

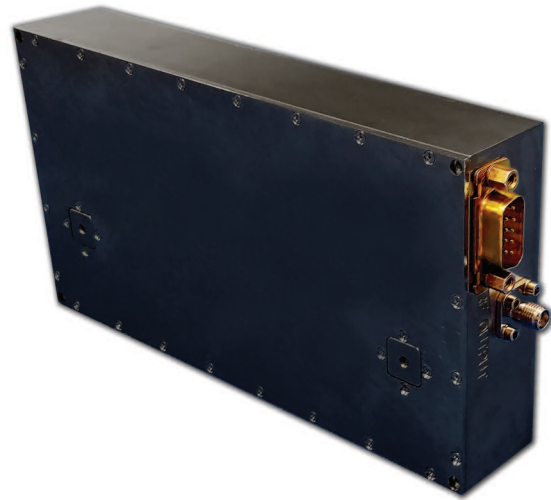
3SFB-225/Q512-O — 50 W High-Power UHF Switched Filter Bank

◆ Features:

- High Power
- Low-Loss
- High Selectivity
- Fast-Switching
- Internal High-Voltage Generator
- Contact Factory for Custom Filter Response or Higher Power Requirements

◆ Applications:

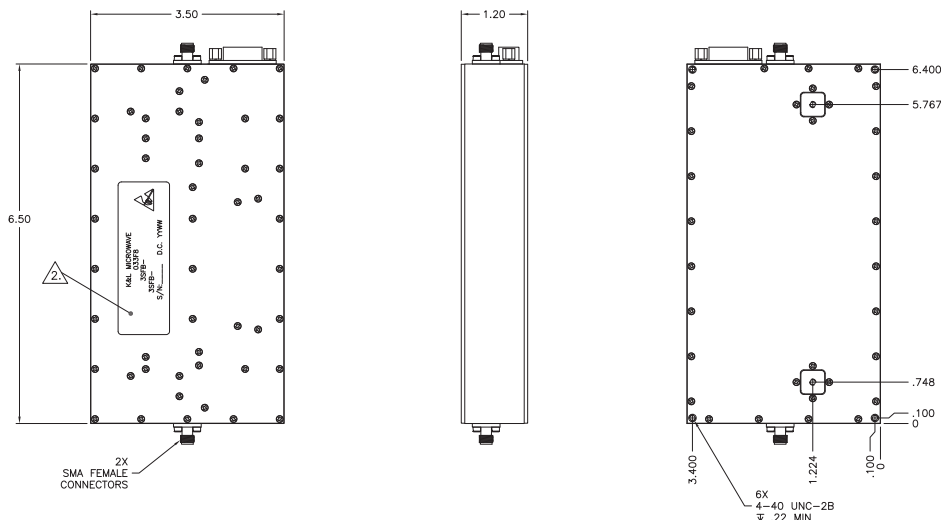
- Harmonic and Spurious Filtering of Power Amplifiers
- Transmitters
- Military
- Radio



◆ Description:

The 3SFB-225/Q512-O is a switched filter bank designed to filter spurious and harmonic signals generated by high-power amplifiers and transmitters by leveraging K&L Microwave's core competencies in low-loss, high power filters and PIN diode based switches. The module has been designed to manage the thermal concerns that arise with high power products and features an on board high-voltage generator powered from the +28 VDC supply all in a small form factor.

◆ Mechanical Specifications:



www.klmicrowave.com
Phone: 410-749-2424 • FAX: 443-260-2268
Email: sales@klmicrowave.com



www.klfilterwizard.com
2250 Northwood Drive
Salisbury, MD 21801

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◆ Specifications:

	Band 1	Band 2	Band 3
Passbands:	225-300 MHz	300-400 MHz	400-512 MHz

Parameter		Minimum	Typical	Maximum
Insertion Loss:	dB	N/A	1.1	1.5
Return Loss:	dB	N/A	-17.7	-12.7
Band 1 Rejection:				
30-140 MHz				
460-1500 MHz				
Band 2 Rejection:				
30-220 MHz	dB	50	61	N/A
600-1500 MHz				
Band 3 Rejection:				
30-300 MHz				
800-1500 MHz				
Switching Speed:	μs	N/A	16	30
+5 VDC Supply Current:RF	mA	N/A	250	350
+28 VDC Supply Current:	mA	N/A	40	100
RF Power (In Band):	dBm	+47.0		
Worst-Case Load VSWR:	N/A	5.0:1		
Hot-Switched:	N/A	No		

Note: Baseplate temperature must be maintained at +70°C maximum.

