

Digitally Programmable and Resistor/Voltage-Tunable Active Filters

	Digitally Programmable		Voltage-Tunable	Resistor-Tunable	
Parameter ①	FLJ-DC, D1, D2 Models	FLJ-D5, D6 Models	FLJ-VL, VB, VH Models	FLJ-R Series	FLJ-UR Series
Frequency Control	3-Digit BCD	3-Bit Binary	FLJ-VL/VH, 0.01-10V FLJ-VB, 0.1-10V	6 or 8 Resistors	2 or 4 Resistors
Filter Characteristics	LP, HP, BP, BR	LP	FLJ-VL, LP BU BE FLJ-VB, BP BU FLJ-VH, HP BU	See below	See below
Filter Types	CH, BE, BU	CH			
Frequency Range	FLJ-DC, 0.1Hz-159.9kHz FLJ-D1, 1.0Hz-1.599kHz FLJ-D2, 100Hz-159.9kHz	Suffix "1" Models, 10Hz-2kHz Suffix "2" Models, 100Hz-20kHz	FLJ-VL, 100Hz-100kHz FLJ-VB, 200Hz-20kHz FLJ-VH, 20Hz-20kHz	See below	See below
Input/Output Range	±10 Volts	±10 Volts	FLJ-VL/VH, ±10 Volts FLJ-VB, ±2 Volts	±10 Volts	±10 Volts
Input Impedance	300kΩ	50kΩ min.	50kΩ min.	50kΩ min.	50kΩ min.
Gain	-1 to -10	1	1	1	1
Number of Poles	2 (1-pole pair)	FLJ-D5LA1/2, 5 FLJ-D6LA1/2, 6	FLJ-VL/VH, 4 FLJ-VB, 2-pole pair	See below	See below
Rolloff	LP/HP, 12dB/octave BP/BR 6dB/octave	FLJ-D5LA1/2, 60dB/octave FLJ-D6LA1/2, 80dB/octave	FLJ-VL/VH, 24dB/octave FLJ-VB, 12dB/oct. (Q=5)	See below	See below
Attenuation Volume	—	FLJ-D5LA1/2, 60dB (1.8fc) FLJ-D6LA1/2, 74dB (1.9fc)	—	See below	See below
Q	1/3 < Q < 10 ⁶ /fc	—	FLJ-VB, Q = 5	See below	See below
Noise	HP, 100μVrms LP, 35μVrms BP, 30μVrms	140μVrms max.	300μVrms	140μVrms max.	140μVrms max.
Ripple	—	0.13dBp-p	—	0.15dBp-p	0.28dBp-p (CH)
Distortion	0.002%	0.05%	0.1% max.	See below	See below
Slew Rate	±8V/μsec	—	—	—	±2V/μsec
Supply Voltages	+5, ±15 Volts	±15 Volts	±15 Volts	±15 Volts	±15 Volts
Power Dissipation	780mW	990mW max.	1080mW	975mW	240-600mW
Operating Temp.	-20 to +70°C	-20 to +70°C	-20 to +70°C	-20 to +70°C	-20 to +70°C
Package	40-pin QDIP	40-pin QDIP	40-pin QDIP	40-pin QDIP	20-pin SIP

Support Products: FLJ-ACO1 Oscillator Adapter for the FLJ-DC, D1 and D2. FLJ-ACR1/2 BCD Logic Controlled Resistor Networks for FLJ-UR Series.

FLJ-R/UR Series

Model	Characteristic and Type	Frequency Range		Poles	Rolloff (dB/octave)	Distortion (%)	Q	Attenuation Volume
		Suffix "1" Models	Suffix "2" Models					
FLJ-R3BA1/2	BP, CA	10Hz-2kHz	100Hz-20kHz	3-pole pair	-	0.005	4.3	18dB/oct.
FLJ-R8LA1/2	LP, CA	10Hz-2kHz	100Hz-20kHz	8	135	0.005	-	86dB (1.6fc)
FLJ-R8LB1/2	LP, CA	10Hz-2kHz	100Hz-20kHz	8	100	0.005	-	92dB (2fc)
FLJ-UR4LA1/2	LP, BU	40Hz-1.6kHz	400Hz-20kHz	4	24	0.01	-	24dB (2fc)
FLJ-UR4LB1/2	LP, CH	40Hz-1.6kHz	400Hz-20kHz	4	42	0.01	-	55dB (2fc)
FLJ-UR4HA1/2	HP, BU	40Hz-1.6kHz	400Hz-5kHz	4	24	0.1	-	24dB (0.5fc)
FLJ-UR4HB1/2	HP, CH	40Hz-1.6kHz	400Hz-5kHz	4	42	0.1	-	55dB (0.5fc)
FLJ-UR2LH1/2	LP, BU	40Hz-1.6kHz	400Hz-20kHz	2	12	0.1	-	12dB (2fc)
FLJ-UR1BA1/2	BP, BU	40Hz-1.6kHz	400Hz-10kHz	1-pole pair	-	0.01	1.8-50	17.5dB ②
FLJ-UR2BA1/2	BP, BU	40Hz-1.6kHz	400Hz-10kHz	2-pole pair	-	0.01	5	35dB ②
FLJ-UR2EA1/2	BR, BU	40Hz-1.6kHz	400Hz-10kHz	2-pole pair	-	0.01	5	—

① Characteristics: LP = Lowpass, HP = Highpass, BP = Bandpass, BR = Bandreject (notch)
Types: CH = Chebyshev, BE = Bessel, BU = Butterworth, CA = Cauer/Elliptical

② For bandpass filters, attenuation volume spec applies at both 2fc and 0.5fc.