

# MONOLITHIC AND DISCRETE CRYSTAL FILTERS

## Monolithic Crystal Filters

1. Center frequencies range: 2...110 MHz
2. Number of poles: 2..14
3. Passband bandwidth:  $\leq 0.4\%$
4. Passband ripple: 0,5 -2 dB max.
5. Insertion loss:  
for fundamental frequency: 0.5...4 dB,  
for third overtone: 2... 6 dB.
6. Shape factor - can be specified by the Customer.
7. Stopband attenuation - can be specified by the Customer (from 30 dB to 90 dB).
8. Spurious response - can be specified by the Customer (from 20 dB to 90 dB).
9. Operating temperature range: -60 °C ..... +85 °C.
10. Intermodulation, VSWR, group delay distortioin and termination - can be specified by the Customer.

### Examples of Monolithic Crystal Filters produced by MORION, Inc.

Filter type	Nominal Frequency	Number of poles	Bandwidth				Impedance, kOhm, nF		Package size, mm	Operating temperature range, °C	Comments
			dB	kHz	dB	kHz	Source	Load			
XMF-MV-522	2048	2	3	3,6	30	<25	3,0±5%	38,0*17,0*4,7 (Accent)	-40...+60		
XMF-MV-522-1	3072	2	3	4,6	30	<30	7,0±5%	38,0*17,0*4,7 (Accent)	-40...+60		
XMF-MV-625-11...16	327... 3287,5	8	3	3,5	80	8,75	5,1±5%	39,5x29,5x5,2	-60...+70		
XMF-MV-4-224 M-7,0k	4224	2	3	7	30	<49	3,0±10%	19,5*14,5*5,0 (Terek)	-40...+60		
XMF-MV-4-224 M-11,0k	4224	2	3	11	30	<100	8,0±10%	19,5*14,5*5,0 (Terek)	-40...+60		
XMF-MV-596-02	4998	8	3	4	70	<=9,5	4,0±5%	56*23*9	0...+45		
XMF-MV-5,3 M	5300	2	1	3	20	<20	1,3	19,5*14,5*5,0 (Terek)	-20...+70		
XMF-MV-9-2.4	9000	8, 10	3	2,4	60	<=Δf *2,0 <=Δf *1,75	9,1±5%	23,0*12,0*15,0 (BF15)	+5...+45		
XMF-MV-642	9755...9992	6	3	≥ 16	60	≤ 25	3,0±5%	38,4x18,2x13,0	-50...+70		
XMF-MV-10 M-3k	10000	2	3	3	30	≤ 20	1,0±5%	11,5x11,0x4,7 (HC4YU)	-40...+75		
XMF-MV-627	10700	8	6	≥ 12	70	≤ 27	6,0±5%	18,5x12x15,0	-30...+70		
XMF-MV-627-01	10700	8	3	≥ 7,5	80	≤ 25	2,5±5%		-30...+70		
XMF-MV-627-02	10700	8	3	≥ 15	70	≤ 35	1,8±5%	18,5x12x15,0	-40...+70		
XMF-MV-630	12500	10	6	≥ 18	90	≤ 46	4,8±5%	23x12x15,0	-60...+85		
XMF-MV-603	20000	10	3	7	70	<=16,6	3,0±5%	15,8*9,0*10,0 (Musa)	-40...+70		
XMF-MV-603-01	20000	10	6	17	70	<=35	4,5±5%	15,8*9,0*10,0 (Musa)	-40...+70		
XMF-MV-584	21400	10	6	18	95	<50	2,2±5%	15,8*9,0*10,0 (Musa)	-40...+70		
XMF-MV-584-01	21400	10	6	7,5	95	<12,5	1,2±5%	15,8*9,0*10,0 (Musa)	-40...+70		
XMF-MV-586-01	21400	4	6	16	40	<50	5,7±5%	3,2*7,8*6,0 two cases (UM5)	-10...+55	coupling capacity 7,6pF±2%	
XMF-MV-620-02	22963	10	3	7,5	60	≤ 20,7	1,6±5%	15,8*9,0*10,0 (Musa)	-60...+85		
XMF-MV-620	22963	10	3	22	60	<=47,5	0,82±5%	15,8*9,0*10,0 (Musa)	-60...+70		
XMF-MV-620-01	22963	10	3	6,5	60	<=18,5	40±0,2%	15,8*9,0*10,0 (Musa)	-60...+70		
XMF-MV-643	23925	14	3	30	70	<=50	2,1±10%	26,0*9,0*9,0 (-Musa)	-60...+80		
XMF-MV-659	23925	2	3	48	20	≤ 140	0,7±0,2%	15,8*9,0*10,0 (Musa)	-60...+60		
XMF-MV-603-02	25000	10	3	7	70	≤ 16,6	0,8±5%	15,8*9,0*10,0 (Musa)	-60...+60		
XMF-MV-603-03	25000	10	6	17	70	≤ 35	4,4±0,2%	15,8*9,0*10,0 (Musa)	-60...+60		
XMF-MV-603-07	25500	10	6	20	60	<=40	7,2±5%	15,8*9,0*10,0 (Musa)	-40...+60		
XMF-MV-586	36000	4	6	16	40	<50	1200±5%	3,2*7,8*6,0 two cases (UM5)	-10...+50	coupling capacity 14,7pF±2%	
XMF-MV-589-01	37000	2	3	6±1	20	<=Δf *3,0	2,4±5%	15,8*9,0*10,0 (Musa)	-35...+35		
XMF-MV-598	44775	4	3	13	40	<=44	0,470±5%	3,2*7,8*6,0 two cases (UM5)	-30...+60	coupling capacity 10,5pF±2%	
XMF-MV-598-01	44775	6	3	13	60	<=44	4,2±5%	3,2*7,8*6,0 three cases (UM5)	-30...+60	coupling capacity 10,5pF±2%	
XMF-MV-598-02	44775	4	3	16	30	<=50	3,3±5%	3,2*7,8*6,0 two cases (UM5 or UM5SMD)	-45...+85		
XMF-MV-606	62500	6	3	20	40	<=60	0,62±10%	15,8*9,0*10,0 (Musa)	-30...+50		
XMF-MV-62,5-18	62500	6	3	28	40	<50	3,2±0,2%	3,2x7,8x6,0 in three package	-30...+60	capacity ties 2,0pF±5%	
XMF-MV-597	80455	4	3	12	30	<=50	1,2±5%	38,4*18,2*13,0 (BF32)	-20...+80		