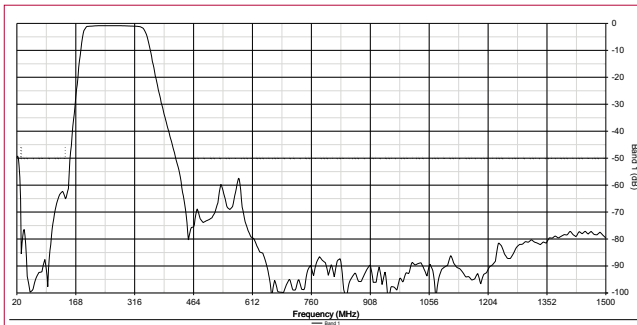
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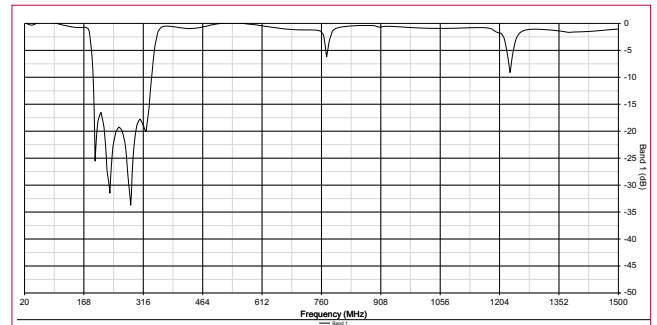
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3SFB-255/Q512-O — 50 W High-Power UHF Switched Filter Bank

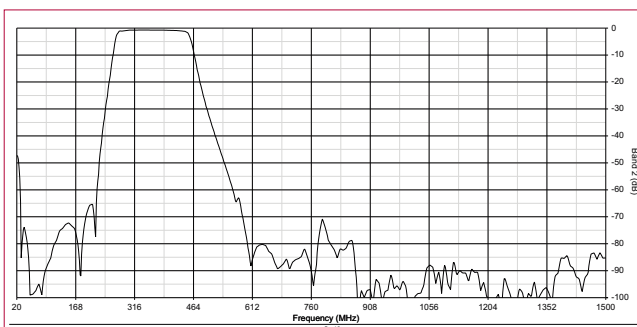
◆ Typical Performance Plots:



