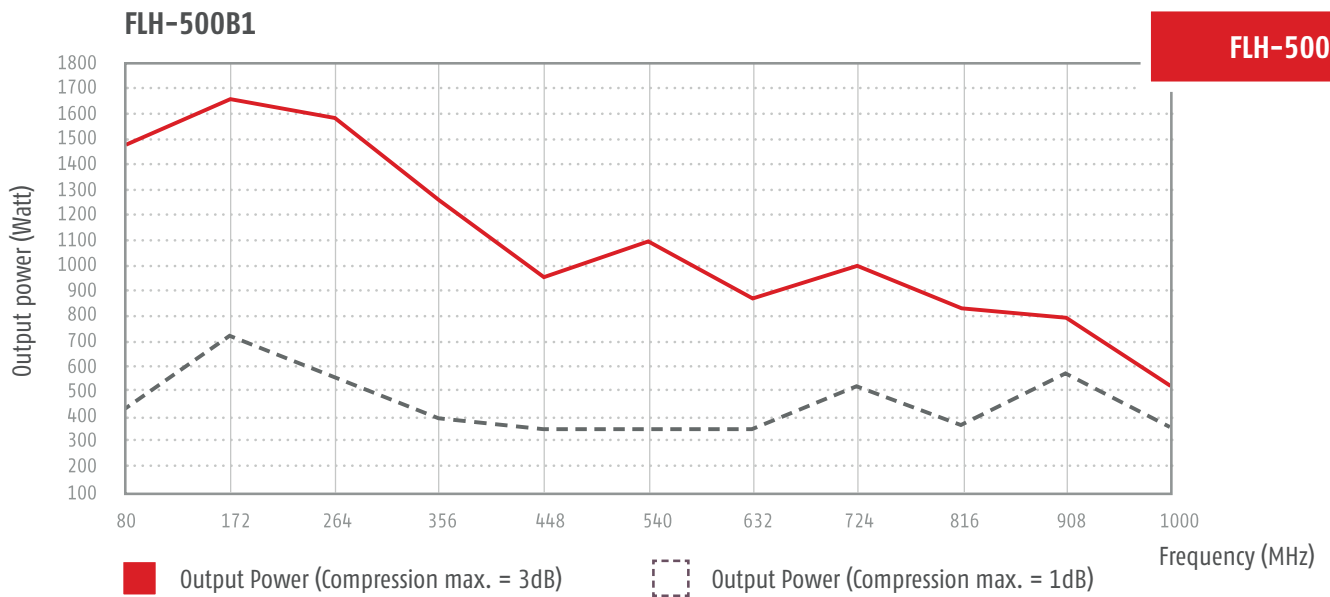
Part Number		FLH-250B1
Frequency range		80MHz-1GHz
Output Power typ.		250 W
Output Power @ 1dB Compression, typ. min.		see Diagramm
RF Input, max.		0 dBm
Gain, typ.		+55 dB
Flatness, typ.		±2.5 dB
IP3, typ.		+59 dBm
Input VSWR, max.		2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 150W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 150W
Input / Output Impedance		50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)
Dimensions (mm)	W	483 (19")
	H	134
	D	534
Weight		28 kg
AC Power Input (W)		1600
Power Supply (VAC)		100-240
Phases		1
Operating Temperature (°C)		0/+50
Operating Humidity Non-Condensing (%)		95
Cooling		Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage
Following types available:		S, E

FLH-250B1

FLH-250B1







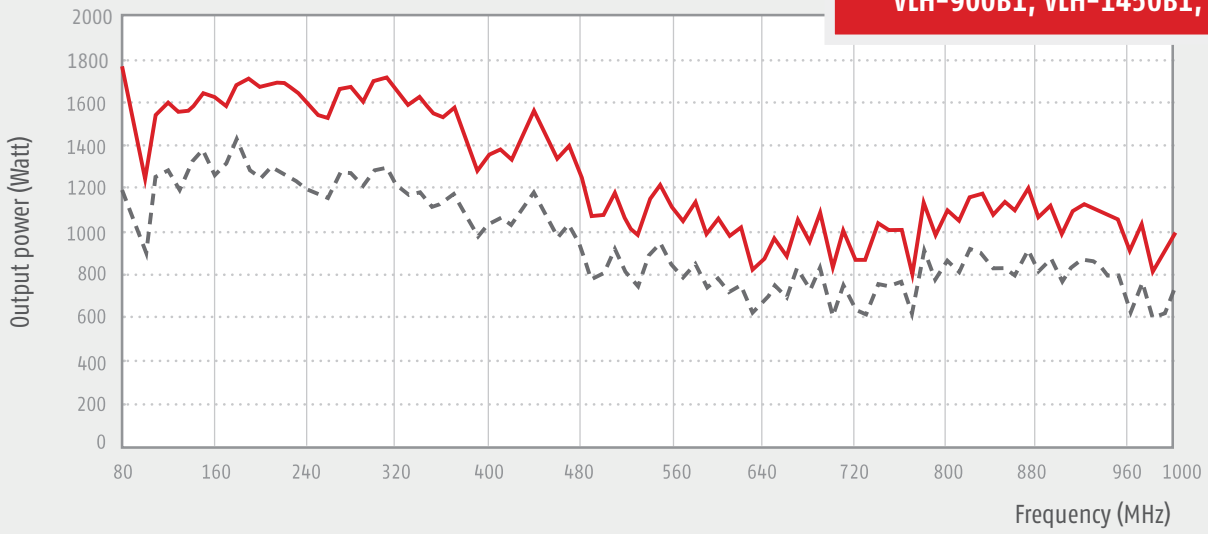
Part Number	FLH-500B1
Frequency range	80MHz-1GHz
Output Power typ.	500 W
Output Power @ 1dB Compression, typ. min.	see Diagramm
RF Input, max.	0 dBm
Gain, typ.	+58 dB
Flatness, typ.	±4.0 dB
IP3, typ.	+64 dBm
Input VSWR, max.	2:1
Harmonics @ 1 dB comp., typ.	-20 dBc min. @ 350W
Spurious Signals @ 1 dB comp., typ.	<-60 dBc @ 350W
Input / Output Impedance	50 Ω / 50 Ω
Connectors In / Out	N(f)N(f)
Dimensions (mm) W x H x D	483 (19") x 223 x 661
Weight	46 kg
AC Power Input (W)	5000
Power Supply (VAC)	180-240
Phases	1
Operating Temperature (°C)	0/+50
Operating Humidity Non-Condensing (%)	95
Cooling	Internal forced air
Circuit Protection	Thermal Overload, Over Current, Over Voltage
Following types available:	S, E

# 80 MHz – 1 GHz

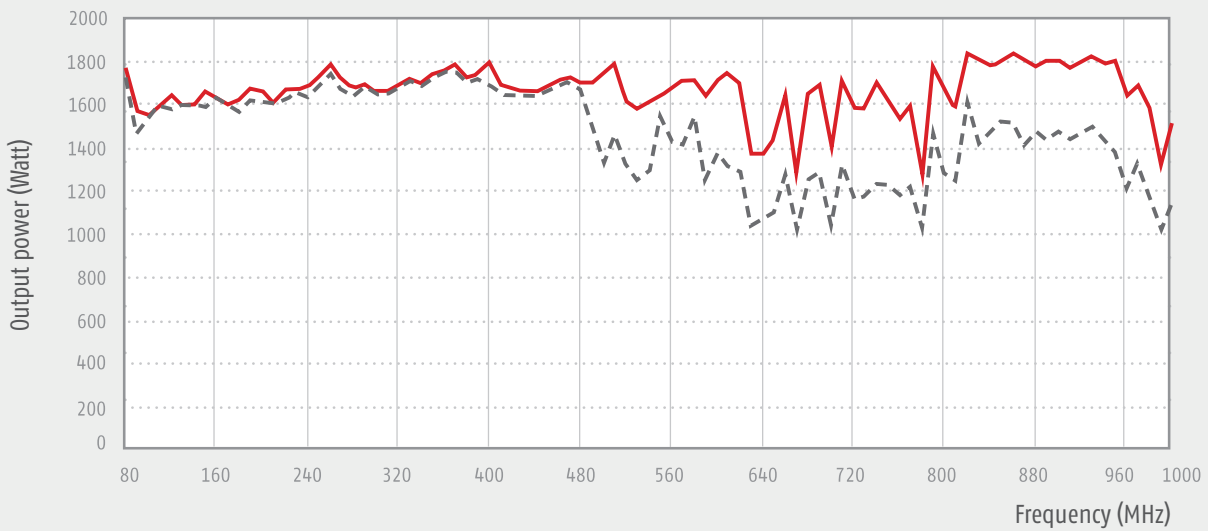
Part Number		VLH-900B1	VLH-1450B1	VLH-1650B1
Frequency range		80MHz-1GHz	80MHz-1GHz	80MHz-1GHz
Output Power typ.		900 W	1450 W	1650 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm	+10 dBm
Gain, typ.		+56 dB	+60 dB	+60 dB
Flatness, typ.		±3.5 dB	±3.5 dB	±3.5 dB
Input VSWR		2:1	2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		7/16(f) N(f)	7/16(f) N(f)	7/16(f) N(f)
Dimensions (mm)	W	600	600	600
	H	1320 (24 HU)	1590 (30 HU)	1590 (30 HU)
	D	840	840	840
Weight		199 kg	290 kg	290 kg
Rated current		5.3 kVA	10.4 kVA	10.4 kVA
Power Supply (VAC)		47-63Hz	47-63Hz	47-63Hz
Phases		3	3	3
Operating Temperature (°C)		0 / +35	0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 240l / sec. max.	Self contained fans 480l / sec. max.	Self contained fans 480l / sec. max.
Following types available:		DC	DC	DC

**VLH-900B1**

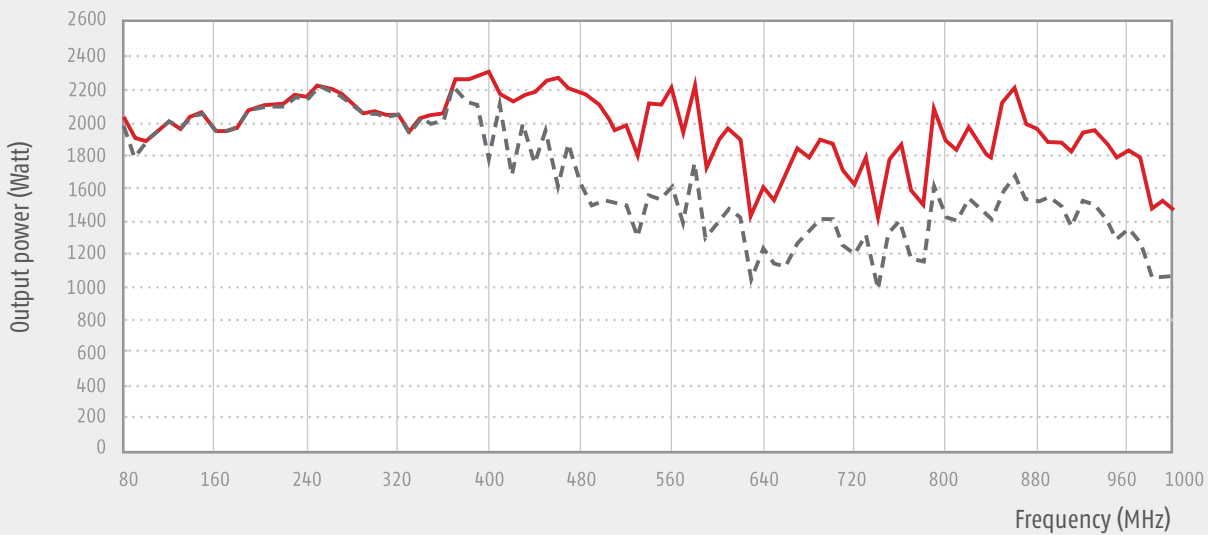
**VLH-900B1, VLH-1450B1, VLH-1650B1**



**VLH-1450B1**



**VLH-1650B1**



Output Power (compression max. = 1dB)

Output Power (compression max. = 3dB)



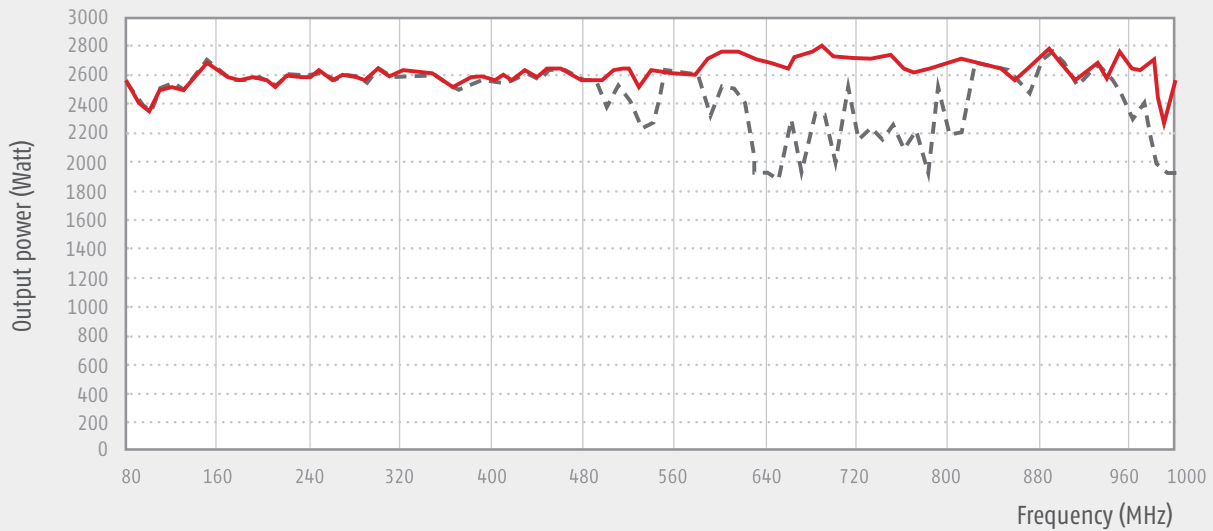
# 80 MHz – 1 GHz

Part Number		VLH-2400B1	VLH-3500B1
Frequency range		80MHz-1GHz	80MHz-1GHz
Output Power typ.		2400 W	3500 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+60 dB	+60 dB
Flatness, typ.		±3.5 dB	±3.5 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		7/16(f) N(f)	EIA 1-5/8 N(f)
Dimensions (mm)	W	800	2 x 800
	H	1940 (38 HU)	1940 (38 HU)
	D	840	840
Weight		590 kg	2 x 590 kg
Rated current		18.4 kVA	36.8 kVA
Power Supply (VAC)		47-63Hz	47-63Hz
Phases		3	3
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 960l / sec. max.	Self contained fans 2 x 960 l / sec. max.
Following types available:		DC	DC

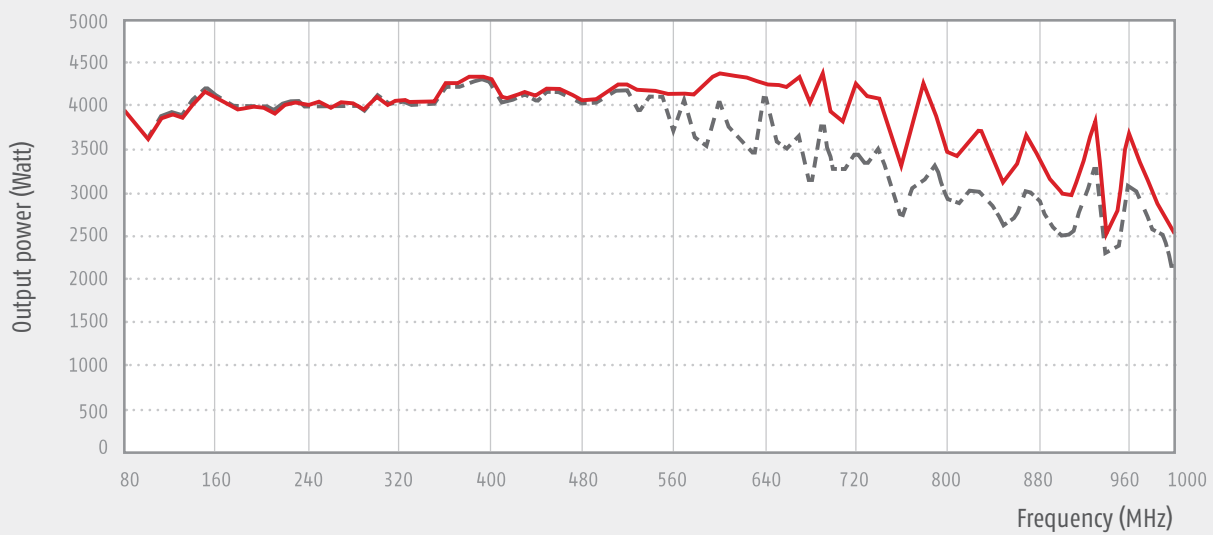


## VLH-2400B1, VLH-3500B1

### VLH-2400B1



### VLH-3500B1



Output Power (compression max. = 1dB)

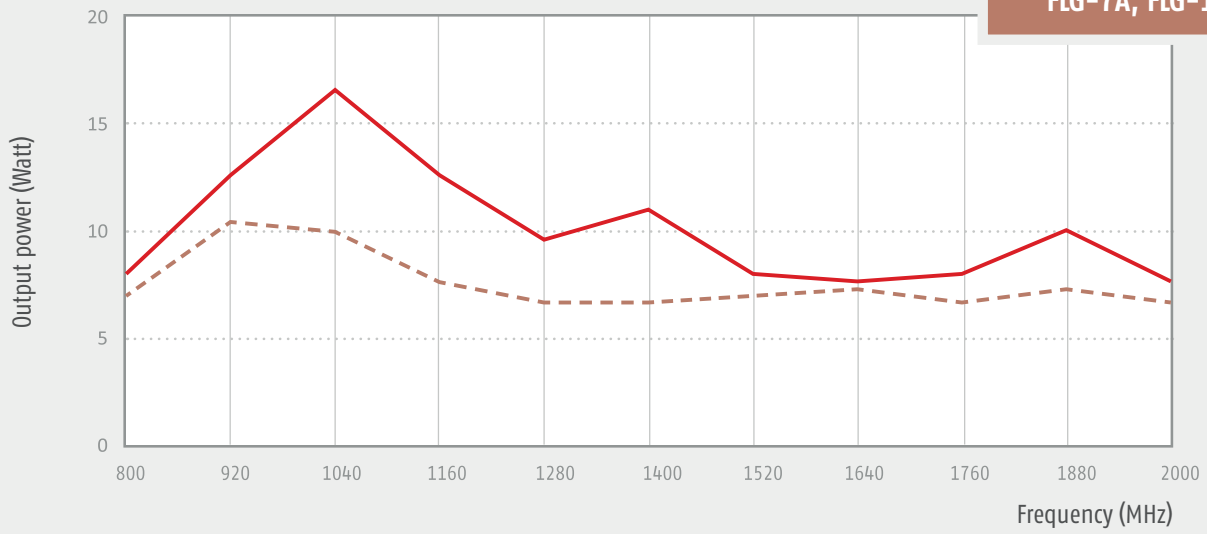
Output Power (compression max. = 3dB)

