

INTEGRATED STEREO AMPLIFIER E-380



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2015-launched E-370 was highly praised in the high-end audio market with superb performance, outstanding reliability and delightful sound quality with authentic musicality.

E-380 is a succession model of E-370, it achieves 20% enhanced output power by strong power supply and amplification stage.

The pre-amplifier section features the further evolved AAVA that reenacts the details of music source.

At the power amplifier section, the damping factor is further enhanced with precise and dynamic speaker driving ability.

The pre-amplifier and power amplifier sections are entirely separated, you are able to connect E-380 with other separated systems.

The mega-evolved E-380 surely takes audiophiles to a world of unlimited musical enjoyment.

Differences in front view



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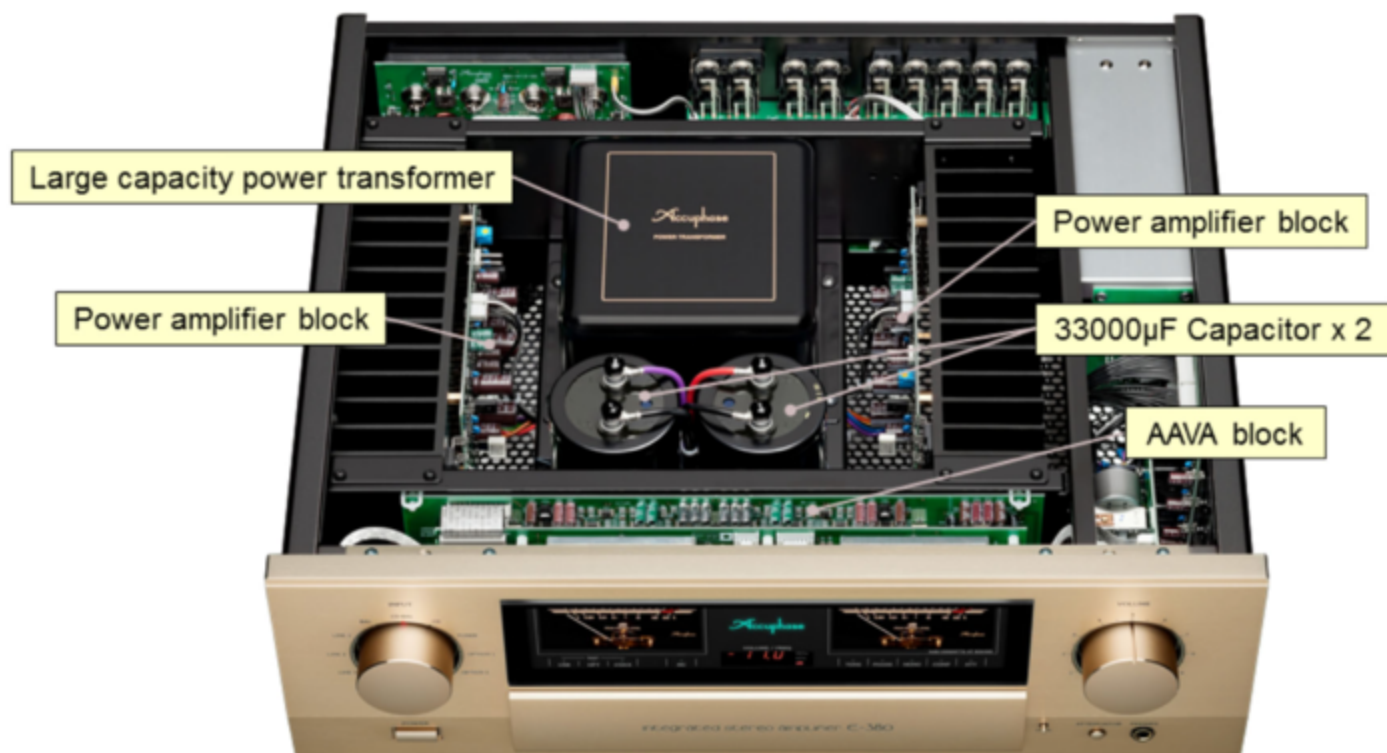
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E-380 has a wholly new front panel design including the button array inside the subpanel.

