



Preamplifiers

MA231 / MA221 / MA231T / MA401 / MA418 / MV201 / MV401

Model	MA231	MA221	MA231T	MA401	MA418	MV201	MV401
Photos							
Diameter	1/2"	1/2"	1/2"	1/4"	1/4"	1/2"	1/4"
Frequency Response (Hz) (± 0.5 dB)	19 ~ 150k	19 ~ 150k	19 ~ 150k	19 ~ 150k	19 ~ 150k	1 ~ 1M	1 ~ 1M
Attenuation (dB) (10 Hz ~ 100k Hz)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.5	< 0.5
Input Impedance ($G\Omega pF$)	6 0.4	6 0.4	6 0.4	6 0.4	6 0.4	10 0.4	10 0.4
Output Impedance (Ω)	< 30	< 30	< 30	< 30	< 30	< 80	< 100
Inherent Noise	A Weighted < 3 μV 20 Hz ~ 20k Hz < 5 μV	A Weighted < 3 μV 20 Hz ~ 20k Hz < 5 μV	A Weighted < 3 μV 20 Hz ~ 20k Hz < 5 μV	A Weighted < 3 μV 20 Hz ~ 20k Hz < 5 μV	A Weighted < 3 μV 20 Hz ~ 20k Hz < 5 μV	A Weighted (20 pF) < 5 μV Z Weighted (20 pF) < 10 μV	A Weighted (20 pF) < 5 μV Z Weighted (20 pF) < 20 μV
Max. Output Voltage (Vrms)	5	5	5	5	5	23	23
Supply Power	ICCP (2 ~ 20 mA)	ICCP (2 ~ 20 mA)	ICCP (2 ~ 20 mA)	ICCP (2 ~ 20 mA)	ICCP (2 ~ 20 mA)	28 - 120 VDC	28 - 120 VDC
Operating Temperature ($^{\circ}C$)	-40 ~ 80	-40 ~ 80	-40 ~ 80	-40 ~ 80	-40 ~ 80	-10 ~ 50	-10 ~ 50
Operating Humidity (RH)	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%
Dimensions	$\varnothing 12.7 \times 74$ mm	$\varnothing 12.7 \times 31.7$ mm	$\varnothing 12.7 \times 90$ mm	$\varnothing 7 \times 56$ mm	$\varnothing 7 \times 56$ mm	$\varnothing 12.7 \times 86.6$ mm	$\varnothing 6.3 \times 63$ mm
Connector	BNC	SMB	TNC	SMB	SMB	7-pin LEMO	7-pin LEMO
Screw Thread	M 11.7 mm \times 60 UNS	M 11.7 mm \times 60 UNS	M 11.7 mm \times 60 UNS	M 5.7 mm \times 60 UNS	M 6 mm \times 0.5 UNS	M 11.7 mm \times 60 UNS	M 5.7 mm \times 60 UNS

Notice: ICCP = Integrated Constant Current Power