# 0,8 GHz – 2 GHz

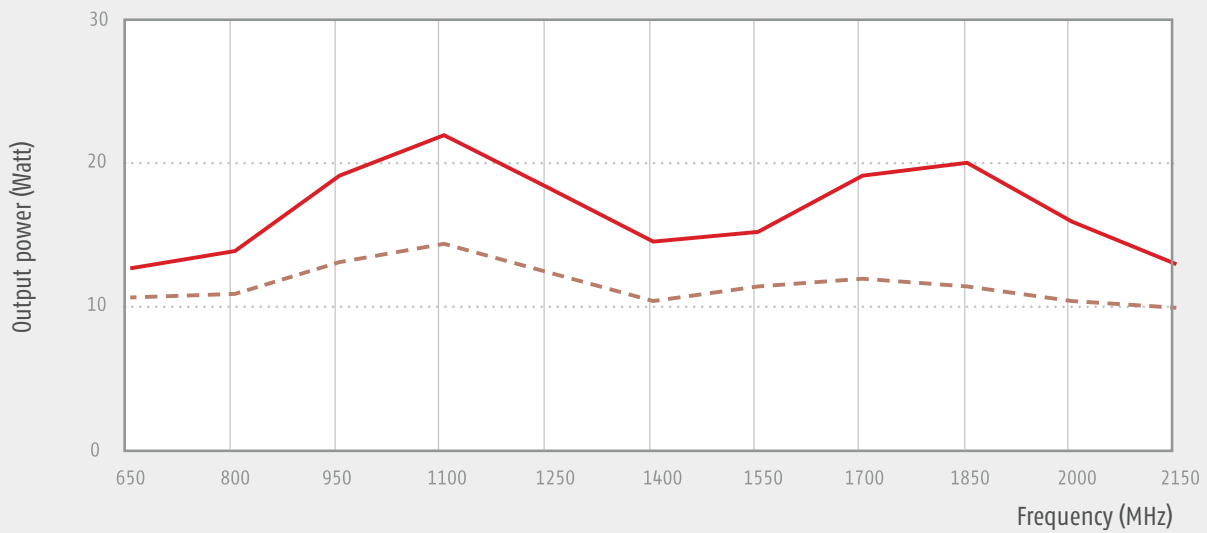
Part Number		FLG-7A	FLG-12A	FLG-25A
Frequency range		0.8GHz-2GHz	0.8GHz-2GHz	1GHz-2GHz
Output Power typ.		7 W	12 W	25 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm	+10 dBm
Gain, typ.		+39 dB	+41 dB	+44 dB
Flatness, typ.		±1.5 dB	±1 dB	±1.5 dB
IP3, typ.		+47 dBm	+50 dBm	+53 dBm
Input VSWR, max.		2:1	2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 5W	-20 dBc @ 10W	-20 dBc @ 20W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 5W	<-60 dBc @ 10W	<-60 dBc @ 20W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")	483 (19")
	H	89	134	134
	D	458	508	508
Weight		12 kg	15 kg	19 kg
AC Power Input (W)		100	140	400
Power Supply (VAC)		100-240	100-240	100-240
Phases		1	1	1
Operating Temperature (°C)		0/+50	0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95	95
Cooling		Internal forced air	Internal forced air	Internal forced air
Circuit Protection		Thermal Overload	Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E	S, E

### FLG-7A

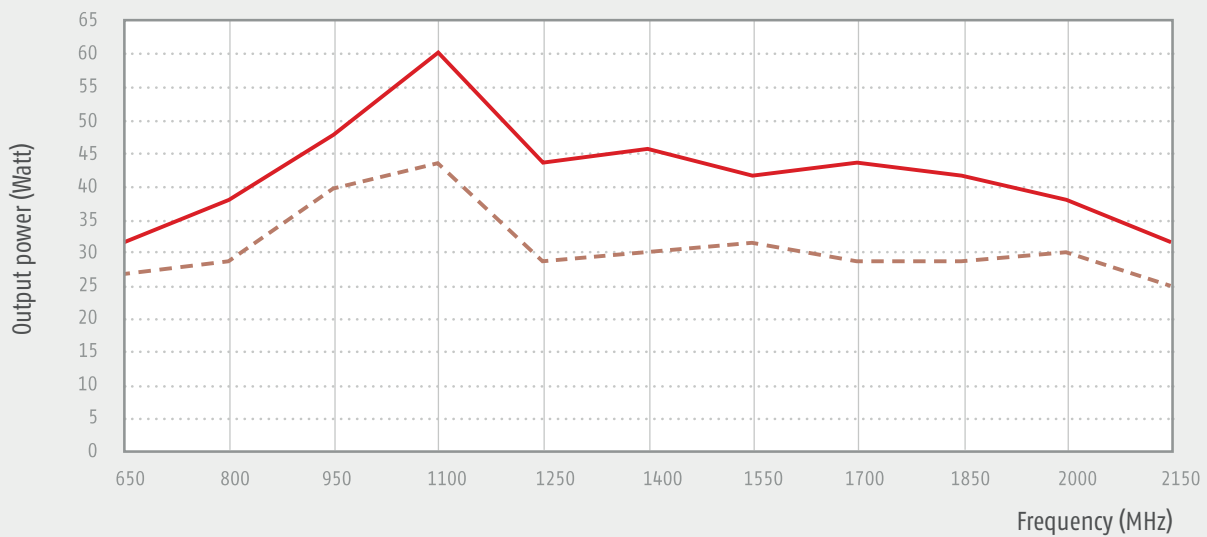
FLG-7A, FLG-12A, FLG-25A



### FLG-12A



### FLG-25A



Output Power (Compression max. = 1dB)

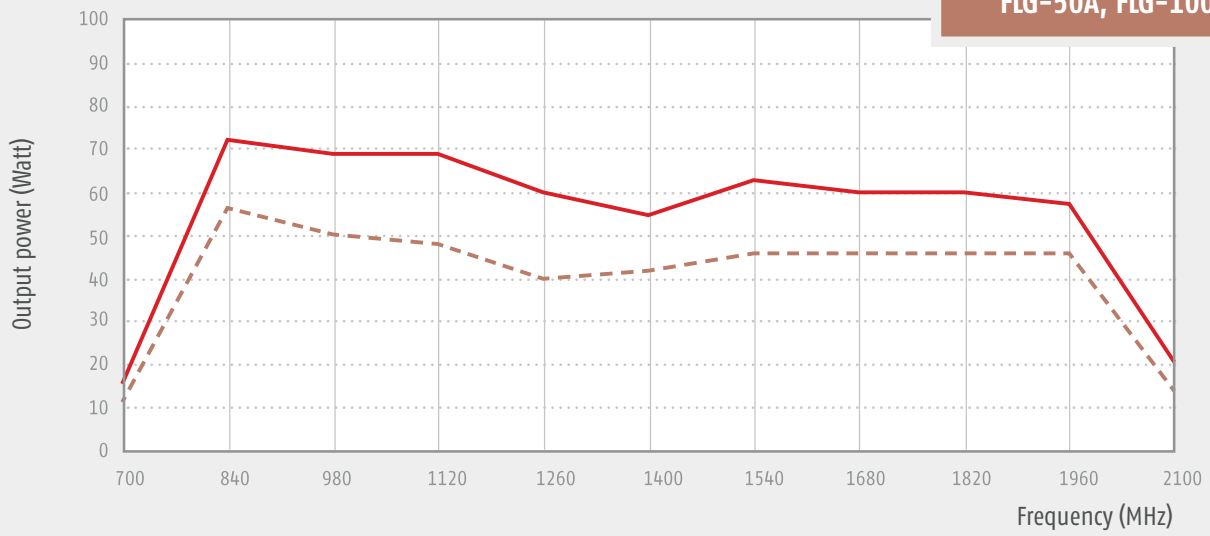
Output Power (Compression max. = 3dB)

# 0,8 GHz – 2 GHz

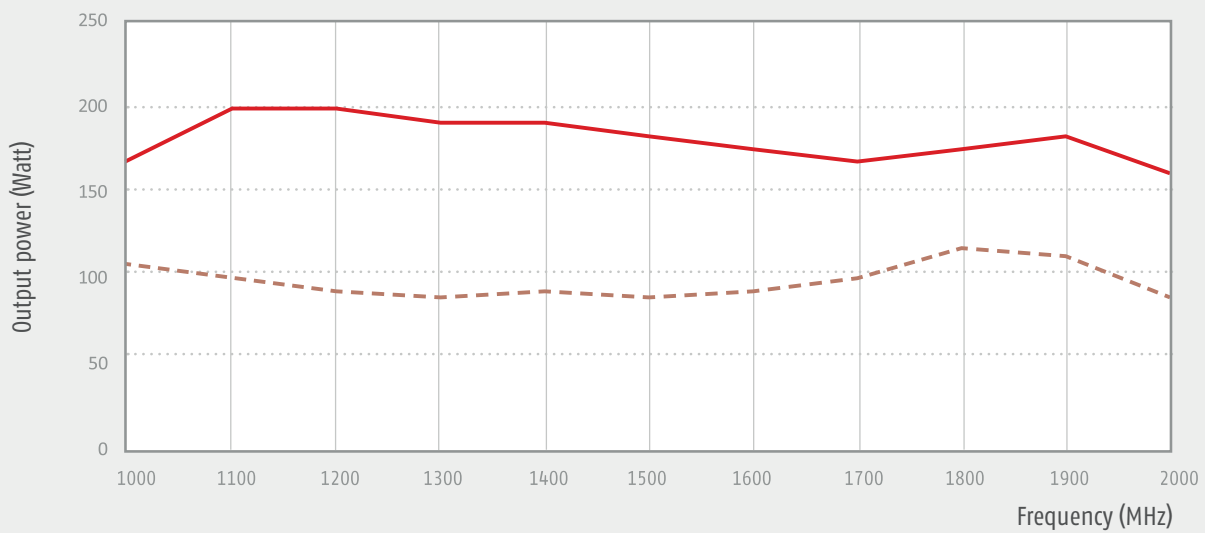
Part Number		FLG-50A	FLG-100A	FLG-200A
Frequency range		0.8GHz-2GHz	0.8GHz-2GHz	0.8GHz-2GHz
Output Power typ.		50 W	120 W	200 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		0 dBm	+10 dBm	+10 dBm
Gain, typ.		+48 dB	+52 dB	+54 dB
Flatness, typ.		±1.5 dB	±2 dB	±2 dB
IP3, typ.		+56 dBm	+59 dBm	+62 dBm
Input VSWR, max.		2:1	2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 35W	-20 dBc @ 80W	-20 dBc @ 150W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 35W	<-60 dBc @ 80W	<-60 dBc @ 150W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")	483 (19")
	H	134	134	223
	D	508	508	508
Weight		20 kg	23 kg	37 kg
AC Power Input (W)		400	1000	1500
Power Supply (VAC)		100-240	100-240	100-240
Phases		1	1	1
Operating Temperature (°C)		0/+50	0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95	95
Cooling		Internal forced air	Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E	S, E

## FLG-50A

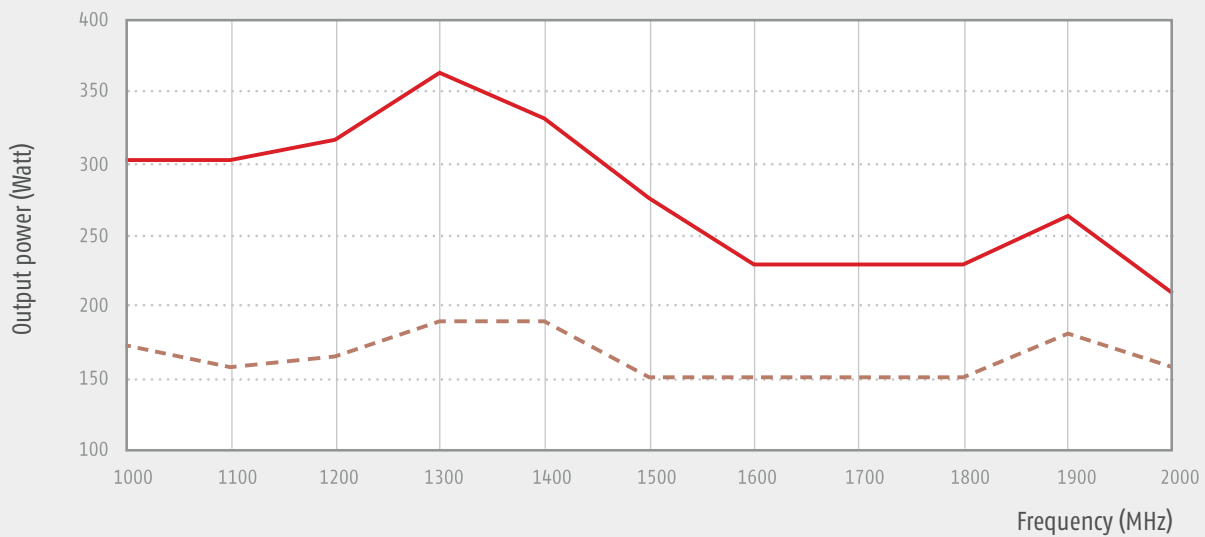
FLG-50A, FLG-100A, FLG-200A



## FLG-100A



## FLG-200A



Output Power (compression max. = 1dB)



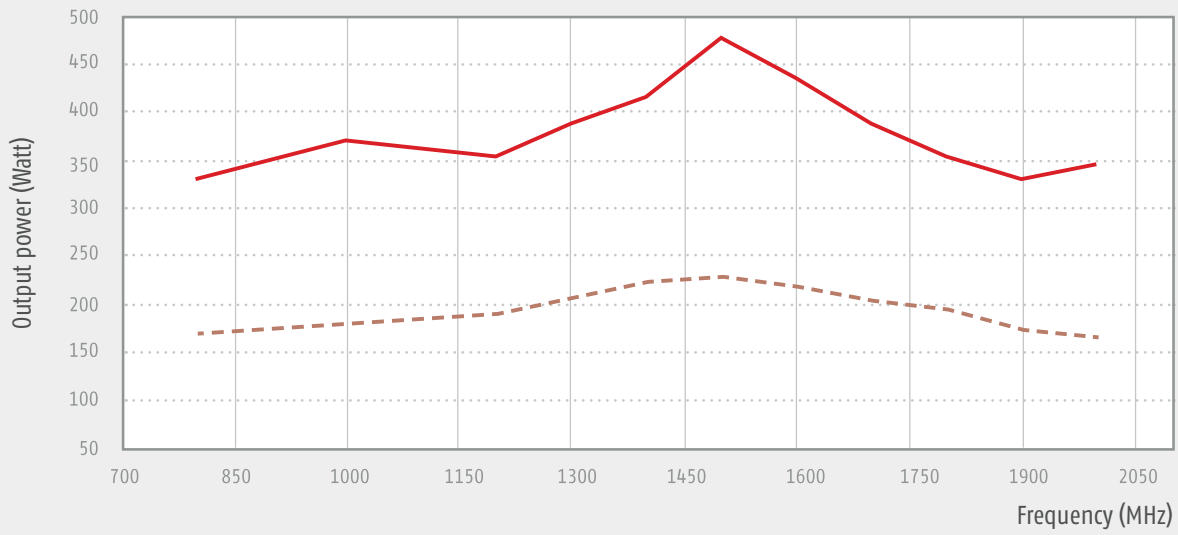
Output Power (compression max. = 3dB)



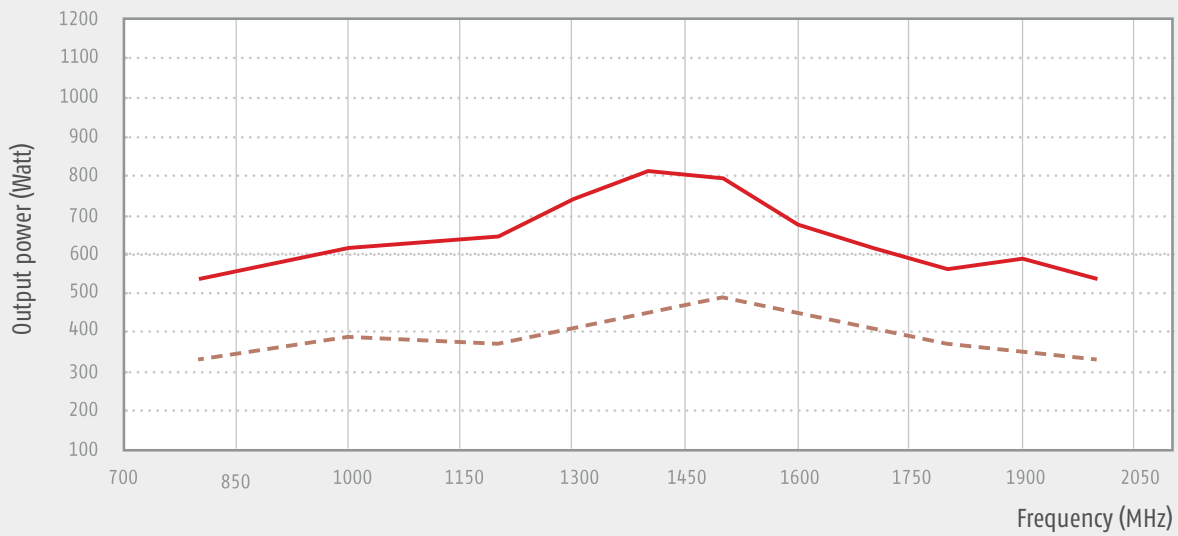
# 0,8 GHz – 2 GHz

Part Number		FLG-300A	FLG-500A
Frequency range		0.8GHz-2GHz	0.8GHz-2GHz
Output Power typ.		300 W	500 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		0 dBm	+10 dBm
Gain, typ.		+56 dB	+58 dB
Flatness, typ.		±2 dB	±2.5 dB
IP3, typ.		+60 dBm	+65 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 150W	-20 dBc
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 150W	<-60 dBc
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f) 7/16 DIN
Dimensions (mm)	W	483 (19")	483 (19")
	H	134	356
	D	610	661
Weight		27 kg	68 kg
AC Power Input (W)		2000	3000
Power Supply (VAC)		180-240	180-264
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage VSWR protection
Following types available:		S, E	S, E

