Specification of NF's 3620 Series

Model		3624	3625	3627	3628
No. of channel		2 (CH-A and CH-B)			
Function		THRU (via only input and output amplifiers), LP-MF (max. flat <Butterworth>), LP-PL (phase linear <Bessel>), HPF, BPF and BEF			
Mode		SEPARATE (independent operating CH-A and CH-B), CASCADE (cascaded CH-A and CH-B)			
Filter charact.	LP-MF/HPF	4-pole max. flat (24 dB ± 2 dB/oct)	8-pole max. flat (48 dB ± 4 dB/oct)	4-pole max. flat (24 dB ± 2 dB/oct)	8-pole max. flat (48 dB ± 4 dB/oct)
	LP-PL	4-pole, phase linear	8-pole, phase linear	4-pole, phase linear	8-pole, phase linear
	BPF	A pair of 2nd order, Q=5, type II *1	A pair of 3rd order, Q=4.32, type III *1	A pair of 2nd order, Q=5, type II *1	A pair of 3rd order, Q=4.32, type III *1
	BEF	A pair of 1st-order, Q=4.3			
Passband gain		×1, ×2, ×5 selectable respectively on input and output amplifiers			
Frequency response in THRU mode		DC to 1 MHz (+0.5, -3 dB) typ. *2		DC to 2 MHz (+0.5, -3 dB) typ. *2	
Input type		Single-ended or floating, selectable			
Input impedance		1 MΩ ± 2%			
CMRR		60 dB typ. (DC to 1 kHz, input/output gain: ×5, input: floating)			
Output impedance		50 Ω ± 2% (1 kHz), single-ended			
Max. output voltage		±10 V/no load, ±5 V/50 Ω load *3		±10 V/no load, ±5 V/50 Ω load *4	
Max. output current		±100 mA			
Total harmonic distortion factor (fin: passband)		0.02% typ. (fin: up to 5 kHz), 0.05% max. (fin: up to 20 kHz) 0.1% max. (fin: up to 50 kHz), 0.2% max. (fin: up to 100 kHz)		0.2% max. (fin: up to 100 kHz)	
Noise (Gout = output gain)		100 μVrms × Gout max. (BW=100 kHz) 800 μVrms × Gout typ. (HPF, BEF, BW: 10 MHz) 200 μVrms × Gout typ. (For only 10 kHz and 100 kHz range of BPF of the 3625, BW = 100 kHz)		300 μVrms × Gout max. (LPF, BW=2 MHz) 500 μVrms × Gout max. (HPF, BPF, BEF, BW=2 MHz)	500 μVrms × Gout max. (LPF, BW=2 MHz) 600 μVrms × Gout max. (BEF, BW=2 MHz) 900 μVrms × Gout max. (HPF, BPF, BW=2 MHz)
Phase difference between channels *5		1° typ. (10 Hz to 10 kHz, in LP-MF, LP-PL and HPF) 3° typ. (100 kHz in BPF) 2° typ. (for other conditions)	2° typ. (10 Hz to 10 kHz, in LP-MF, LP-PL and HPF) 6° typ. (100 kHz in BPF) 4° typ. (for other conditions)	2° typ. (10 Hz to 10 kHz, in LP-MF, LP-PL and HPF) 4° typ. (100 kHz in BPF) 3° typ. (for other conditions)	4° typ. (10 Hz to 10 kHz, in LP-MF, LP-PL and HPF) 8° typ. (1 MHz in BPF) 6° typ. (for other conditions)
Cross talk between channels		-80 dB or less (DC to 1 MHz)		-75 dB or less (DC to 100 kHz), -70 dB or less (100 kHz to 2 MHz)	
Max. attenuation		100 dB or greater (up to 100 kHz) 80 dB or greater (up to 1 MHz)		90 dB or greater (up to 100 kHz), 70 dB or greater (up to 2 MHz)	
DC offset voltage		Adjustable to zero via front panel (ZERO)			
Signal ground	SEPARATE	CH-A and CH-B independently isolated from chassis			
	CASCADE	CH-A and CH-B commonly isolated from chassis			
GPIB		All settings and inquiries of panel setting other than POWER, FLOAT and ZERO			
Memory		The panel settings at power off are memorized.			
Power requirements		AC100, 120, 220 or 240 V ± 10%, selectable (Max. 250 V)			
Dimensions		434 (W) × 132.5 (H) × 400 (D) mm excluding protrusions A Mountable into a JIS/EIA standard rack cabinet with an exclusive rack mounting kit			
Weight		Approx. 10.0 kg	Approx. 10.5 kg	Approx. 10.0 kg	Approx. 10.5 kg