The needle power meter with indication range to -50dB is able to move even at the small volume level less than -60dB.

Sampling Frequency Display has expanded to "MHz" to support the DAC-50.

Internal view



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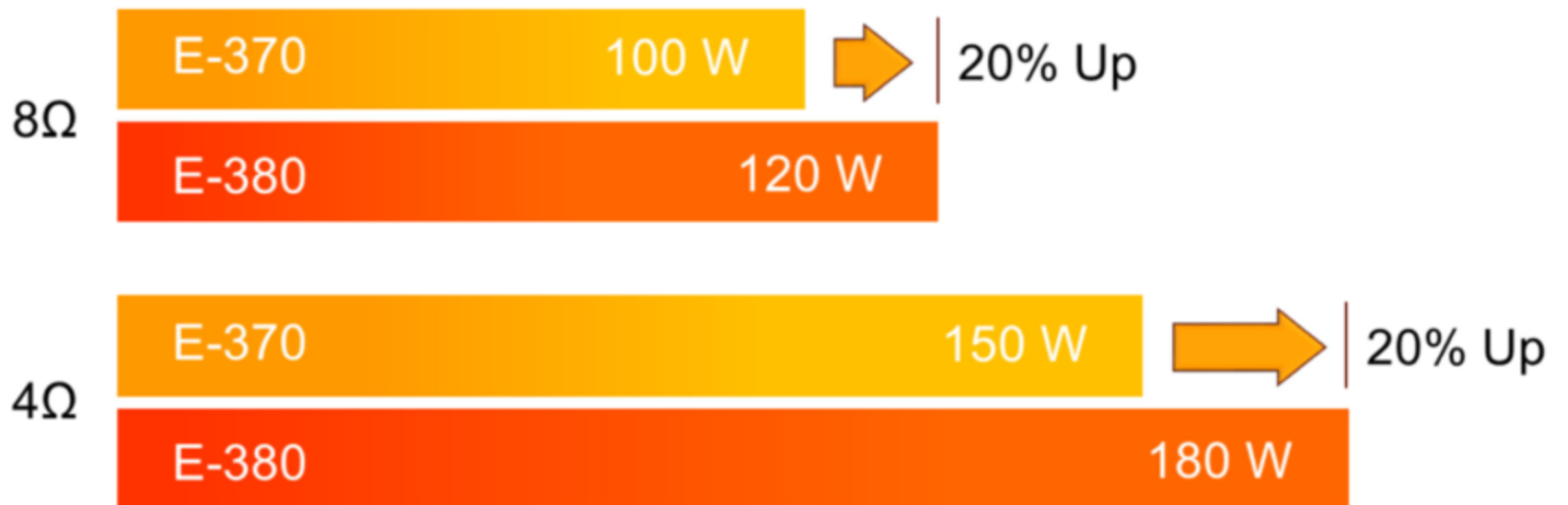
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E-380 takes the mono block construction. With the symmetrical arrangement of L / R power amplifier blocks, the strong power supply with a massive high-efficiency transformer and two large 33000 μ F specially-made filtering capacitors are installed at the center of unit.

AAVA circuit block is located near the front panel.