FLG-300A



FLG-500A



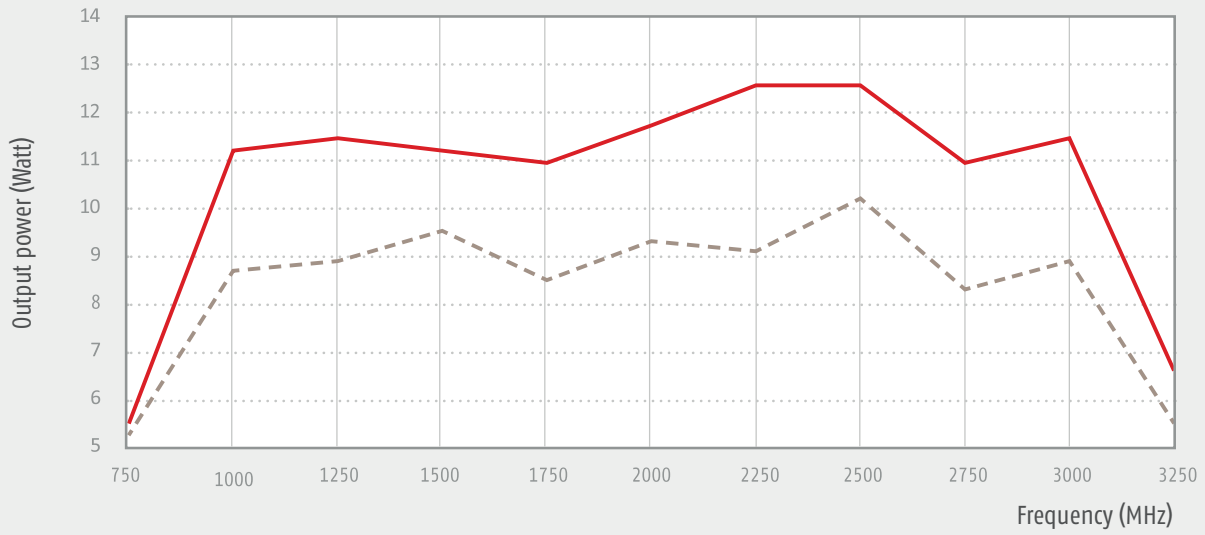
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 0,8 GHz – 3,2 GHz

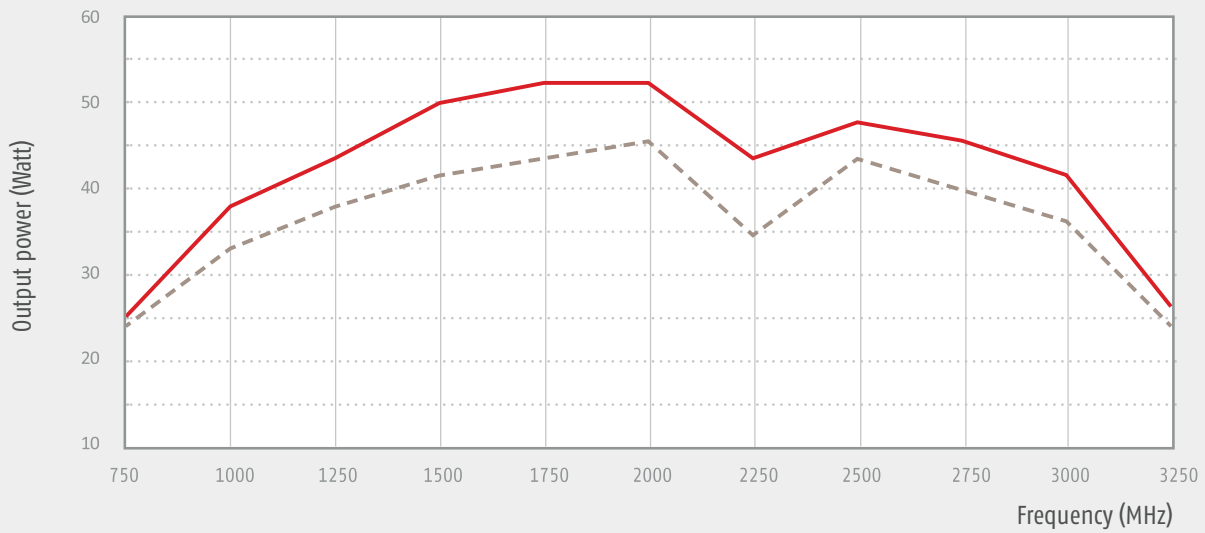
Part Number		FLG-10C	FLG-30C
Frequency range		1GHz-3GHz	1GHz-3GHz
Output Power typ.		10 W	30 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+38 dB	+46 dB
Flatness, typ.		±1.5 dB	±1.5 dB
IP3, typ.		+48 dBm	+54 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 7W	-20 dBc @ 24W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 7W	<-60 dBc @ 24W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	134	134
	D	508	508
Weight		20 kg	20 kg
AC Power Input (W)		200	350
Power Supply (VAC)		100-240	100-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current
Following types available:		S, E	S, E



FLG-10C



FLG-30C



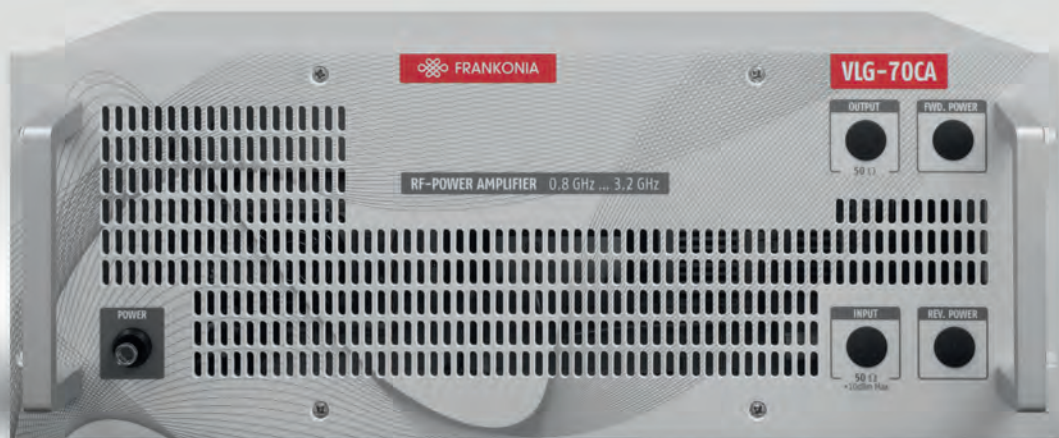
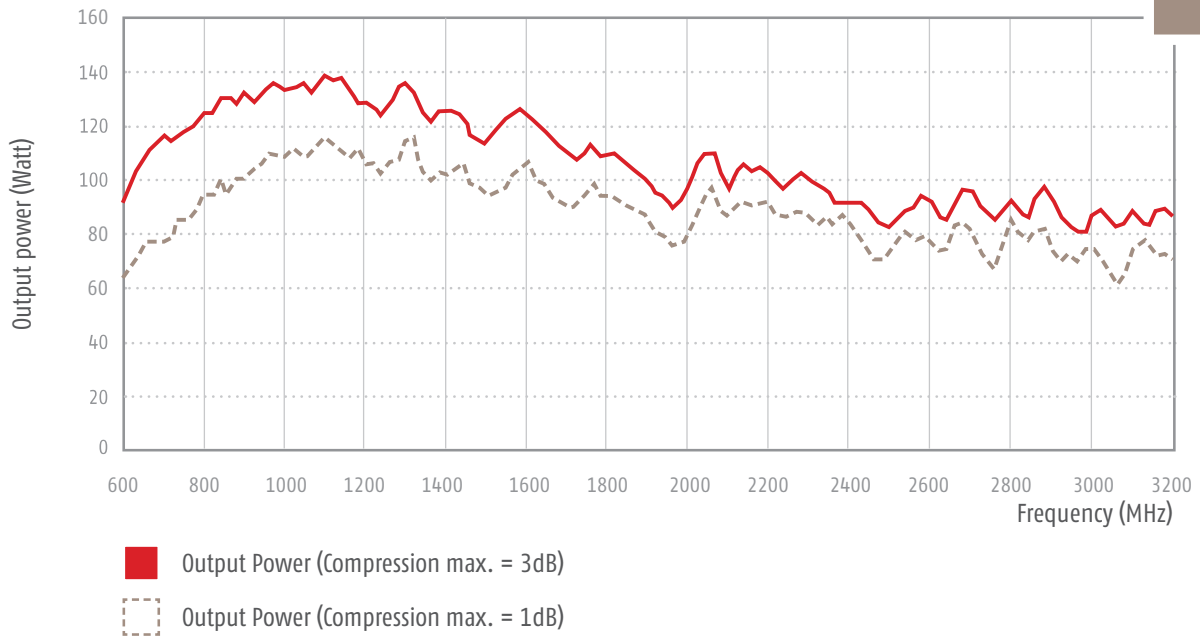
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 0,8 GHz – 3,2 GHz

Part Number		VLG-70CA
Frequency range		0,8GHz-3,2GHz
Output Power typ.		70 W
Output Power @ 1dB Compression, typ. min.		see Diagramm
RF Input, max.		+10 dBm
Gain, typ.		+47 dB
Flatness, typ.		±5 dB
Input VSWR		2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc
Class type		A
Input / Output Impedance		50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)
Dimensions (mm)	W	450
	H	178 (4 HU)
	D	640
Weight		25 kg
Rated current		4.5A @ 110VAC 2.2A @ 230VAC
Power Supply (VAC)		90-250, 47-63 Hz
Phases		1
Operating Temperature (°C)		0 / +35
Room temperature storage (°C)		-20 / +70
Cooling / Forced air		Self contained fans 60 l / sec. max.
Following types available:		S, SC, D, DC

VLG-90CA

VLG-90CA

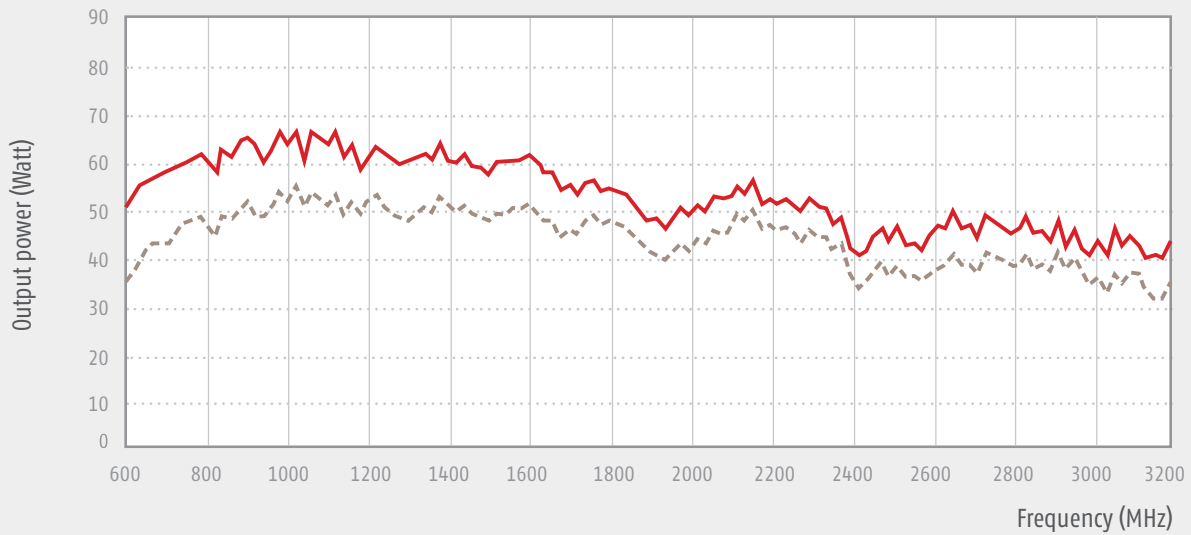


# 0,8 GHz – 3,2 GHz

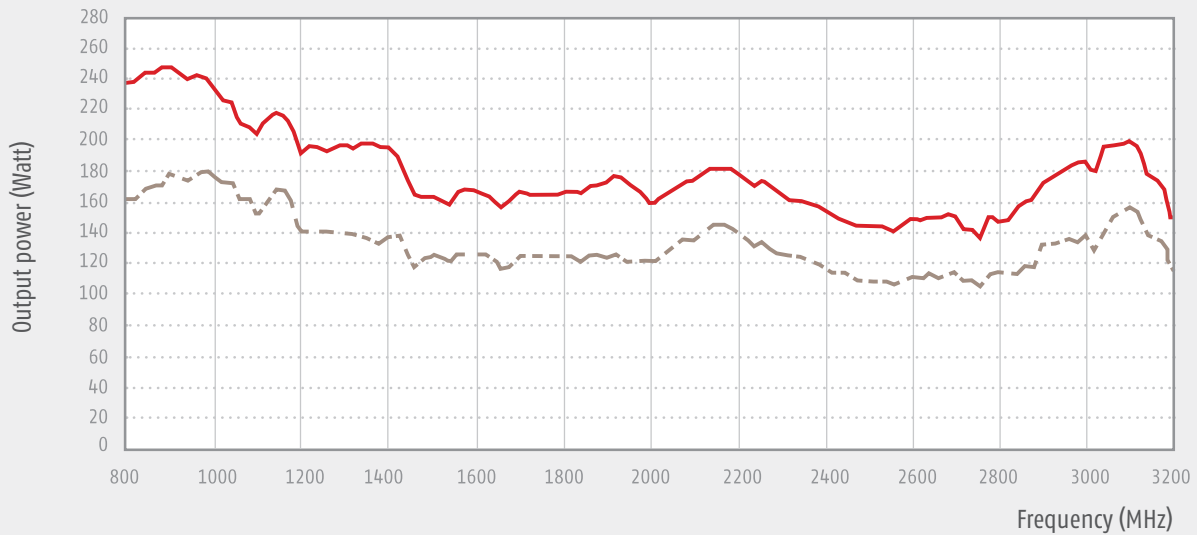
Part Number		VLG-40CA	VLG-120CA
Frequency range		0,8GHz-3,2GHz	0,8GHz-3,2GHz
Output Power typ.		40 W	120 W
Output Power @ 1dB Compression, typ. min.		see Diagramm 25W from 2000M-3200M	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+45 dB	+52 dB
Flatness, typ.		±5 dB	±5 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	450
	H	178 (4 HU)	312
	D	640	640
Weight		20 kg	33 kg
Rated current		3.2A @ 110VAC 1.5A @ 230VAC	4.8A @ 230VAC
Power Supply (VAC)		90-250, 47-63 Hz	200-250, 47-63 Hz
Phases		1	1
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 60 l / sec. max.	Self contained fans 120 l / sec. max.
Following types available:		S, SC, D, DC	D, DC

VLG-48CA, VLG-120CA

VLG-48CA



VLG-120CA

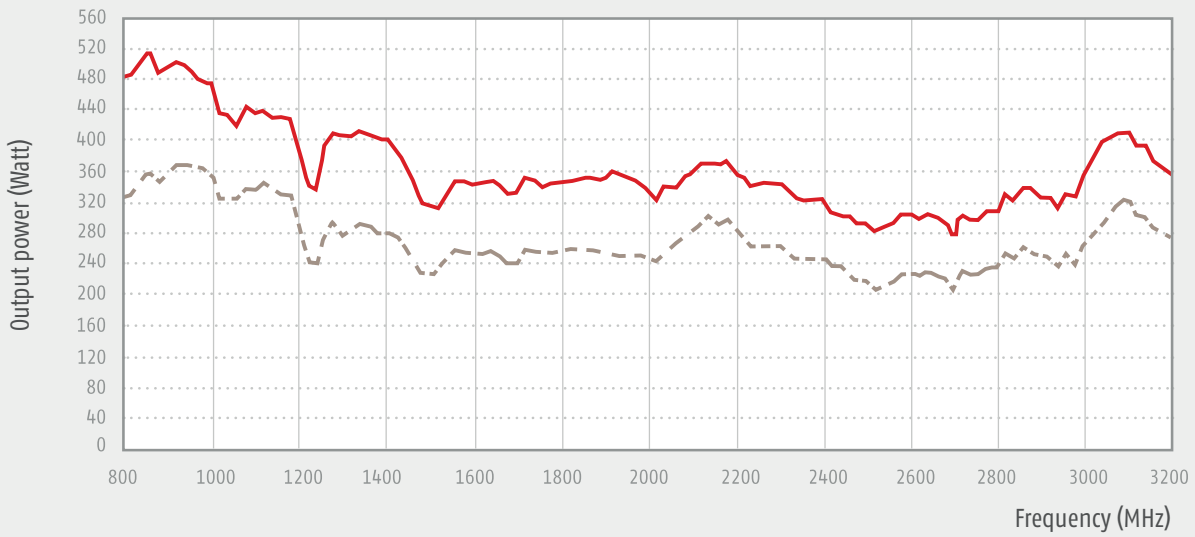


- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

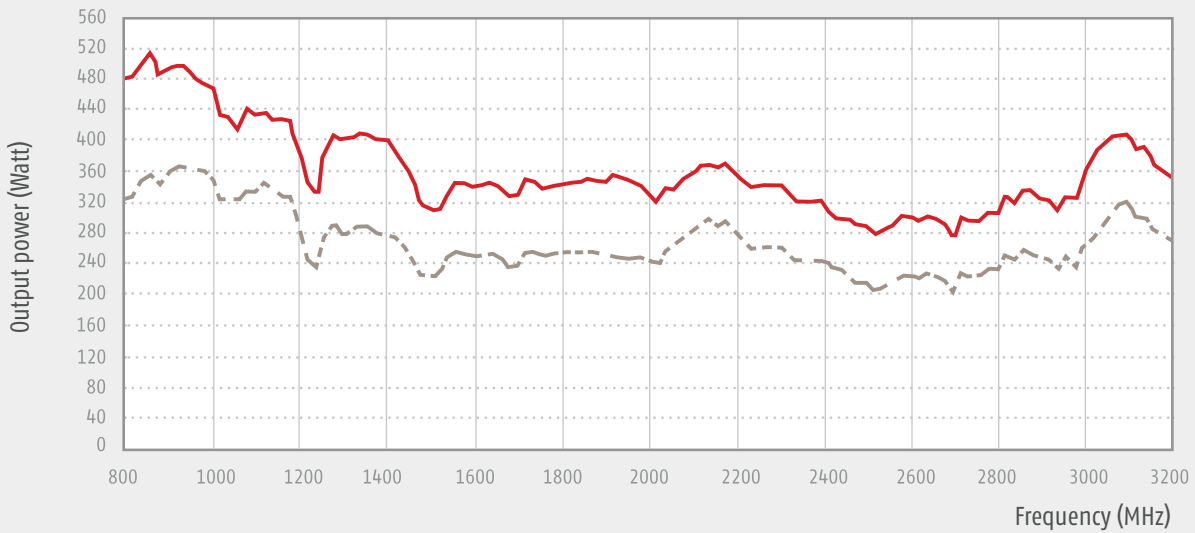
# 0,8 GHz – 3,2 GHz

Part Number		VLG-220CA	VLG-450CA
Frequency range		0,8GHz-3,2GHz	0,8GHz-3,2GHz
Output Power typ.		220 W	450 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+54 dB	+57 dB
Flatness, typ.		±5 dB	±5 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	7/16(f) N(f)
Dimensions (mm)	W	450	600
	H	312 (7 HU)	1050 (18 HU)
	D	640	840
Weight		45 kg	230 kg
Rated current		8.7A @230VAC	4 kVA
Power Supply (VAC)		200-250, 47-63 Hz	47-63Hz
Phases		1	3
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 120 l / sec. max.	Self contained fans 2400 l / sec. max.
Following types available:		D, DC	DC