*1: This 1/3 oct BPF conforms to type II or III of JIS C-1513.
*2: Input and output gains: ×1, input voltage: 1 Vrms
*3: DC to 300 kHz, the above specification × 0.4 for 1 MHz
*4: DC to 1 MHz, the above specificaiton × 0.4 for 2 MHz
*5: LP: DC to 2 fc (fc≦500 kHz for 3627/3628), HPF: 1/2 fc to 300 kHz (1 MHz for 3627/3628)
BPF: f_0 (f_0≦500 kHz for 3627/3628)

Cutoff frequency (fc) and center frequency (f_0)

Model		3624	3625	3627	3628
Frequency range	LPF	0.01 Hz to 159.9 kHz		1 Hz to 1.59 MHz	
	HPF/BEF			1 Hz to 500 kHz	
	BPF			1 Hz to 1.00 MHz	
Frequency range selection		Auto ranging or fixed			
Display		3-1/2 digits		2-1/2 digits	
Setting		CH-A and CH-B independent (SEPARATE) or simultaneous (COUPLED)			

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●REPRESENTATIVE

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3624/3625/3627/3628
DUAL CHANNEL PROGRAMMABLE FILTER

NF Corporation

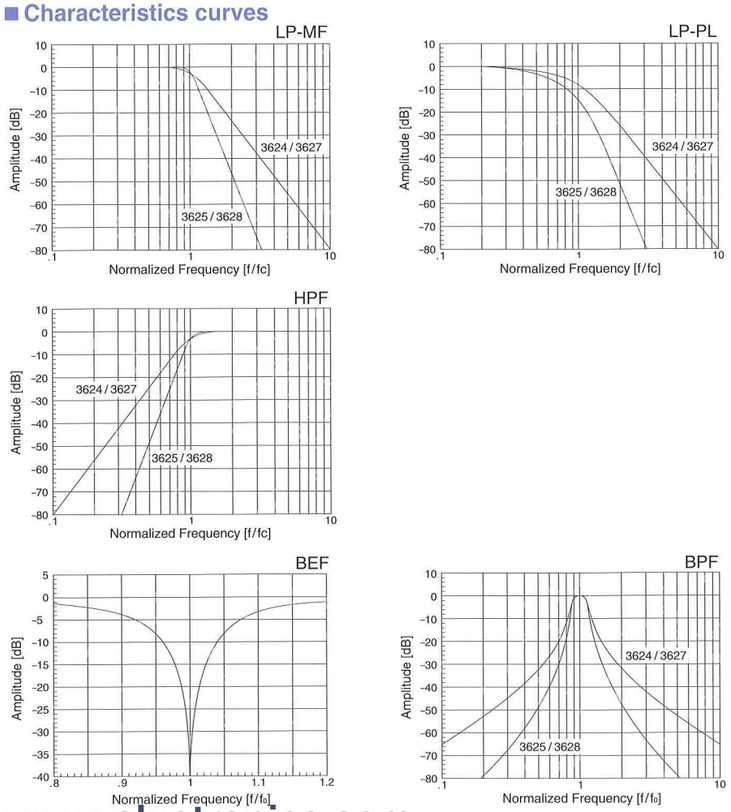
Rack mount and desk-top
The ultimate in CR active filters

3264/3625/3627/3628

■ Selection guide

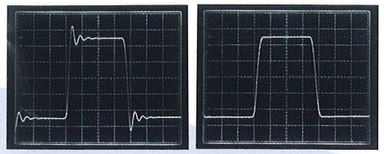
	3624	3625	3627	3628
Cutoff frequency range	0.01 Hz to 159.9 kHz		1 Hz to 1.59 MHz	
Number of channels	2	2	2	2
Attenuation slope	24 dB/oct	48 dB/oct	24 dB/oct	48 dB/oct
Filter characteristics (LP-MF, LP-PL, HPF, BPF, BEF	○	○	○	○
GPIB	○	○	○	○

■ Characteristics curves



Usable as a lowpass/highpass/bandpass/band elimination filter for each channel.

A lowpass filter can select the max flat characteristic (LP-MF, Butterworth) and the phase linear characteristic (LP-PL, Bessel) attaching importance to amplitude characteristics and excess response respectively.



Max. flat (LP-MF) **Phase linear (LP-PL)**

Response to a 1 kHz square wave input to the 3625 (fc = 15 kHz)

Front/rear selectable for signal input.
The output is always available on the front and rear. Used at the desk-top, it is available for all signal connections at the front panel, and for rack mount all wiring can be done at the rear.

Built-in amplifier on input and output can prevent saturation of the filter by amplifying output signals, superposed on the noise.
Weak signals can be amplified at input so that the influence of internal noise may be reduced as much as possible.
Simultaneous use of these amplifiers is also possible.

