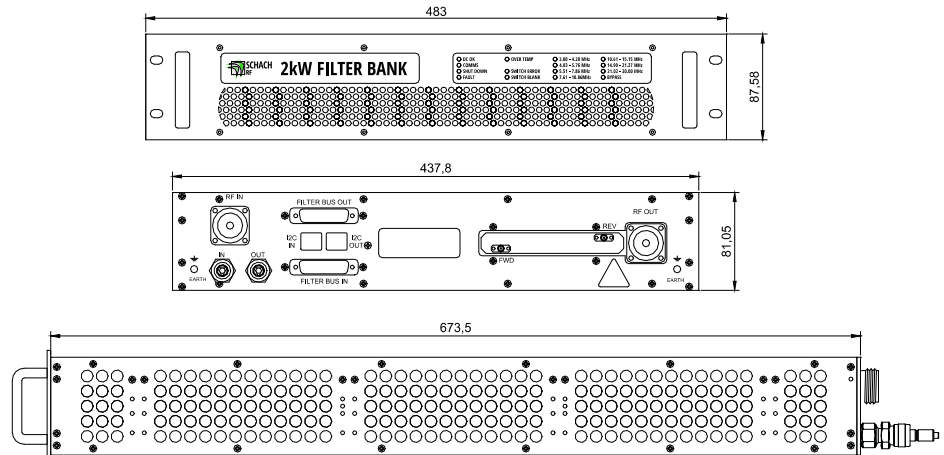


## 2kW 7 Band HF Harmonic Filter Bank



### HIGHLIGHTS

- ◆ Rated to 2kW into 50 ohms 3MHz to 30MHz.
- ◆ Rated to 1.6kW into a 2:1 mismatch.
- ◆ 7 Filter bands with 250kHz overlap.
- ◆ Extensive protection and monitoring.
- ◆ Built-in dual directional output coupler.
- ◆ Designed to work with the SRF2K2HFPA for harmonics typically less than -75dBc.
- ◆ Designed to preserve the SRF2K2HFPA very low noise and hum specification.

ITEM	SPECIFICATION	NOTES
Model	SRF2KFBNK-B	
Filter Bands	7 Filters + 1 Bypass Standard Configuration: 3.00 - 4.28 MHz 4.03 - 5.76 MHz 5.51 - 7.86 MHz 7.61 - 10.86 MHz 10.61 - 15.15 MHz 14.90 - 21.27 MHz 21.02 - 30.00 MHz	Band Overlap = 250kHz
Filter Topology	7th Order Elliptic Low Pass With 5th order harmonic termination.	Harmonic termination: 800W flange resistor typically dissipating <20W.
Pass Band Insertion Loss	<0.4dB, typically 0.18dB.	
Stop Band Insertion Loss	2nd Harmonic > 55dB 3rd Harmonic > 60dB	Filter Bank Is designed to give <-70dBc (-75dBc typical) harmonics when used with SRF2K2HFPA.
Pass Band VSWR	<1.25:1, typically <1.1:1 Bypass Mode <1.4:1	
Switching Operations	Main relays rated to 10 <sup>9</sup> switching operations.	Depends on blanked RF while switching.
Output Shorting Relay.	Tungsten contact output shorting relay.	Output shorting relay used to stop any reverse coupled antenna power during band switching.

Note: Specifications may change as product evolves. Confirm with factory before order for any critical specifications.



ITEM	SPECIFICATION	NOTES
Band Selection	Via 4-bit TTL parallel bus or via I <sup>2</sup> C command.	Default control via parallel bus.
Band Select Time	<35mS	
Rated Power	2kW CW continuously into 50Ohms 1.6W CW continuously into VSWR 2:1	3MHz to 30MHz
Harmonic Power Handling	100W CW continuously 500W for < 100mS	
Protection	Detects: Incorrect band selection Harmonic load over-temperature Harmonic load over-power	The filter bank control bus outputs a SHUTDOWN signal which should be used to disable the RF source.
Front Panel LED Indicators	DC OK, Comms, Shutdwn, Fault, Over Temp, Switch Error, Switch Blank, Selected Band	
Output Coupler	Fwd/Rev coupling: -62dB 2-45MHz Fwd/Rev flatness: ±0.3dB 2-45MHz Directivity: >30dB 2-45MHz	
DC Power	Requires 24-28V DC, <350mA	Via parallel bus.
Parallel Interface	The parallel interface provides basic Filter bank functionality and may be bussed in parallel between units. 1. Band address (4-bit TTL level) 2. Shutdown output (open collector) 3. Fault output (open collector) 4. 24V DC in.	25-pin female D connector. An input and output connector facilitates daisy chaining units. This also allows the use of a Unit OK interlock line to protect against a disconnected bus cable.
Monitor Interface	The I <sup>2</sup> C monitor interface enables extensive monitoring of harmonic termination temperature and voltage as well as latched faults.	This interface also provides an alternative for the setting of the filter band. It is not needed for normal filter bank function.
Air Temperature	The unit is intended for operation below 40°C but can tolerate short periods below 50°C.	
Cooling	Water cooled. Requires at least 0.2 lpm. Maximum allowed flow is 2lpm.	Passive air cooling is possible provided sufficient free air is available around unit.

3/5 Ballantyne Street, MAGILL SA 5072  
Phone: +618 7225 8385 Email: sales@schachrf.com.au