**VLG-220CA**



**VLG-450CA**



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

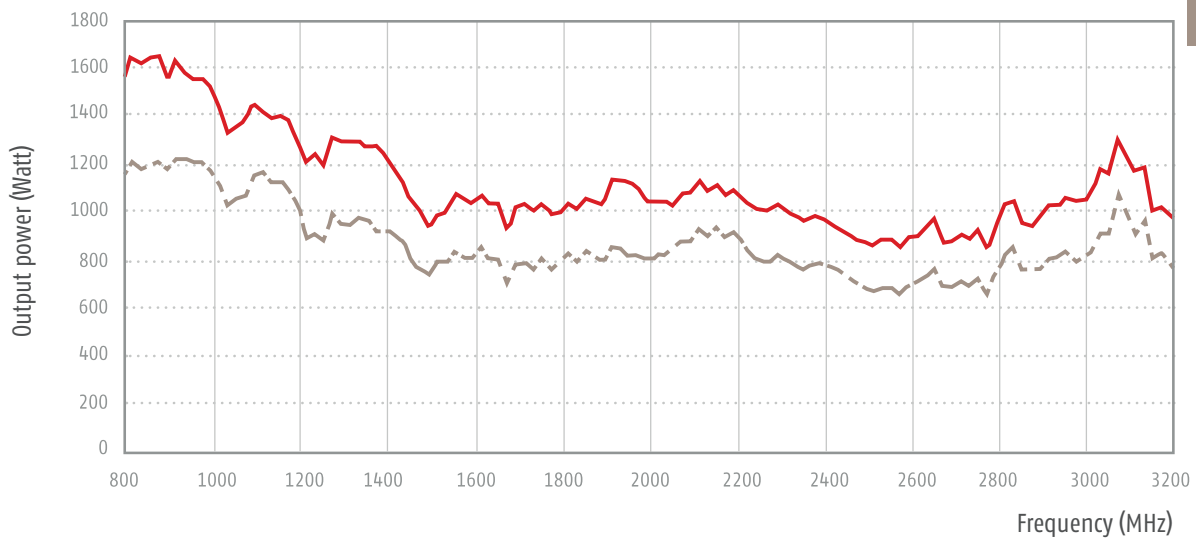
# 0,8 GHz – 3,2 GHz

Part Number		VLG-1000CA
Frequency range		0,8GHz-3,2GHz
Output Power typ.		1000 W
Output Power @ 1dB Compression, typ. min.		see Diagramm
RF Input, max.		+10 dBm
Gain, typ.		+63 dB
Flatness, typ.		±5 dB
Input VSWR		2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc
Class type		A
Input / Output Impedance		50 Ω / 50 Ω
Connectors In / Out		7/16(f) N(f)
Dimensions (mm)	W	600
	H	1590 (30 HU)
	D	840
Weight		320 kg
Rated current		7 kVA
Power Supply (VAC)		47-63Hz
Phases		3
Operating Temperature (°C)		0 / +35
Room temperature storage (°C)		-20 / +70
Cooling / Forced air		Self contained fans 4800 l / sec. max.
Following types available:		DC



VLG-1000CA

VLG-1000CA



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

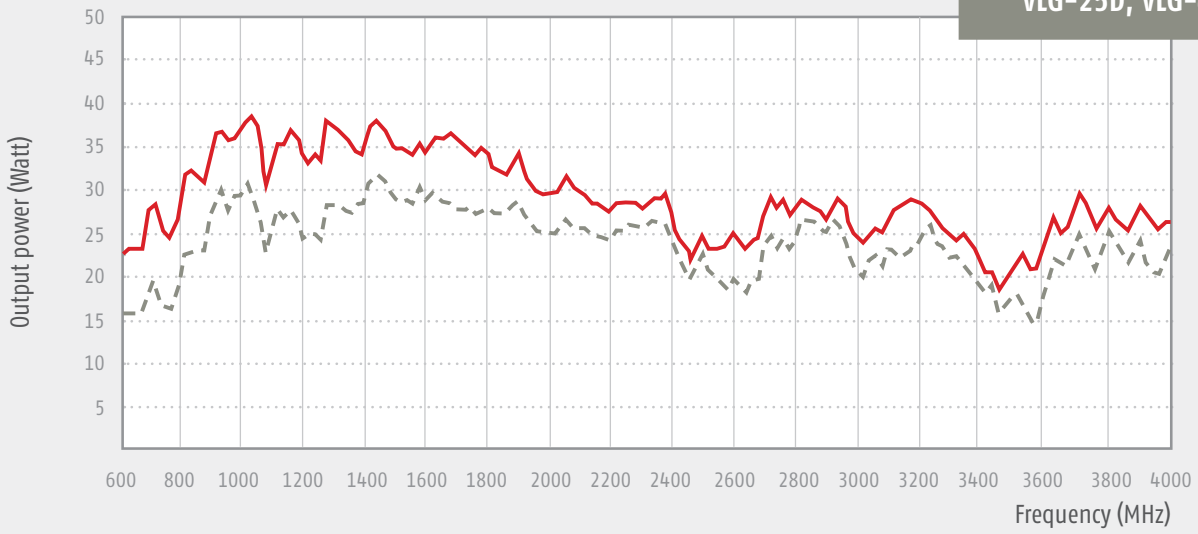


# 0,8 GHz – 4 GHz

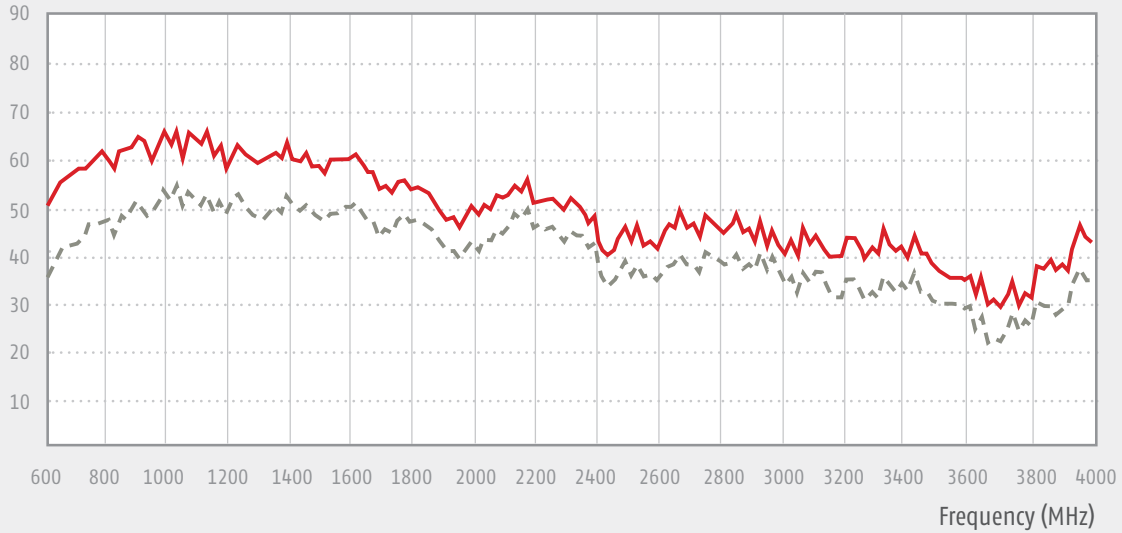
Part Number		VLG-25D	VLG-45D	VLG-80D
Frequency range		0,8GHz-4GHz	0,8GHz-4GHz	0,8GHz-4GHz
Output Power typ.		25 W	45 W	80 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		0 dBm	0 dBm	0 dBm
Gain, typ.		51 dB	55 dB	56 dB
Flatness, typ.		±5 dB	±5 dB	±5 dB
Input VSWR		2:1	2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	450	450
	H	89 (2 HU)	178 (4 HU)	178 (4 HU)
	D	640	640	640
Weight		12 kg	15 kg	25 kg
Rated current		2.2A @ 110VAC 1A @ 230VAC	2.8A @ 110VAC 1.4A @ 230VAC	4.5A @ 110VAC 2.2A @ 230VAC
Power Supply (VAC)		90-250, 47-63 Hz	90-250, 47-63 Hz	90-250, 47-63 Hz
Phases		1	1	1
Operating Temperature (°C)		0 / +35	0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 20 l / sec. max.	Self contained fans 60 l / sec. max.	Self contained fans 60 l / sec. max.
Following types available:		S, SC, D, DC	S, SC, D, DC	S, SC, D, DC

**VLG-25D**

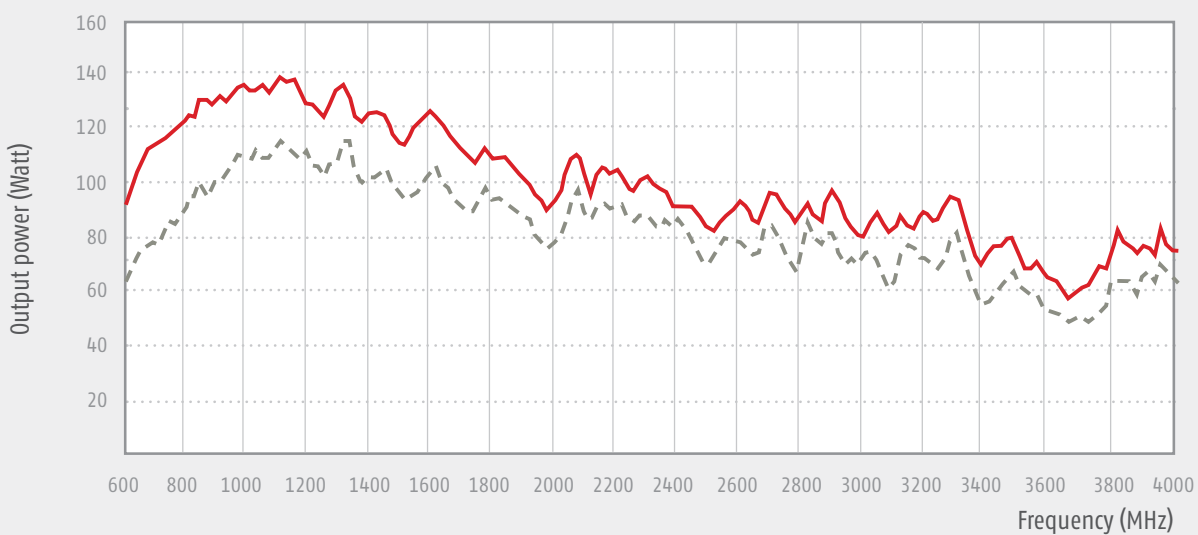
VLG-25D, VLG-45D, VLG-80D



**VLG-45D**



**VLG-80D**



Output Power (compression max. = 1dB)

Output Power (compression max. = 3dB)

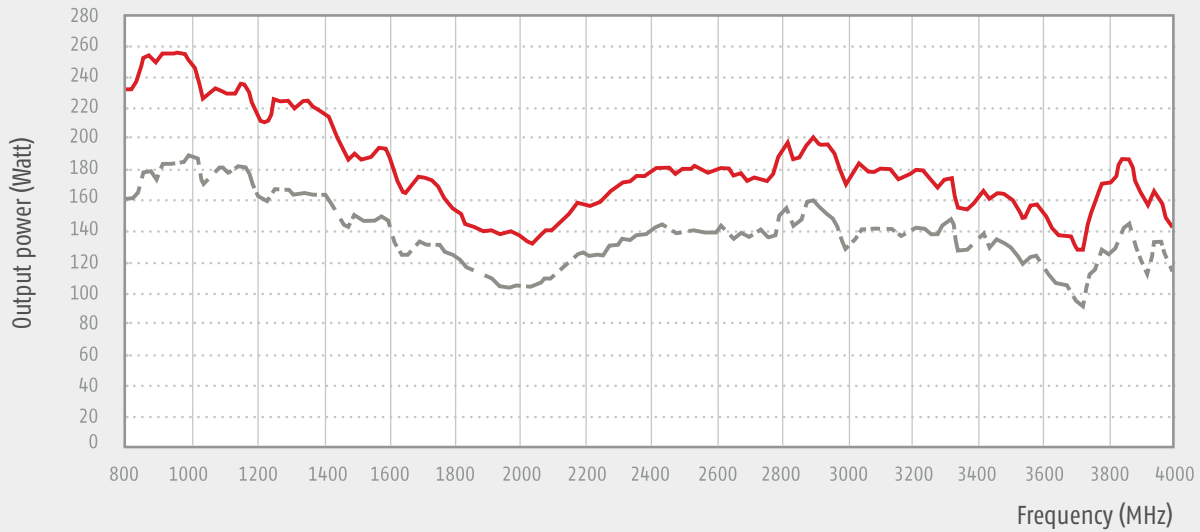


# 0,8 GHz – 4 GHz

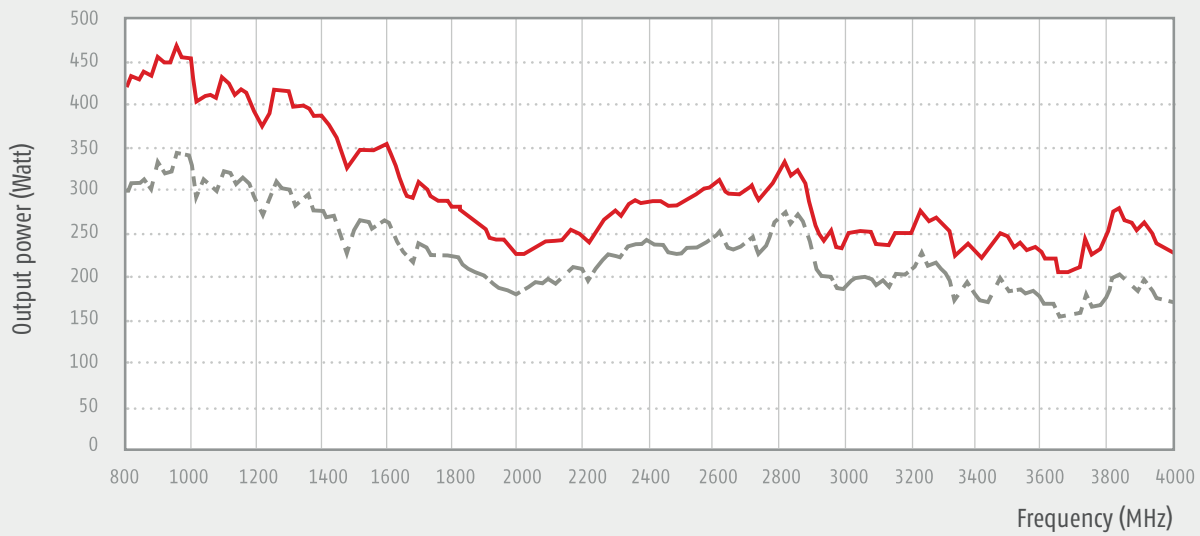
Part Number		VLG-100D	VLG-200D
Frequency range		0,8GHz-4GHz	0,8GHz-4GHz
Output Power typ.		100 W	200 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+56 dB	+54 dB
Flatness, typ.		±5 dB	±5 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	450
	H	312 (7 HU)	312 (7 HU)
	D	640	640
Weight		33 kg	45 kg
Rated current		4.8A @ 230VAC	8.5A @ 230VAC
Power Supply (VAC)		200-250, 47-63 Hz	200-250, 47-63 Hz
Phases		1	1
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 120l / sec. max.	Self contained fans 120l / sec. max.
Following types available:		D, DC	D, DC

VLG-100D, VLG-200D

**VLG-100D**



**VLG-200D**

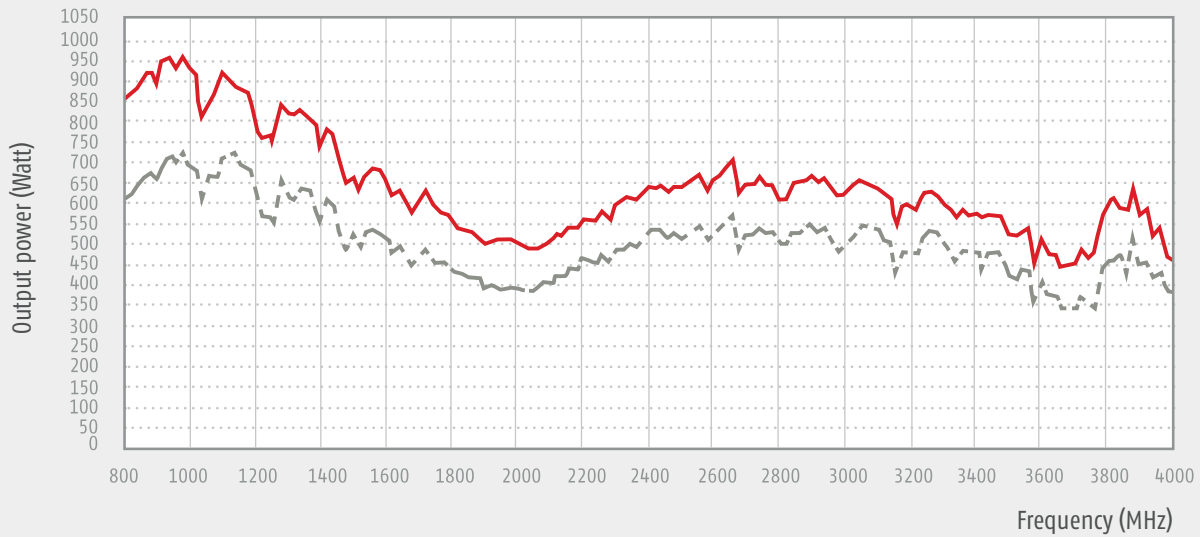


- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

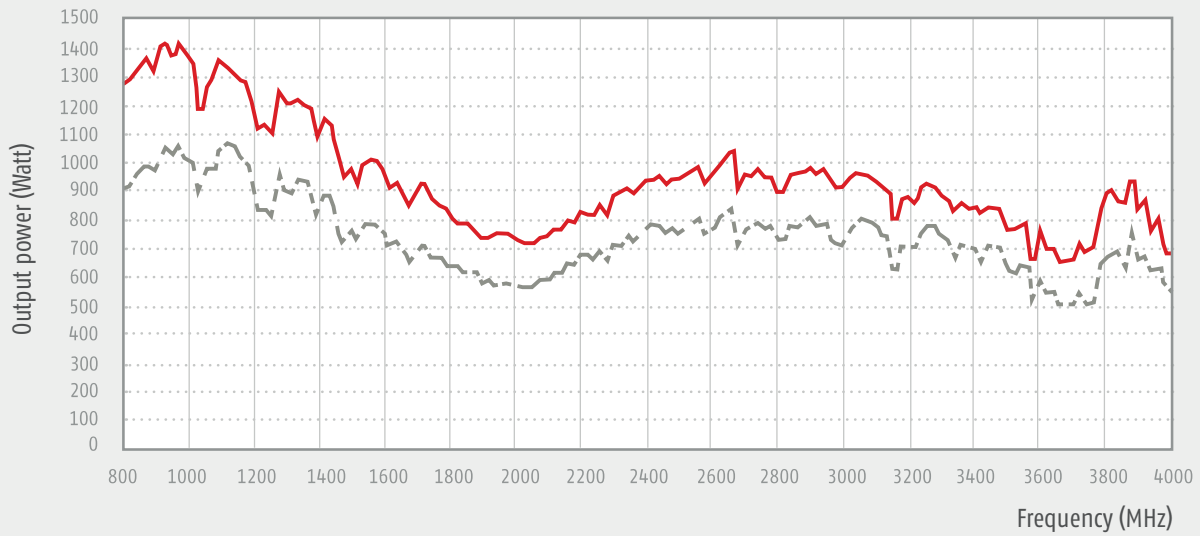
# 0,8 GHz – 4 GHz

Part Number		VLG-420D	VLG-800D
Frequency range		0,8GHz-4GHz	0,8GHz-4GHz
Output Power typ.		420 W	800 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+57 dB	+60 dB
Flatness, typ.		±5 dB	±5 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		7/16(f) N(f)	7/16(f) N(f)
Dimensions (mm)	W	600	600 (30U)
	H	1050 (18 HU)	1590 (30 HU)
	D	840	840
Weight		230 kg	320 kg
Rated current		4 kVA	7.5 kVA
Power Supply (VAC)		47-63 Hz	47-63 Hz
Phases		3	3
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 240l / sec. max.	Self contained fans 480l / sec. max.
Following types available:		DC	DC

