



2023/10/05

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# Specifications

## Features

- Dedicated to MC cartridges
- Open-loop type

## Performance spec

	Spec	Condition	Note
Gain	66dB	At 1kHz	
Input impedance	100 ohm		
Max output	10.0V	At 1kHz	
Max input	13mV	At 1kHz	
RIAA deviation	+/-0.1dB	20Hz-20kHz	
Channel deviation	+/-0.1dB	20Hz-20kHz	
THD	0.01%	w/o filter	
SNR	110dB	w/o filter	

## PCB spec

### \* Basic spec

- t=1.6mm, double-sided PCB
- Substrate: FR-4
- Copper: Tough pitch, t=35um (1oz)
- Finish: LeadFree HASL
- Track width (signal): 0.4mm
- Track width (power/GND): 0.254mm (min), 0.5mm (norm), 1.2mm (max), 1.8mm (for AGND)
- Spacing track to track: 0.152mm
- Spacing track to via: 0.304mm
- Spacing track to pad: 0.152mm
- Small via (for signal track): hole: 0.3mm, width: 0.6mm
- Large via (for power/GND track): hole: 0.6mm, width: 1.2mm

### \* Dimension

See the sheet "PcbDesign".

### \* Layout of the key parts

See the sheet "PcbDesign".

### \* Ground plane

- Ground plane is employed to prevent crosstalks and diviation in ground potential.
- This board has only one ground: AGND.

**Connector spec****\* PL501: PowerIn**

Connected with: BD4 VOL Board

Connector: S8B-XH-A (8-pin SIL, 2.5mm spacing)

Pin assignment:

Pin#	Signal	Function	Note
1	GND	Ground	
2	GND	Ground	
3	GND	Ground	
4	GND	Ground	
5	+23V	Plus power supply	
6	GND	Ground	
7	-23V	Minus power supply	
8	GND	Ground	

**\* PL502: EQ\_OUT**

Connected with: BD4 VOL Board

Connector: S4B-XH-A (4-pin SIL, 2.5mm spacing)

Pin assignment:

Pin#	Signal	Function	Note
1	EQ_R	EQ OUT R-ch	
2	GND	Ground	
3	GND	Ground	
4	EQ_L	EQ OUT L-ch	

**\* SK501: PHONO\_L**

Connected with: J1 PHONO\_L

Connector: 714-43-103-31-018000 (3-pin SIP, 2.54mm spacing)

Pin assignment:

Pin#	Signal	Function	Note
1	GND	Ground	
2	GND	Ground	
3	PHONO_L	Input from L-ch of MC cartridge	

**\* SK502: PHONO\_R**

Connected with: J2 PHONO\_R

Connector: 714-43-103-31-018000 (3-pin SIP, 2.54mm spacing)

Pin assignment:

Pin#	Signal	Function	Note
1	GND	Ground	
2	GND	Ground	
3	PHONO_R	Input from R-ch of MC cartridge	

**\* SK503: EQ\_L**

Connected with: BD4

Connector: 714-43-103-31-018000 (3-pin SIP, 2.54mm spacing)

Pin assignment:

Pin#	Signal	Function	Note
1	GND	Ground	
2	GND	Ground	
3	EQ_L	Output of L-ch of EQ	

**\* SK504: EQ\_R**

Connected with: BD4

Connector: 714-43-103-31-018000 (3-pin SIP, 2.54mm spacing)

Pin assignment:

Pin#	Signal	Function	Note
1	GND	Ground	
2	GND	Ground	
3	EQ_R	Output of R-ch of EQ	

**\* SK505: EQ\_OUT\_L**

Connected with: J3 EQ\_OUT\_L

Connector: 714-43-103-31-018000 (3-pin SIP, 2.54mm spacing)

Pin assignment:

Pin#	Signal	Function	Note
1	GND	Ground	
2	GND	Ground	
3	EQ_OUT_L	L-ch of buffered output	

**\* SK506: EQ\_OUT\_R**

Connected with: J4 EQ\_OUT\_R

Connector: 714-43-103-31-018000 (3-pin SIP, 2.54mm spacing)

Pin assignment:

Pin#	Signal	Function	Note
1	GND	Ground	
2	GND	Ground	
3	EQ_OUT_R	R-ch of buffered output	

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