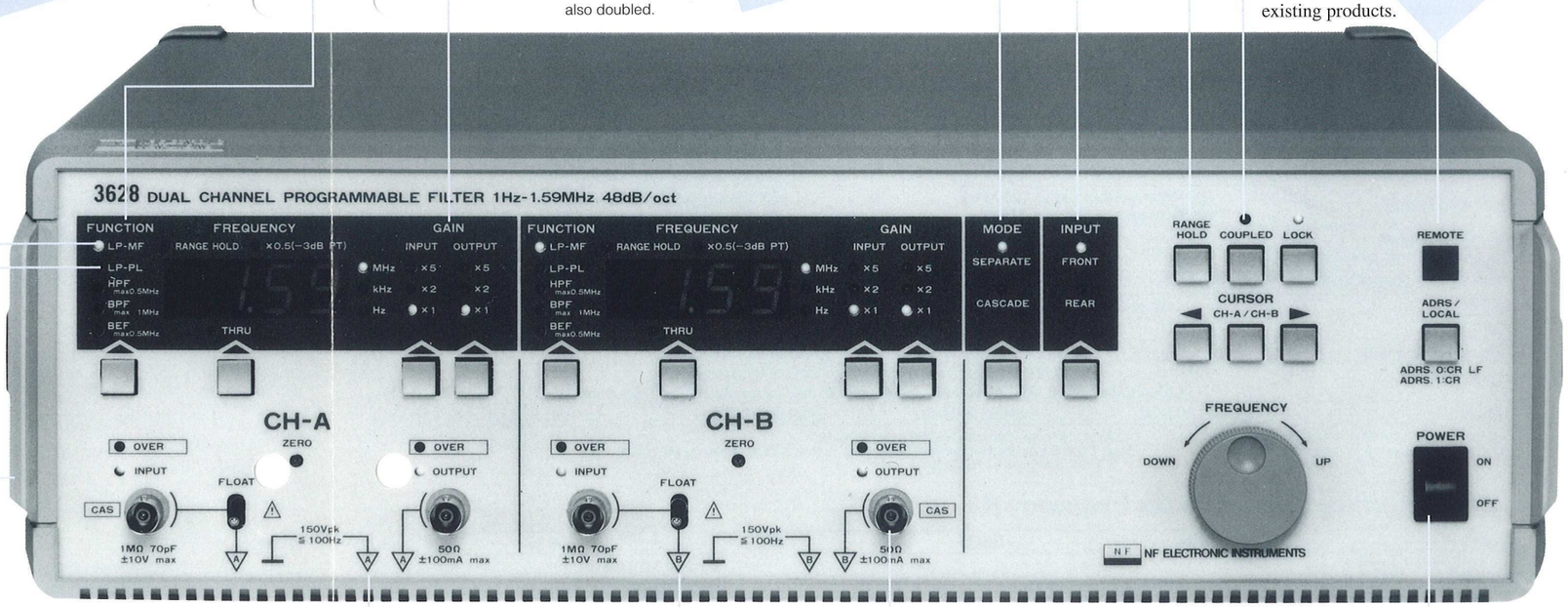
Usable as a filter in 2-CH cascaded connection.
The same setting on both channels can get attenuation to double* by making a wide range bandpass filter with lowpass and highpass filters.

* Attenuation quantity in the cut-off frequency is also doubled.

The set frequency is ranged automatically so that a maximum resolution may always be obtained.
The frequency can also be shifted up and down with the range held, without changing the resolution.

Continuous frequency setting is possible for CH-A and CH-B. Simultaneous alteration of frequency is possible with 2-CH measurement.
The frequency can be shifted as the range remains constant for a wide range bandpass in cascaded connection.

The GPIB command set is compatible to NF's conventional instruments.
This enables replacement of these series without wasting controlling software for existing products.



Signal ground is isolated from the chassis independently for each channel. Can prevent grounding problem, which may occur at the system startup in rack mount*.

* isolated from the chassis which is common to 2-CH when cascaded connection.

Low distortion of 0.02%*1 and low noise characteristic of 100 μVrms*2 realizing essentially clear output from the filter.

*1 Typical value for 5 kHz or lower input frequency for 3624/3625

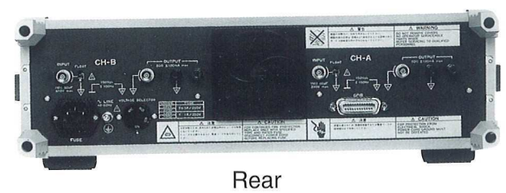
*2 3624/3625 (BW=100 kHz)

Automatic memory setting at power off can be set to startup with the last setting at power-off.

Adopted body-size (EIA3U) which is the JIS/EIA standard. Exactly fitting rack mount is available*.

* Exclusive rack mount adapter (optional). Also, prepare a rail or angle on the rack.

Input circuit makes single-ended or floating (differential) to meet the connected instrument.



Rear