### VLG-420D



### VLG-800D



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

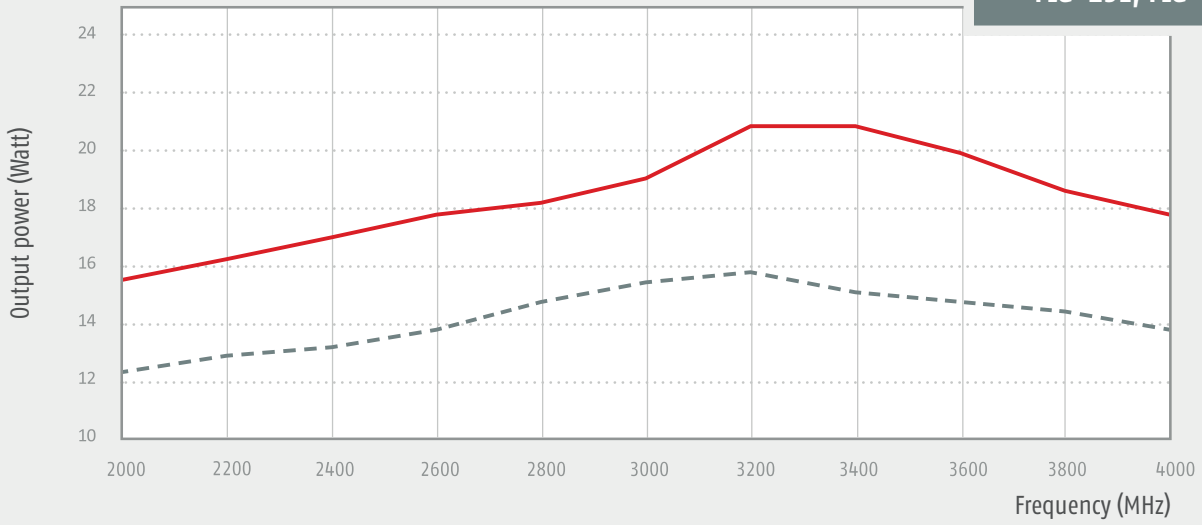
## 2 GHz – 4 GHz

Part Number		FLG-15E	FLG-30E	FLG-60E
Frequency range		2GHz-4GHz	2GHz-4GHz	2GHz-4GHz
Output Power typ.		15 W	30 W	60 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm	+10 dBm
Gain, typ.		+43 dB	+46 dB	+49 dB
Flatness, typ.		±1.5 dB	±1.5 dB	±3 dB
IP3, typ.		+51 dBm	+54 dBm	+56 dBm
Input VSWR, max.		2:1	2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 12W	-20 dBc @ 24W	-20 dBc @ 40W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 12W	<-60 dBc @ 24W	<-60 dBc @ 40W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")	483 (19")
	H	134	134	134
	D	508	508	508
Weight		14 kg	16 kg	22 kg
AC Power Input (W)		200	350	600
Power Supply (VAC)		100-240	100-240	100-240
Phases		1	1	1
Operating Temperature (°C)		0/+50	0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95	95
Cooling		Internal forced air	Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E	S, E

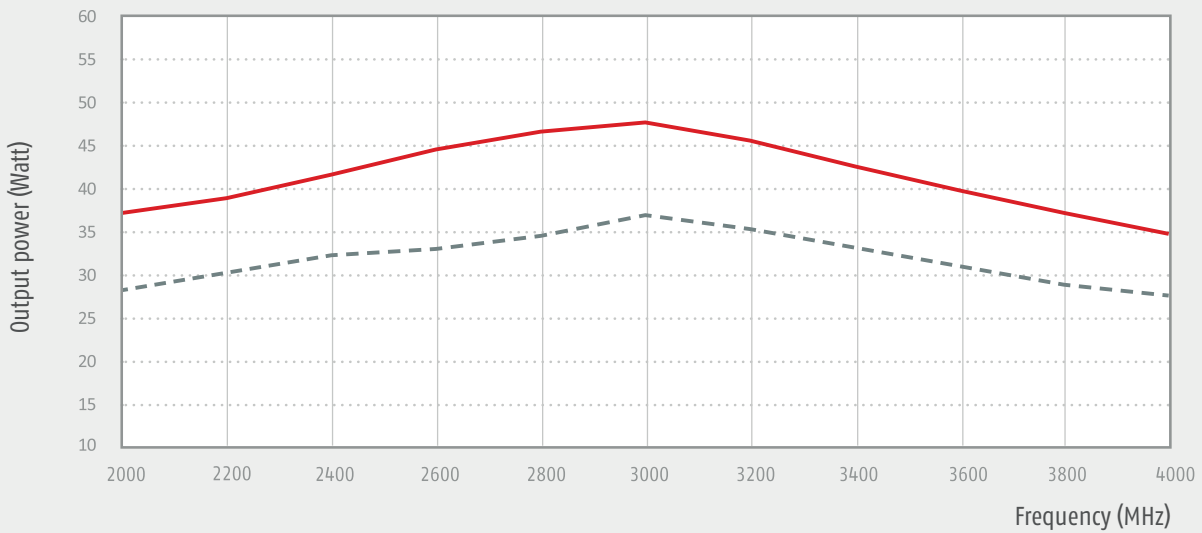


FLG-15E

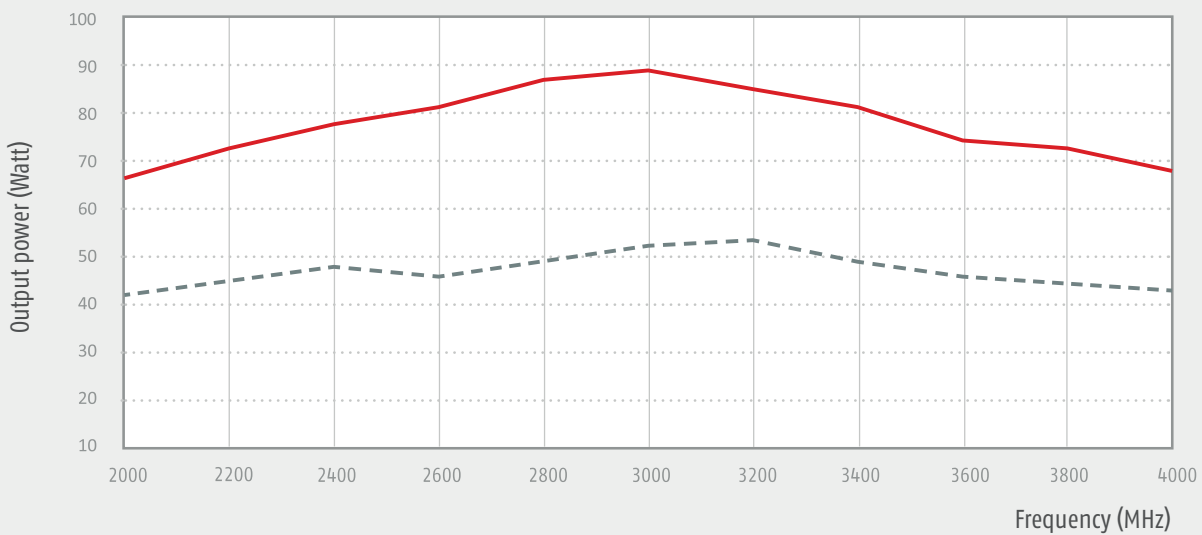
FLG-15E, FLG-30E, FLG-60E



FLG-30E



FLG-60E



Output Power (compression max. = 1dB)



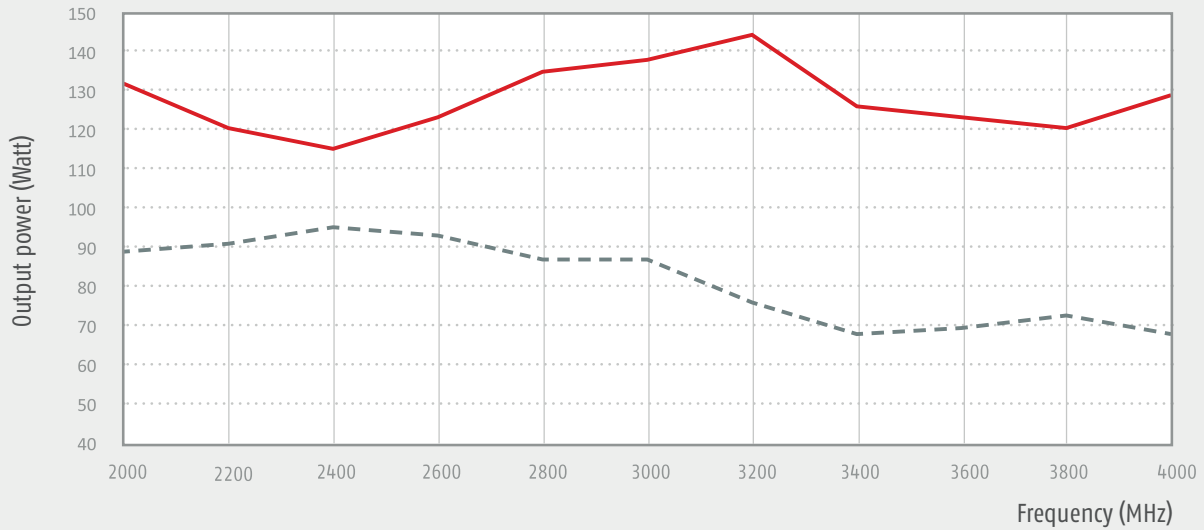
Output Power (compression max. = 3dB)



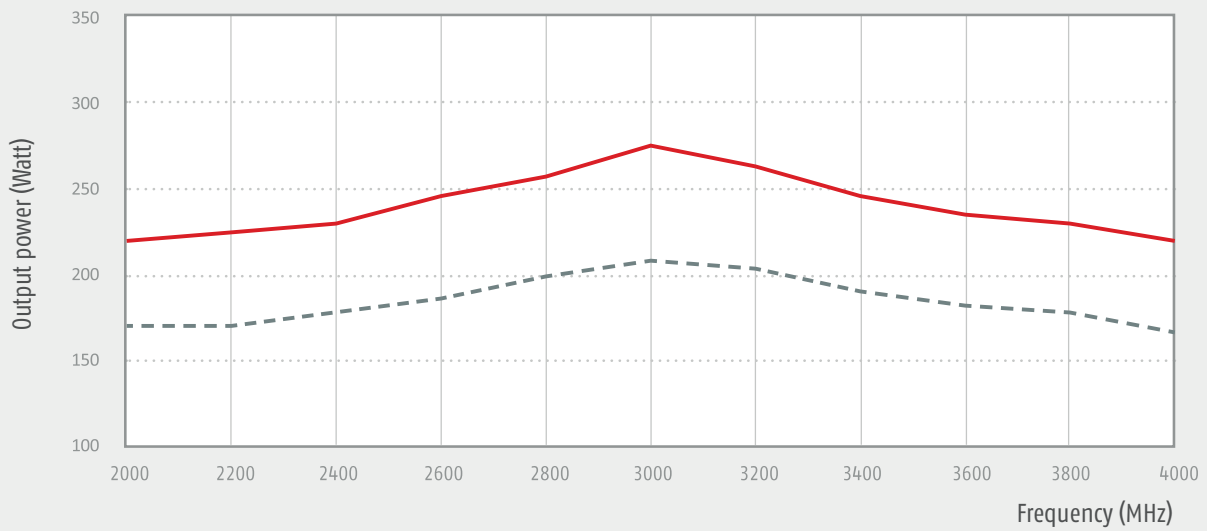
## 2 GHz – 4 GHz

Part Number		FLG-100E	FLG-200E
Frequency range		2GHz-4GHz	2GHz-4GHz
Output Power typ.		100 W	200 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+3 dBm
Gain, typ.		+51 dB	+54 dB
Flatness, typ.		±3.0 dB	±2.0 dB
IP3, typ.		+55 dBm	+57 dB
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 60W	-20 dBc @ 120W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 60W	<-60 dBc @ 120W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	134	223
	D	508	610
Weight		34 kg	42 kg
AC Power Input (W)		800	1500
Power Supply (VAC)		110-240	100-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E

FLG-100E



FLG-200E



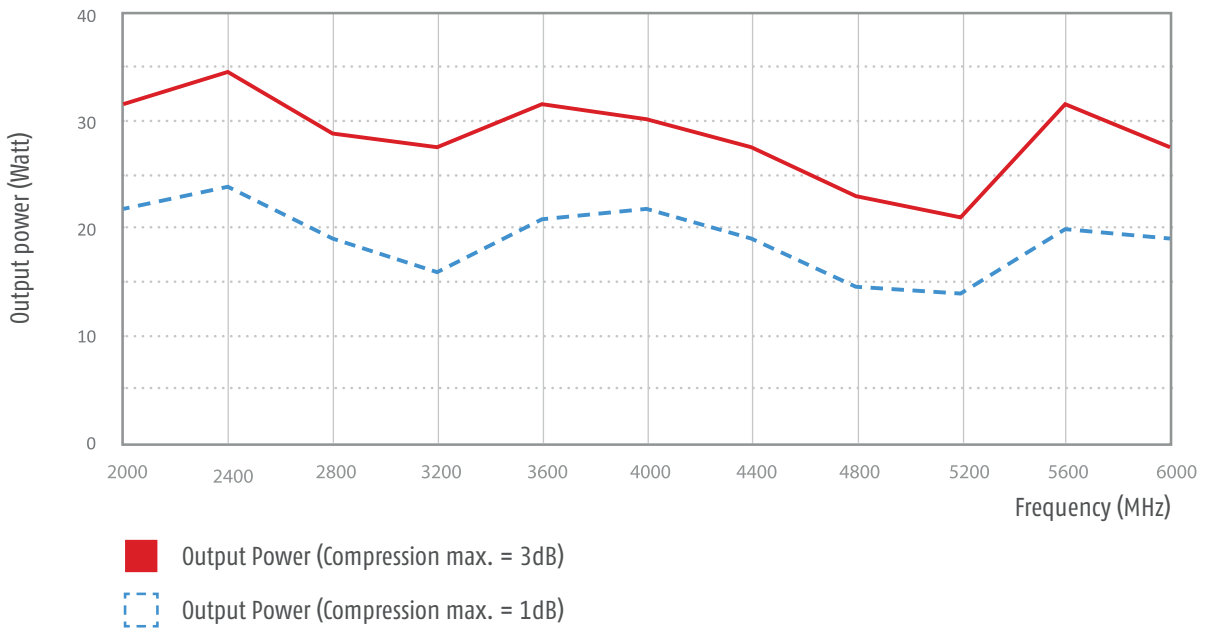
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

## 2 GHz – 6 GHz

Part Number		FLG-15F
Frequency range		2GHz-6GHz
Output Power typ.		20 W
Output Power @ 1dB Compression, typ. min.		see Diagramm
RF Input, max.		+6 dBm
Gain, typ.		+43 dB
Flatness, typ.		±1.5 dB
IP3, typ.		+50 dBm
Input VSWR, max.		2:1
Harmonics @ 1 dB comp., typ.		-15 dBc @ 12W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 12W
Input / Output Impedance		50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)
Dimensions (mm)	W	483 (19")
	H	134
	D	508
Weight		17 kg
AC Power Input (W)		400
Power Supply (VAC)		100-240
Phases		1
Operating Temperature (°C)		0/+50
Operating Humidity Non-Condensing (%)		95
Cooling		Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage
Following types available:		S, E

FLG-15F

FLG-15F



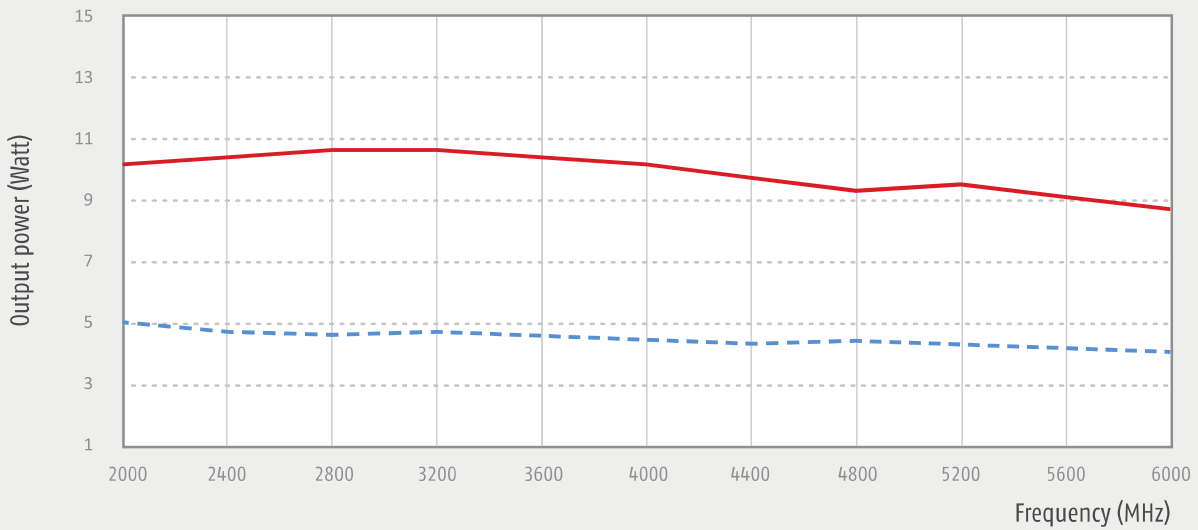
## 2 GHz – 6 GHz

Part Number		FLG-9F	FLG-30F
Frequency range		2GHz-6GHz	2GHz-6GHz
Output Power typ.		9 W	30 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+3 dBm	0 dBm
Gain, typ.		+40 dB	+45 dB
Flatness, typ.		±2 dB	±2.5 dB
IP3, typ.		+46 dBm	+49 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc	-20 dBc @ 25W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc	<-60 dBc @ 25W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	134	134
	D	508	508
Weight		17 kg	19 kg
AC Power Input (W)		300	400
Power Supply (VAC)		100-240	100-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E