Rated output power

- Class-AB 120W / 8Ω, 180W / 4Ω



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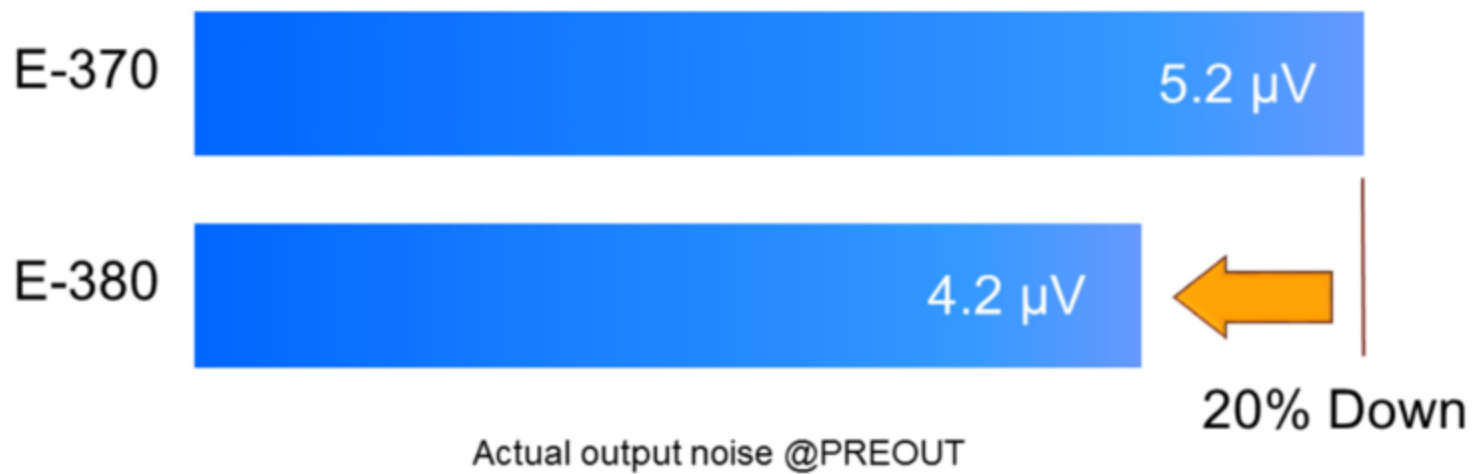
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The rated output power of E-380 is 20% higher than the former model due to the enhanced power supply section.

They are 120W into 8Ω load and 180W into 4Ω load.

Ultra low noise

- 20% lower than the former model @PRE-OUT
– S/N ratio: 109dB guarantee (E-370: 107dB)



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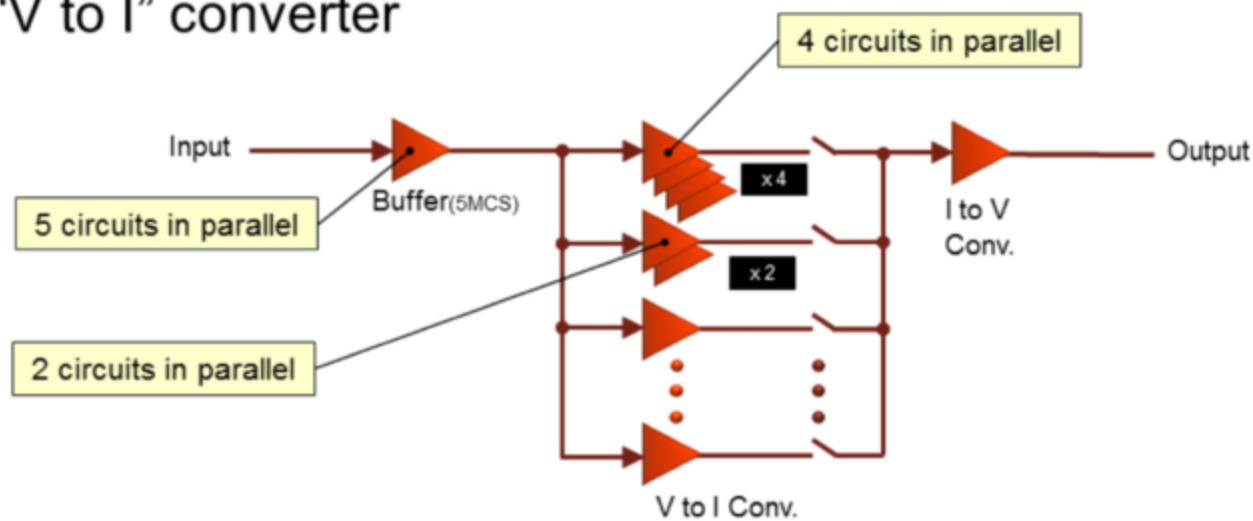
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E-380 marks 4.2μV of the actual noise voltage. This is 20% lower(2dB) than the former model.

E-380 guarantees 109dB Signal to Noise ratio at the maximum gain.