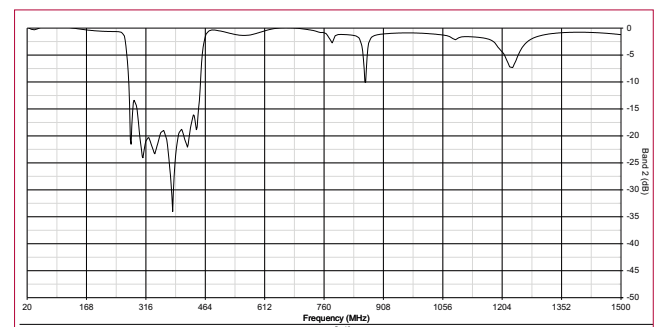
Band 1 Insertion Loss, +25°C, +10 dBm



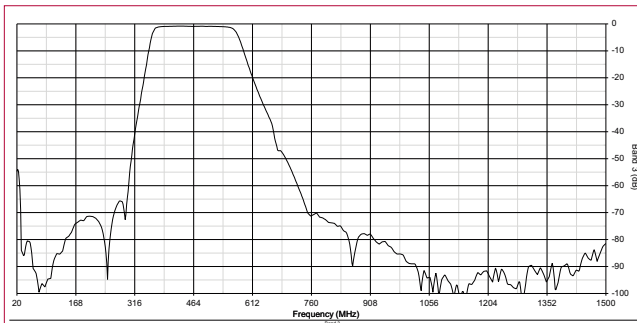
Band 1 Return Loss, +25°C, +10 dBm



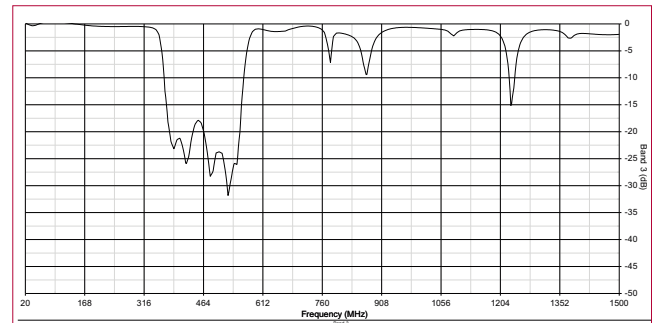
Band 2 Insertion Loss, +25°C, +10 dBm



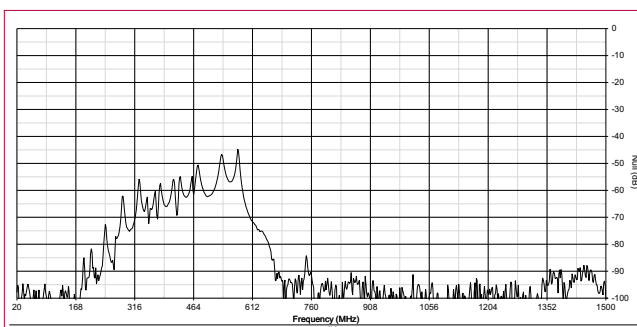
Band 2 Return Loss, +25°C, +10 dBm



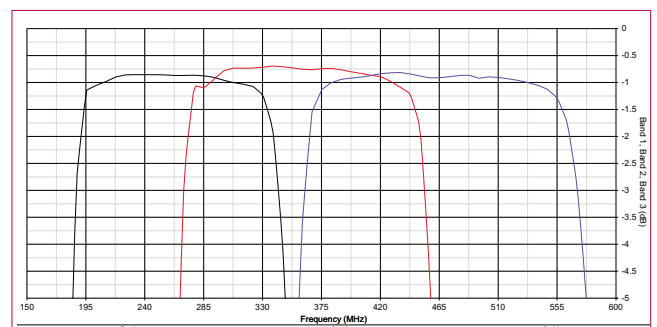
Band 3 Insertion Loss, +25°C, +10 dBm



Band 3 Return Loss, +25°C, +10 dBm



**Null Insertion Loss
+25°C, +10 dBm**



Bands 1- 3 Insertion Loss, +25°C, +10 dBm

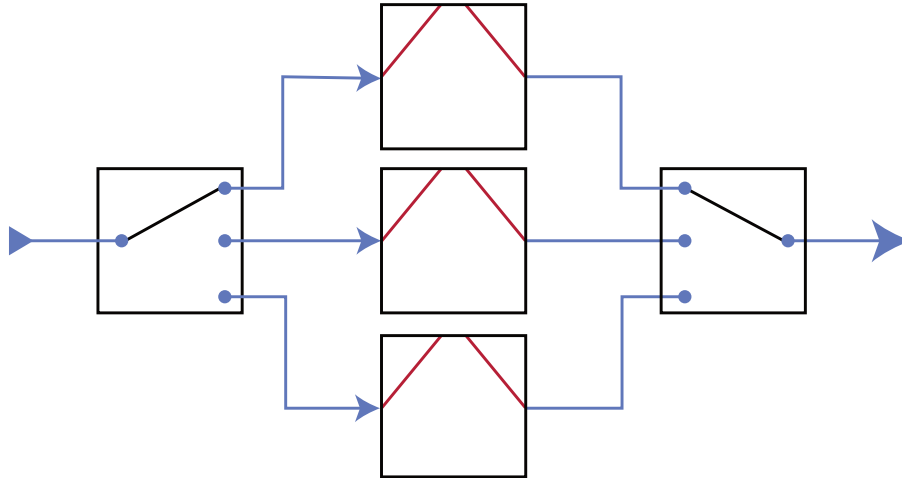
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◆ Functional Block Diagram:



◆ Interface Control:

P1 Pinout	Description
1	+5 VDC
2	GND
3	+28 VDC
4	NC
5	NC
6	B0
7	B1
8	NC
9	NC

◆ Absolute Maximum Ratings:

Supply Voltage +5 VDC +28 VDC	+5.5 VDC +30 VDC
RF Input Power	+50 dBm, (100 ns pulse 10% DC)
Storage Temperature	-45 to +125 °C
Operational Temperature	-45 to +70 °C
ESD Sensitivity	Class 1B

◆ Band Selection:

B1	B0	Path
L	L	Null
L	H	Band 1
H	L	Band 2
H	H	Band 3

Standard TTL Levels