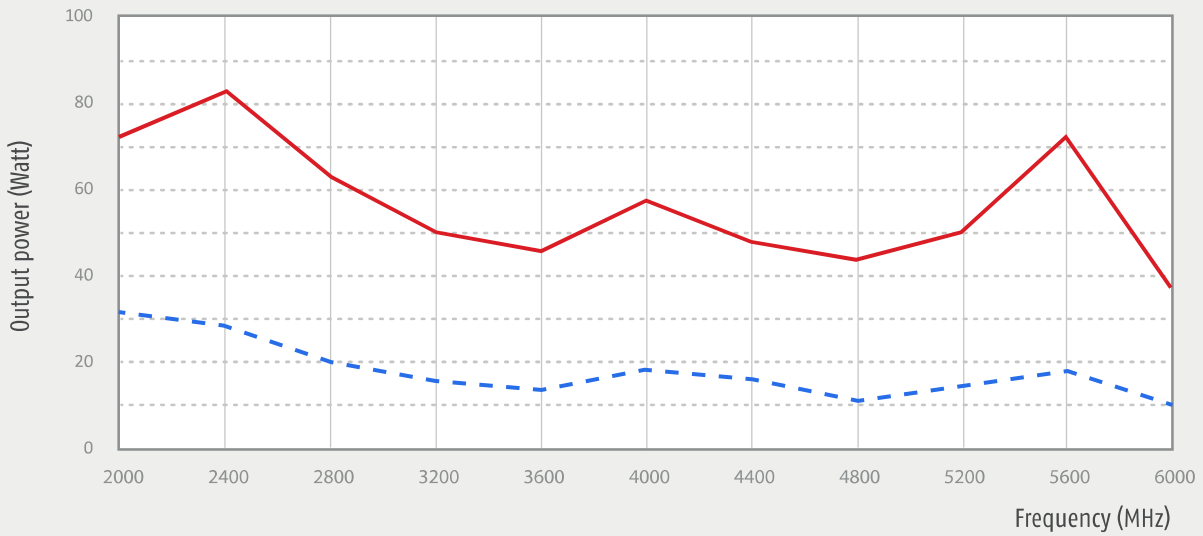
## 2 GHz – 6 GHz

Part Number		FLG-9F	FLG-30F
Frequency range		2GHz-6GHz	2GHz-6GHz
Output Power typ.		9 W	30 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+3 dBm	0 dBm
Gain, typ.		+40 dB	+45 dB
Flatness, typ.		±2 dB	±2.5 dB
IP3, typ.		+46 dBm	+49 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc	-20 dBc @ 25W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc	<-60 dBc @ 25W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	134	134
	D	508	508
Weight		17 kg	19 kg
AC Power Input (W)		300	400
Power Supply (VAC)		100-240	100-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E

### FLG-9F



### FLG-30F



- Output Power (Compression max. = 3dB)
- ▤ Output Power (Compression max. = 1dB)

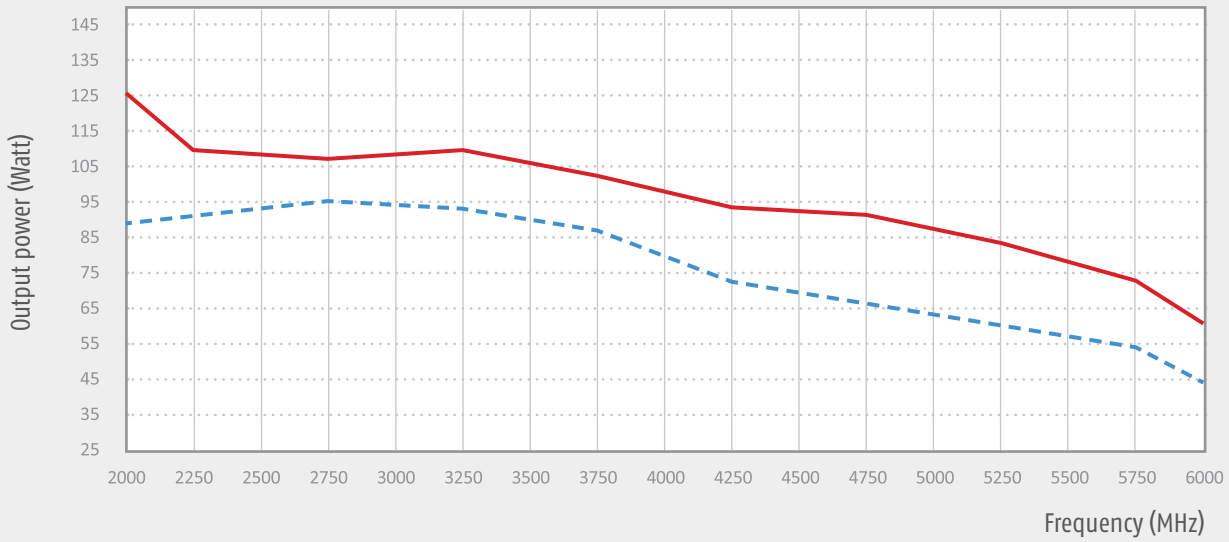


## 2 GHz – 6 GHz

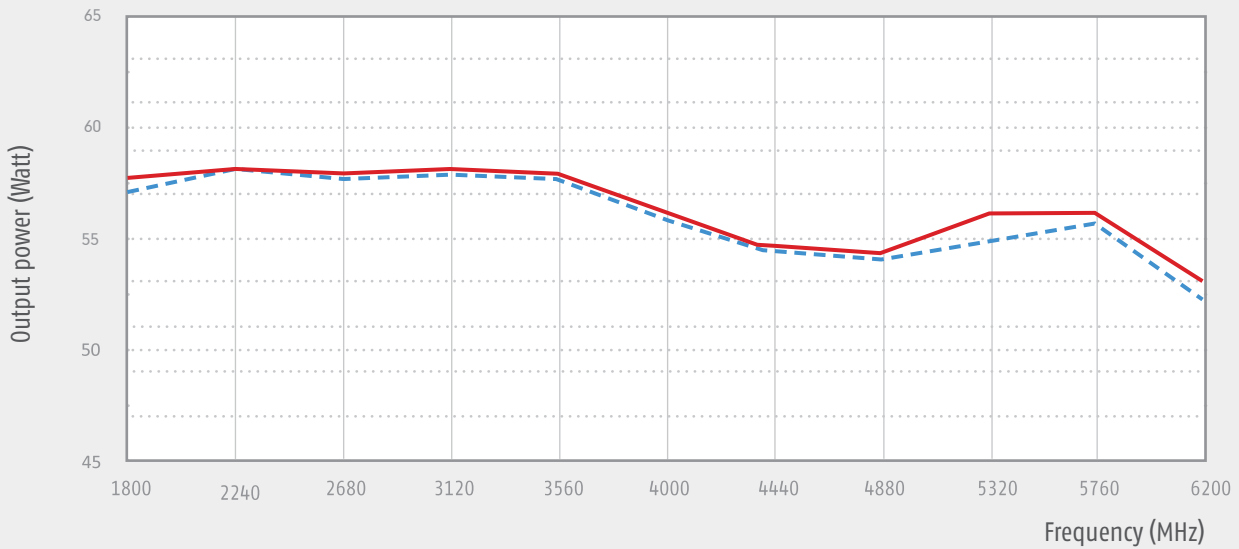
Part Number		FLG-50F	FLG-100F
Frequency range		2GHz-6GHz	2GHz-6GHz
Output Power typ.		50 W	100 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		0 dBm	+3 dBm
Gain, typ.		+50 dB	+53 dB
Flatness, typ.		±3 dB	±3 dB
IP3, typ.		+54 dBm	+54 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc	-20 dBc
Spurious Signals @ 1 dB comp., typ.		<-60 dBc	<-60 dBc
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	134	223
	D	508	610
Weight		21 kg	42 kg
AC Power Input (W)		800	2000
Power Supply (VAC)		100-240	100-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E

## FLG-50F, FLG-100F

### FLG-50F



### FLG-100F



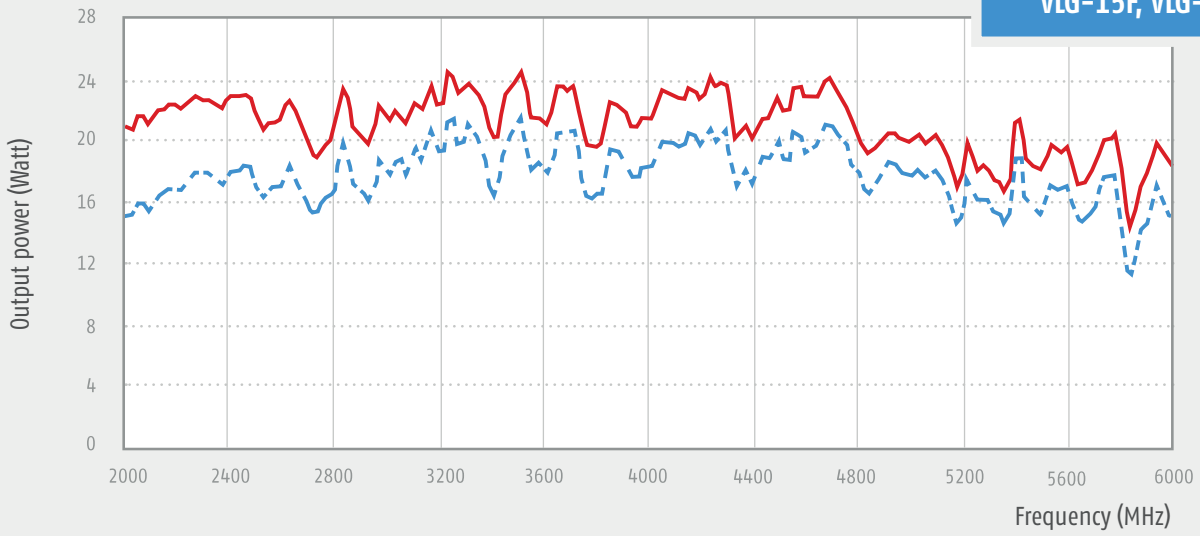
- Output Power (Compression max. = 3dB)
- ▤ Output Power (Compression max. = 1dB)

## 2 GHz – 6 GHz

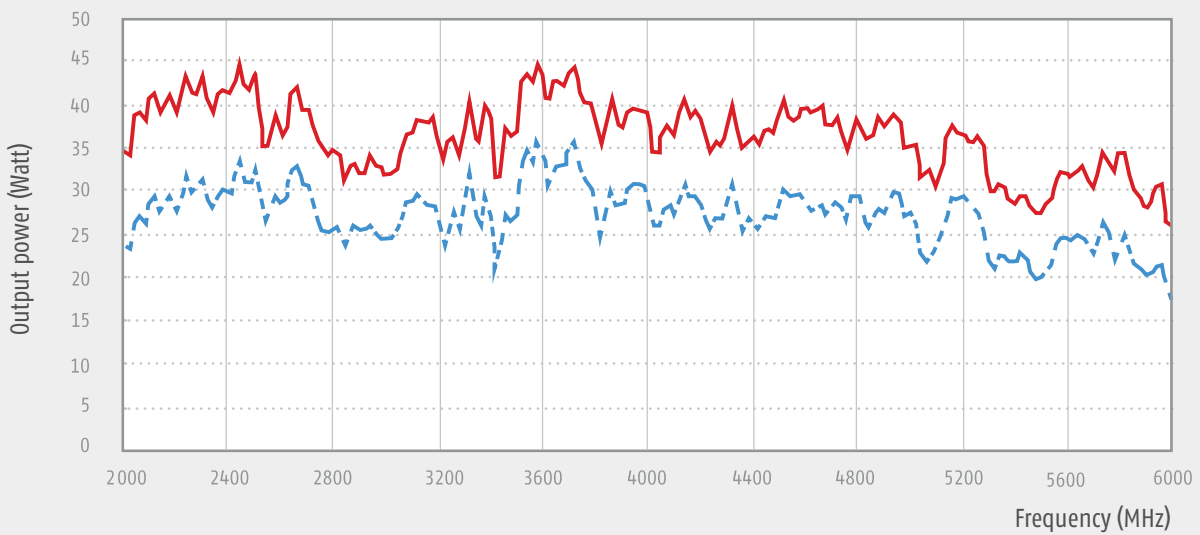
Part Number		VLG-15F	VLG-30F	VLG-55F
Frequency range		2GHz-6GHz	2GHz-6GHz	2GHz-6GHz
Output Power typ.		15 W	30 W	55 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm	+10 dBm
Gain, typ.		+46 dB	+49 dB	+52 dB
Flatness, typ.		±5 dB	±5 dB	±5 dB
Input VSWR		2:1	2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	450	450
	H	89 (2 HU)	178 (4 HU)	178 (4 HU)
	D	640	640	640
Weight		11 kg	20 kg	25 kg
Rated current		2A @ 110VAC 0.9A @ 230VAC	3.2A @ 110VAC 1.6A @ 230VAC	5.4A @ 110VAC 2.6A @ 230VAC
Power Supply (VAC)		90-250, 47-63 Hz	90-250, 47-63 Hz	90-250, 47-63 Hz
Phases		1	1	1
Operating Temperature (°C)		0 / +35	0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 20 l / sec. max.	Self contained fans 60 l / sec. max.	Self contained fans 60 l / sec. max.
Following types available:		S, SC, D, DC	S, SC, D, DC	S, SC, D, DC

**VLG-15F**

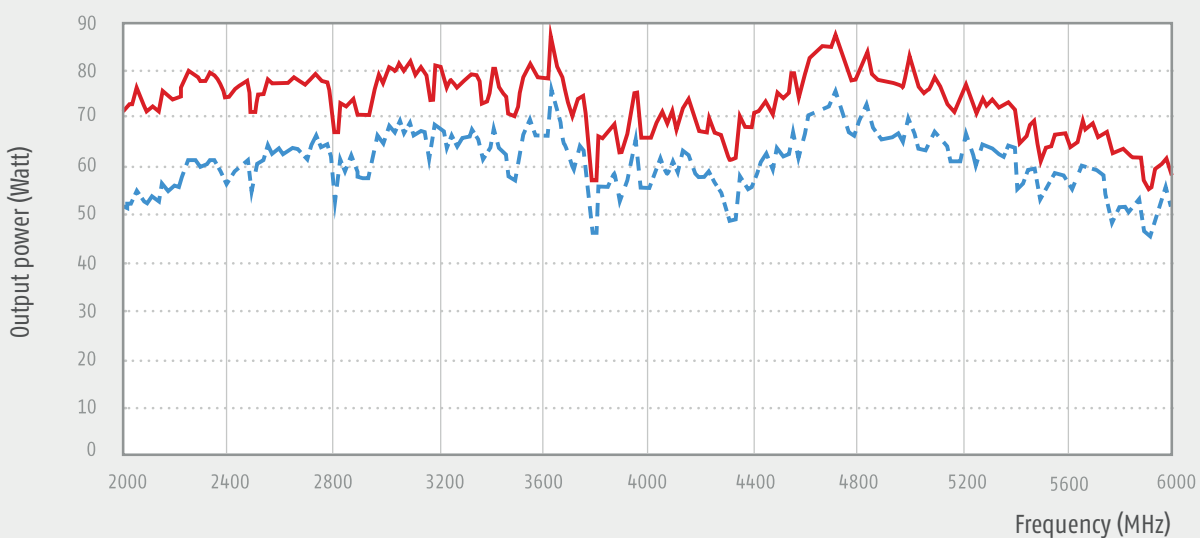
VLG-15F, VLG-30F, VLG-55F



**VLG-30F**



**VLG-55F**



Output Power (compression max. = 1dB)

Output Power (compression max. = 3dB)

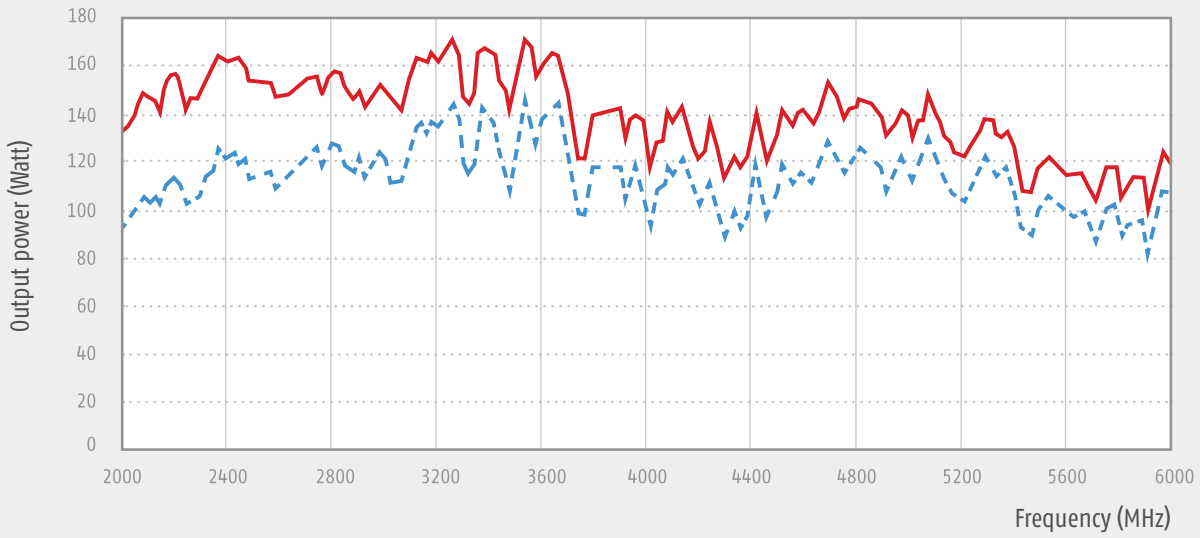


## 2 GHz – 6 GHz

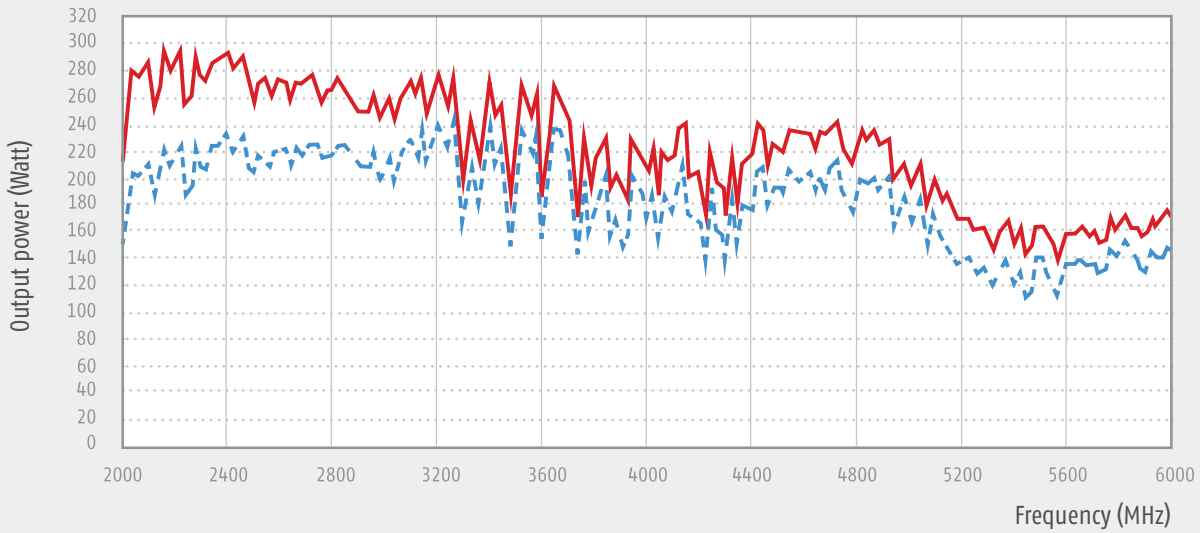
Part Number		VLG-100F	VLG-180F
Frequency range		2GHz-6GHz	2GHz-6GHz
Output Power typ.		100 W	180 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+54 dB	+59 dB
Flatness, typ.		±5 dB	±5 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	600 (18U)
	H	312 (7 HU)	1050 (18 HU)
	D	640	840
Weight		37 kg	230 kg
Rated current		4.6A @ 230VAC	10A @ 230VAC
Power Supply (VAC)		200-250, 47-63 Hz	47-63Hz
Phases		1	1
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 120l / sec. max.	Self contained fans 240l / sec. max.
Following types available:		D, DC	D, DC

VLG-100F, VLG-180F

VLG-100F



VLG-180F



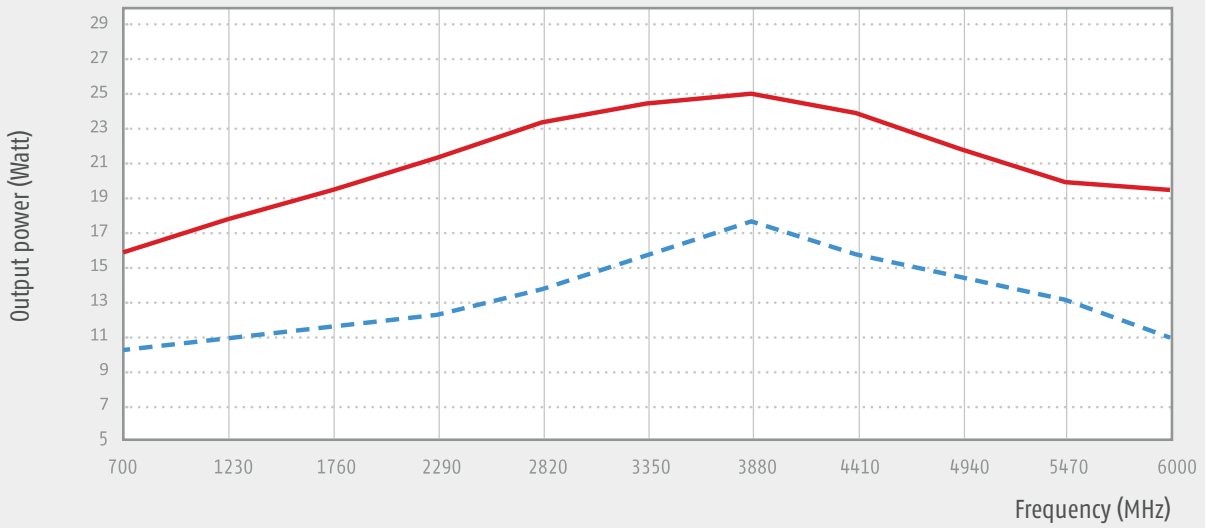
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

# 0.7 GHz – 6 GHz

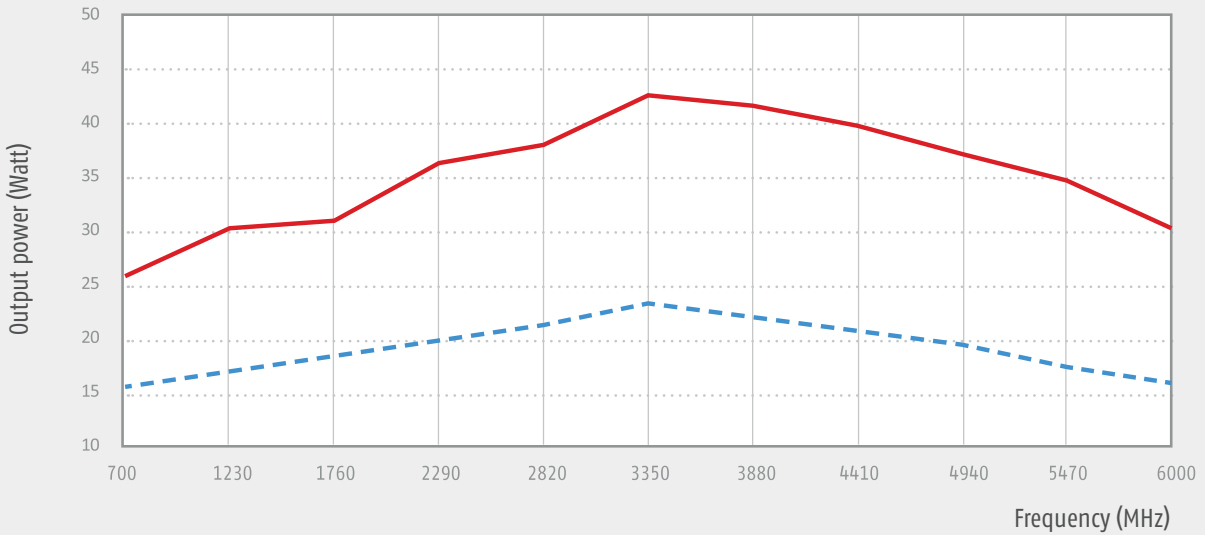
Part Number		FLG-15G	FLG-25G
Frequency range		0.7GHz-6GHz	0.7GHz-6GHz
Output Power typ.		15 W	25 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		0 dBm	0 dBm
Gain, typ.		+42 dB	+44 dB
Flatness, typ.		±5 dB	±5 dB
IP3, typ.		+45 dBm	+47 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 10W	-20 dBc @ 15W
Spurious Signals @ 1 dB comp., typ.		<-60 dBc @ 10W	<-60 dBc @ 15W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	134	134
	D	534	534
Weight		21 kg	22 kg
AC Power Input (W)		350	600
Power Supply (VAC)		110-240	100-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E

## FLG-15G, FLG-25G

### FLG-15G



### FLG-25G



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

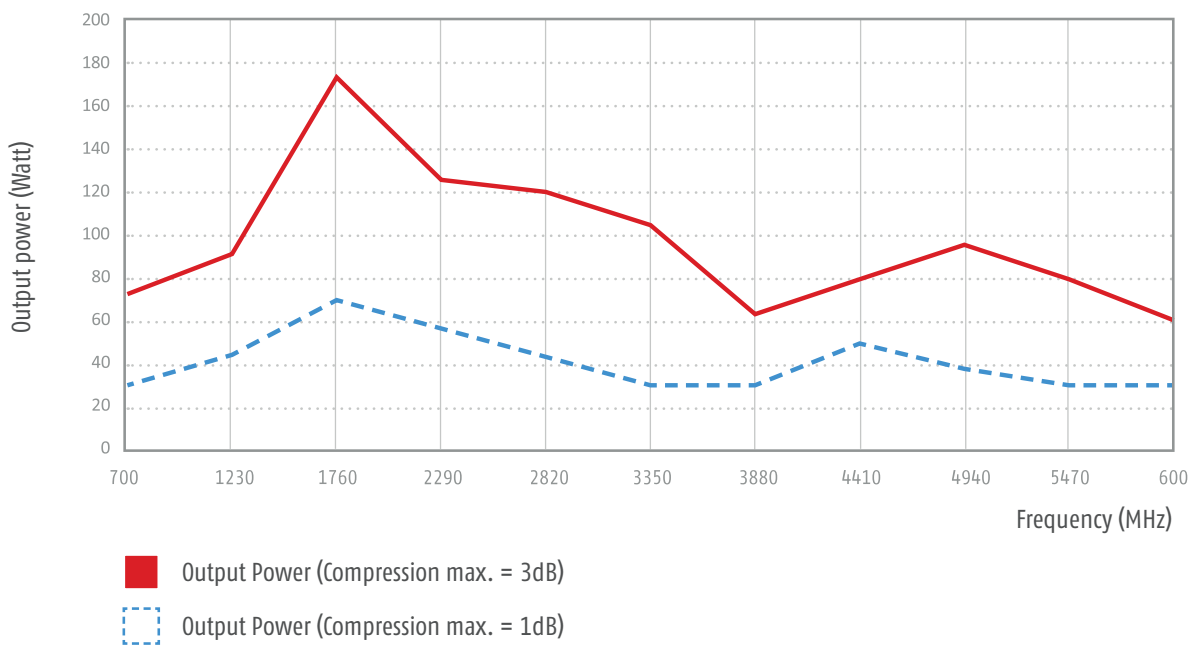


# 0.7 GHz – 6 GHz

Part Number		FLG-50G
Frequency range		0.7GHz-6GHz
Output Power typ.		50 W
Output Power @ 1dB Compression, typ. min.		see Diagramm
RF Input, max.		0 dBm
Gain, typ.		+48 dB
Flatness, typ.		±5 dB
IP3, typ.		+52 dBm
Input VSWR, max.		2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ 30W
Spurious Signals @ 1 dB comp., typ.		<-60 @ 30W
Input / Output Impedance		50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)
Dimensions (mm)	W	483 (19")
	H	134
	D	534
Weight		25 kg
AC Power Input (W)		650
Power Supply (VAC)		110-240
Phases		1
Operating Temperature (°C)		0/+50
Operating Humidity Non-Condensing (%)		95
Cooling		Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage
Following types available:		S, E

FLG-50G

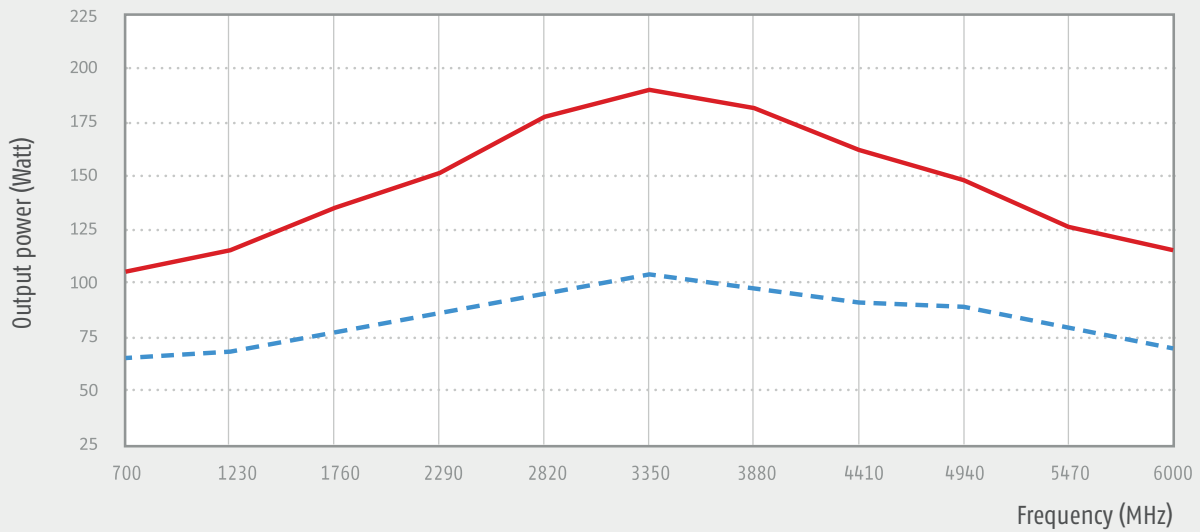
FLG-50G



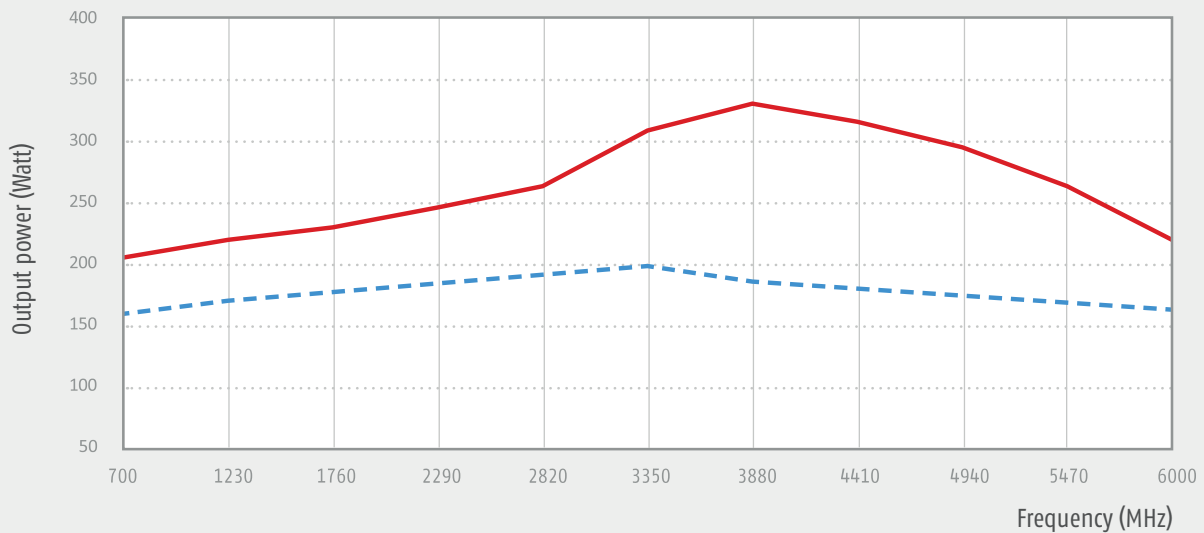
# 0.7 GHz – 6 GHz

Part Number		FLG-100G	FLG-200G
Frequency range		0.7GHz-6GHz	0.7GHz-6GHz
Output Power typ.		100 W	200 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+3 dBm	+10 dB
Gain, typ.		+53 dB	+55 dB
Flatness, typ.		±4 dB	±3.5 dB
IP3, typ.		+54 dBm	+60 dBm
Input VSWR, max.		2:1	2:1
Harmonics @ 1 dB comp., typ.		-20 dBc @ P1dB	-20 dBc @ 150W
Spurious Signals @ 1 dB comp., typ.		<-60 @ P1dB	<-60 dBc @ 150W
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	483 (19")	483 (19")
	H	223	661
	D	610	134
Weight		44 kg	84 kg
AC Power Input (W)		3000	3000
Power Supply (VAC)		100-240	100-240
Phases		1	1
Operating Temperature (°C)		0/+50	0/+50
Operating Humidity Non-Condensing (%)		95	95
Cooling		Internal forced air	Internal forced air
Circuit Protection		Thermal Overload Over Current Over Voltage	Thermal Overload Over Current Over Voltage
Following types available:		S, E	S, E

FLG-100G



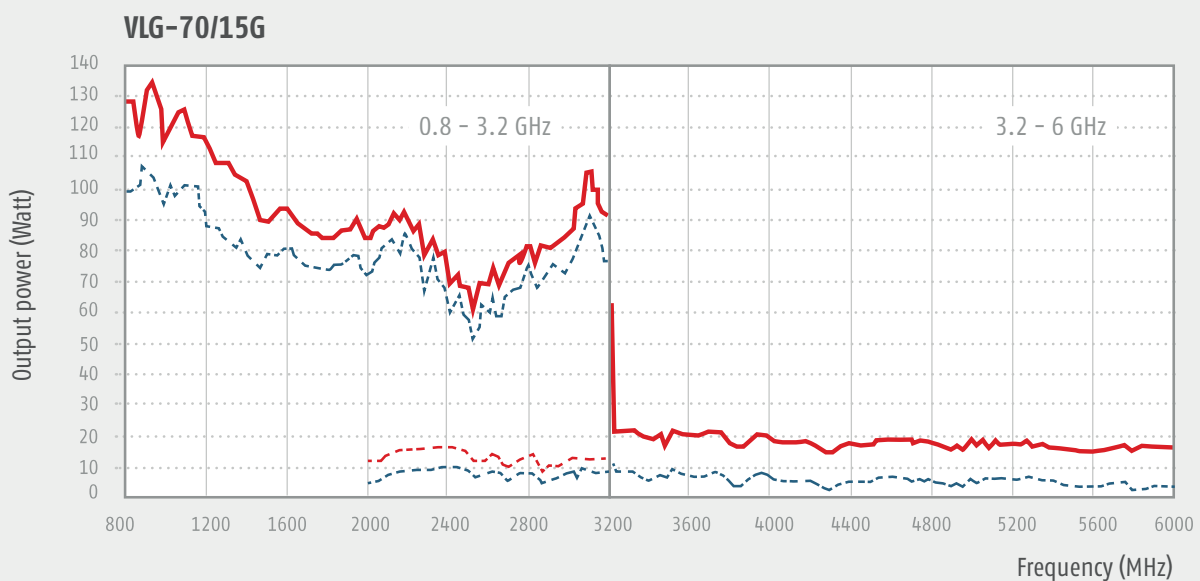
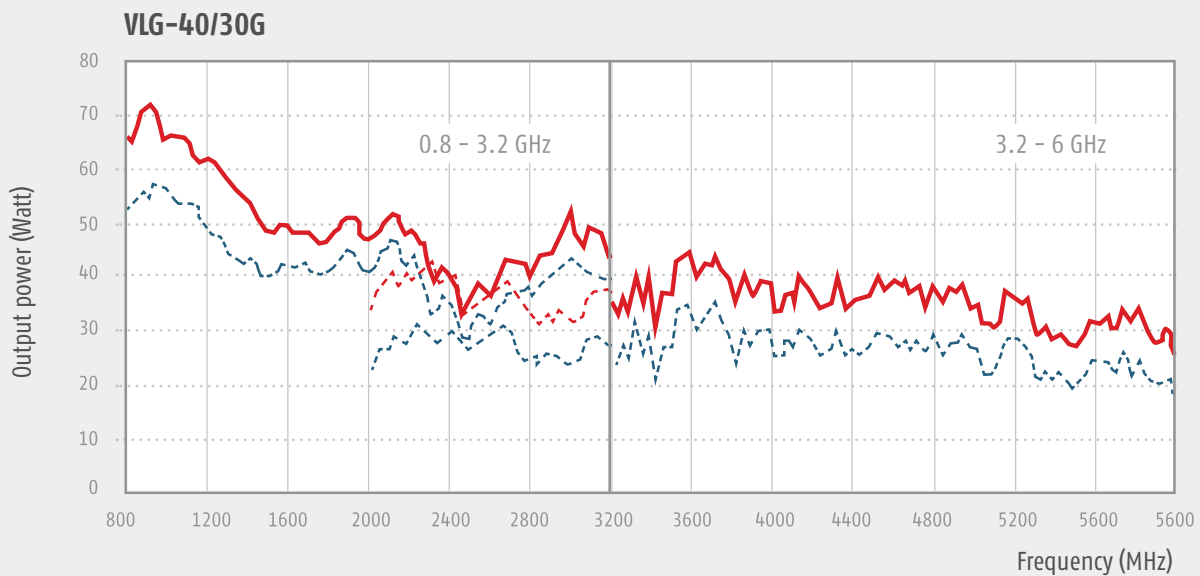
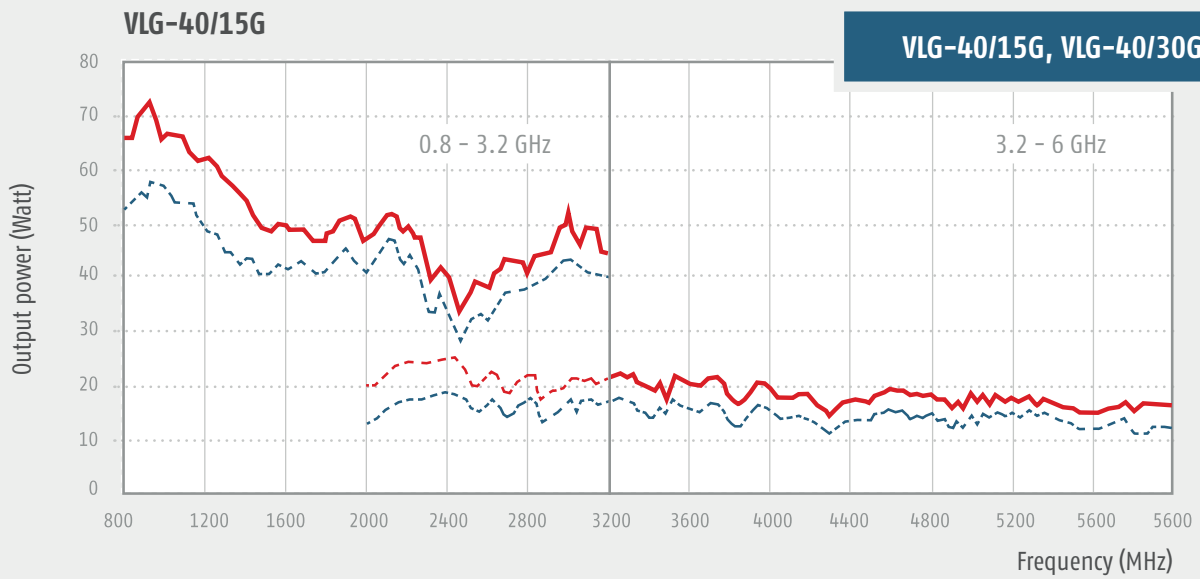
FLG-200G



- Output Power (Compression max. = 3dB)
- ▨ Output Power (Compression max. = 1dB)

## 0.8 GHz – 6 GHz

Part Number		VLG-40/15G	VLG-40/30G	VLG-70/15G
Frequency range		0.8GHz-6GHz	0.8GHz-6GHz	0.8GHz-6GHz
Output Power typ.		40W / 15W	40W / 30W	70 W / 15 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm	+10 dBm
Gain, typ.		+47 dB	+47 dB	+50 dB
Flatness, typ.		±5 dB	±5 dB	±5 dB
Input VSWR		2:1	2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc	H2, H3 <-20 dB
Class type		A	A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	450	450
	H	178 (4 HU)	312 (7 HU)	312 (7 HU)
	D	640	640	640
Weight		25 kg	37 kg	37 kg
Rated current		3.3A @ 110VAC 1.6A @ 230VAC	1.7A @ 230VAC	2.8A @ 230VAC
Power Supply (VAC)		90-250, 47-63 Hz	200-250, 47-63 Hz	200-250, 47-63 Hz
Phases		1	1	1
Operating Temperature (°C)		0 / +35	0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 60 l / sec. max.	Self contained fans 120 l / sec. max.	Self contained fans 120 l / sec. max.
Following types available:		D, DC	D, DC	D, DC



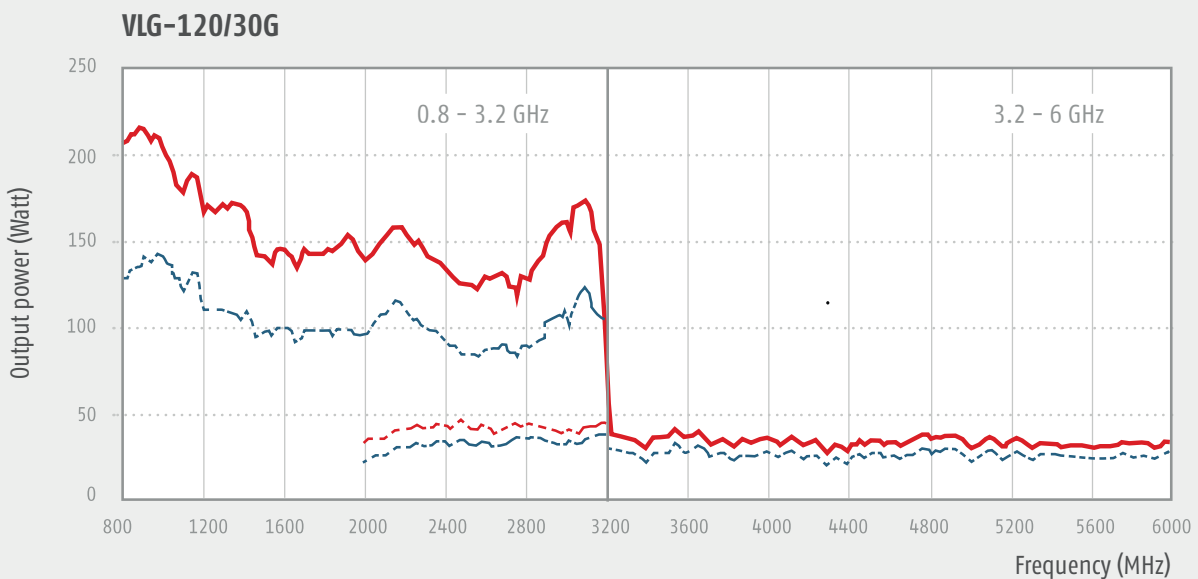
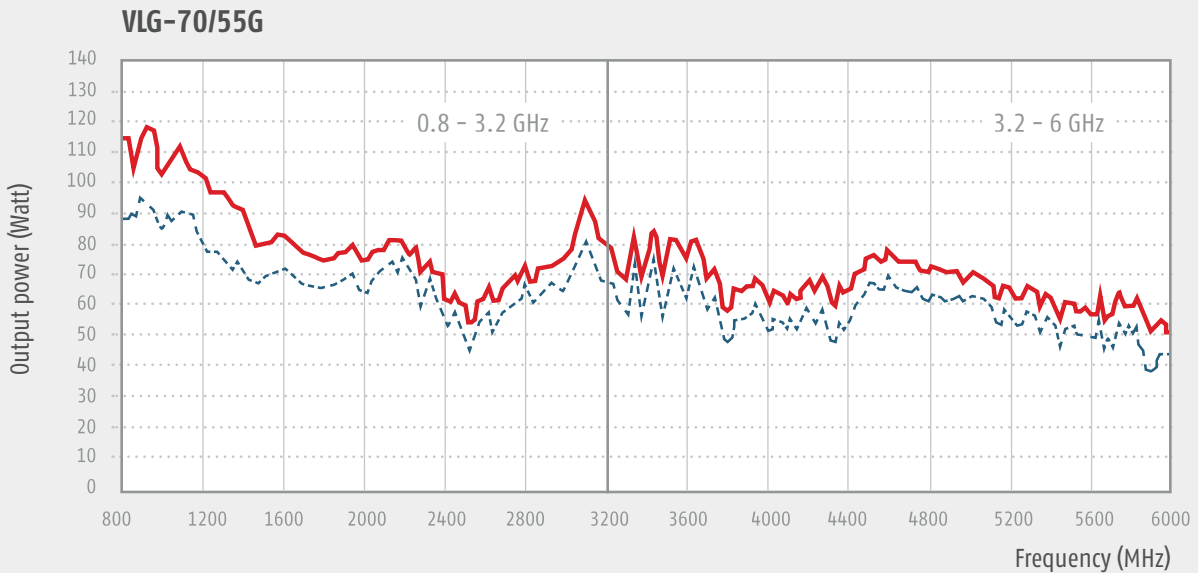
Output Power (compression max. = 1dB)

Output Power (compression max. = 3dB)

## 0.8 GHz – 6 GHz

Part Number		VLG-70/30G	VLG-70/55G	VLG-120/30G
Frequency range		0.8GHz-6GHz	0.8GHz-6GHz	0.8GHz-6GHz
Output Power typ.		70 W / 30 W	70 W / 55 W	120 W / 30 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm	+10 dBm
Gain, typ.		+50 dB	+50 dB	+50 dB
Flatness, typ.		±5 dB	±5 dB	±5 dB
Input VSWR		2:1	2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	450	450	600
	H	312 (7 HU)	360 (8 HU)	1050 (18 HU)
	D	640	640	840
Weight		40 kg	45 kg	145 kg
Rated current		2.8A @ 230VAC	3.3A @ 230VAC	6.4A @ 230VAC
Power Supply (VAC)		200-250, 47-63 Hz	200-250, 47-63 Hz	200-250, 47-63 Hz
Phases		1	1	1
Operating Temperature (°C)		0 / +35	0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 120 l / sec. max.	Self contained fans 120 l / sec. max.	Self contained fans 240 l / sec. max.
Following types available:		D, DC	D, DC	D, DC

**VLG-70/30G, VLG-70/55G, VLG-120/30G**



Output Power (compression max. = 1dB)

Output Power (compression max. = 3dB)

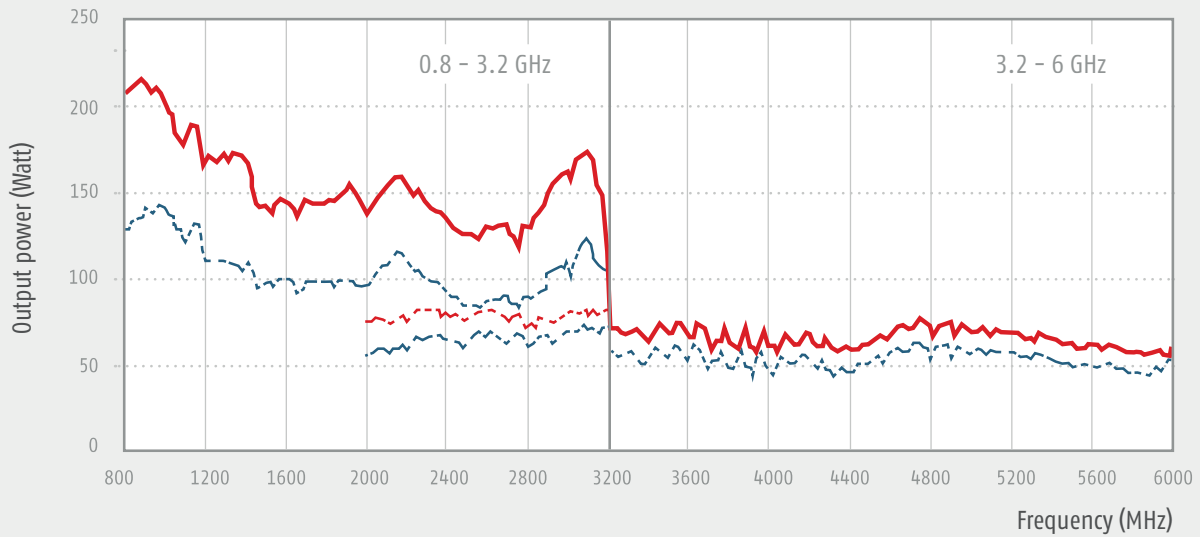


## 0.8 GHz – 6 GHz

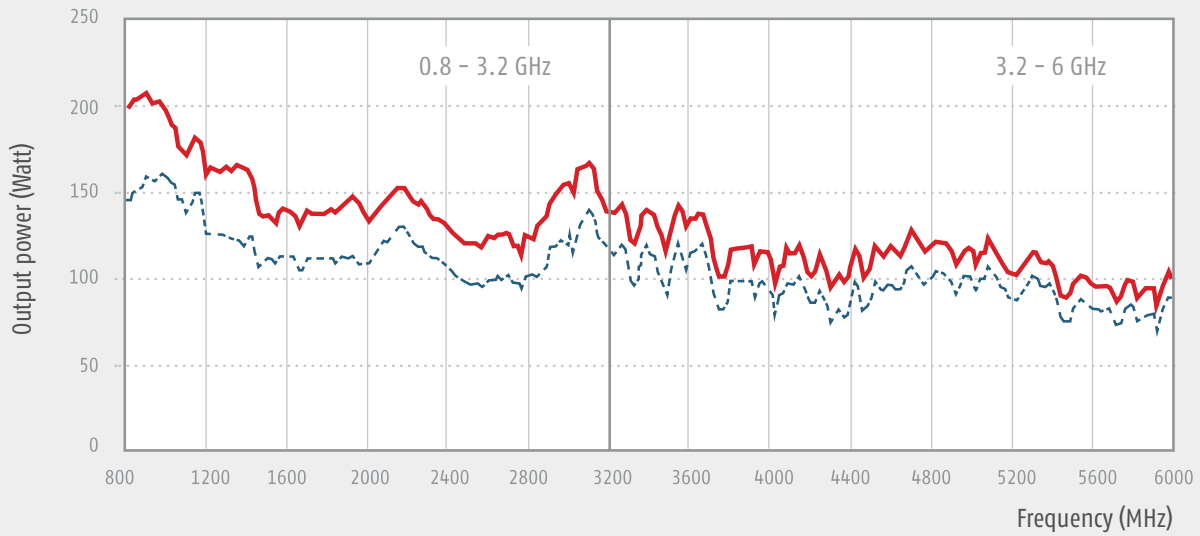
Part Number		VLG-120/55G	VLG-120/100G
Frequency range		0.8GHz-6GHz	0.8GHz-6GHz
Output Power typ.		120 W / 55 W	120 W / 100 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+50 dB	+50 dB
Flatness, typ.		±5 dB	±5 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	600	600
	H	1050 (18 HU)	1050 (18 HU)
	D	840	840
Weight		145 kg	145 kg
Rated current		8A @ 230VAC	10A @ 230VAC
Power Supply (VAC)		200-250, 47-63 Hz	200-250, 47-63 Hz
Phases		1	1
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 240l / sec. max.	Self contained fans 240l / sec. max.
Following types available:		D, DC	D, DC

## VLG-120/55G, VLG-120/100G

### VLG-120/55G



### VLG-120/100G



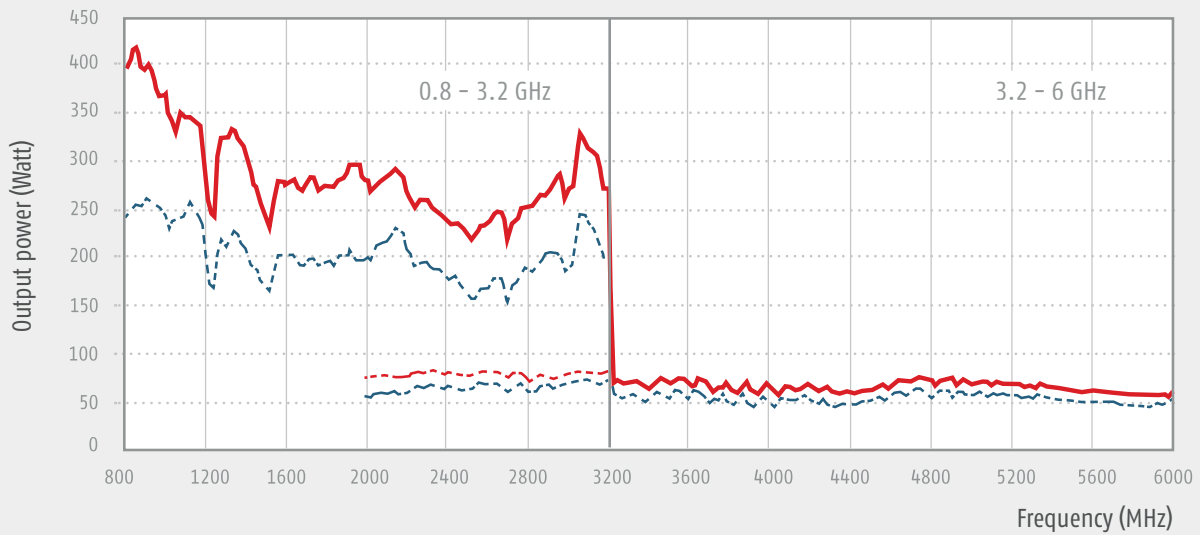
- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)

## 0.8 GHz – 6 GHz

Part Number		VLG-220/55G	VLG-220/100G
Frequency range		0.8GHz-6GHz	0.8GHz-6GHz
Output Power typ.		220 W / 55 W	220 W / 100 W
Output Power @ 1dB Compression, typ. min.		see Diagramm	see Diagramm
RF Input, max.		+10 dBm	+10 dBm
Gain, typ.		+50 dB	+53 dB
Flatness, typ.		±5 dB	±5 dB
Input VSWR		2:1	2:1
Harmonics @ 1 dB comp.		H2, H3 <-20 dBc	H2, H3 <-20 dBc
Class type		A	A
Input / Output Impedance		50 Ω / 50 Ω	50 Ω / 50 Ω
Connectors In / Out		N(f)N(f)	N(f)N(f)
Dimensions (mm)	W	600	600
	H	1050 (18 HU)	1050 (18 HU)
	D	840	840
Weight		145 kg	165 kg
Rated current		13.7A @ 230VAC	14A @230V VAC
Power Supply (VAC)		200-250, 47-63 Hz	200-250, 47-63 Hz
Phases		1	1
Operating Temperature (°C)		0 / +35	0 / +35
Room temperature storage (°C)		-20 / +70	-20 / +70
Cooling / Forced air		Self contained fans 240l / sec. max.	Self contained fans 240l / sec. max.
Following types available:		D, DC	D, DC

**VLG-220/55G, VLG-220/100G**

**VLG-220/55G**



**VLG-220/100G**



- Output Power (Compression max. = 3dB)
- Output Power (Compression max. = 1dB)



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