Technology for ultra low noise

- Improvement of AAVA
 - Fourth paralleled largest unit, paralleled second largest unit in “V to I” converter



AAVA: Accuphase Analog Vari-gain Amplifier

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AAVA(Accuphase Analog Vari-gain Amplifier) is a volume control principle that eliminates all variable resistors from the signal path. This is the original Accuphase unique technology.

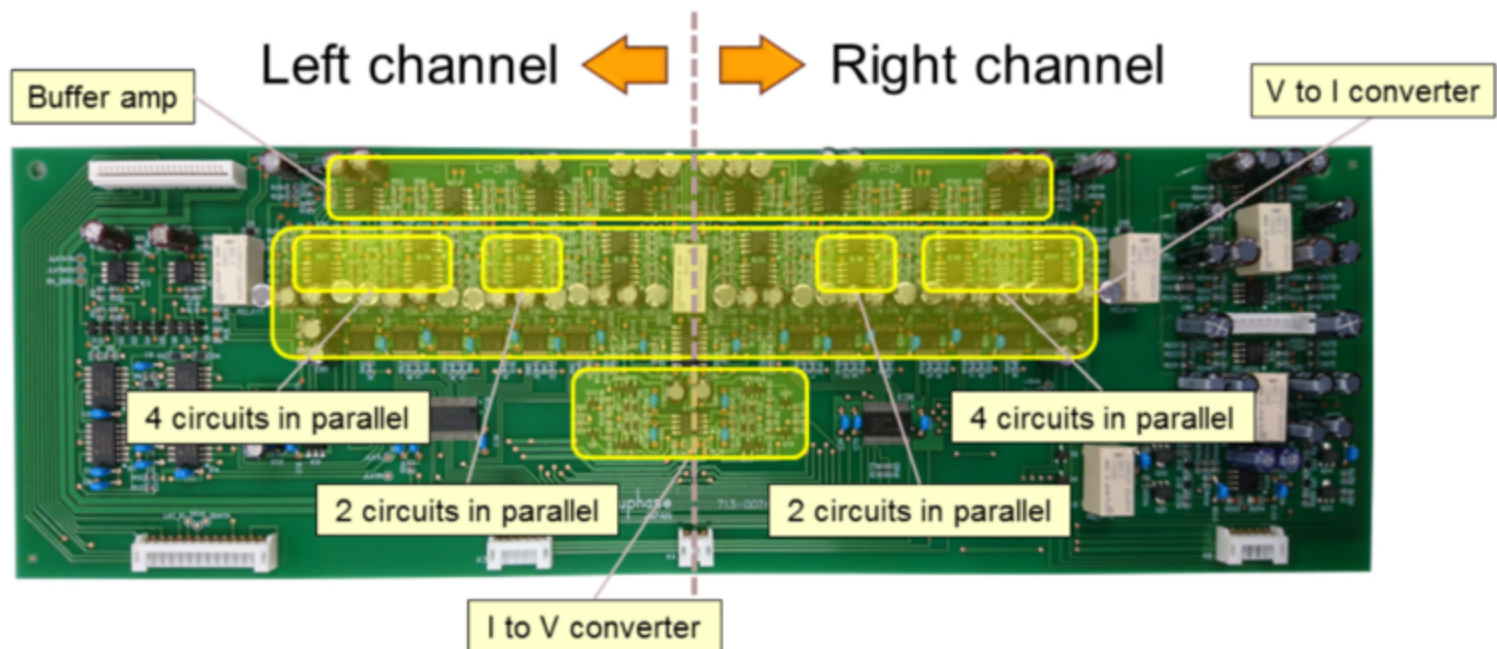
AAVA module in E-380 achieves low noise by the fourth paralleled largest unit and the paralleled second largest unit in “V to I” converters.

This improvement helps to make the V-I converter amp's output current double, and it results in reducing the value of the feedback resistors and the noise coming from them.

*AAVA module in the former model E-370 has paralleled the largest two units in “V to I” converters.

Technology for ultra low noise

- AAVA Assembly



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Left and right channels are symmetrically arranged in AAVA assembly of E-380.

Super high Damping Factor(D.F.)

- 25% higher than the former model



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E-380 guarantees 500 of Damping Factor.
It is 25% higher than the former model.

****Damping Factor:**

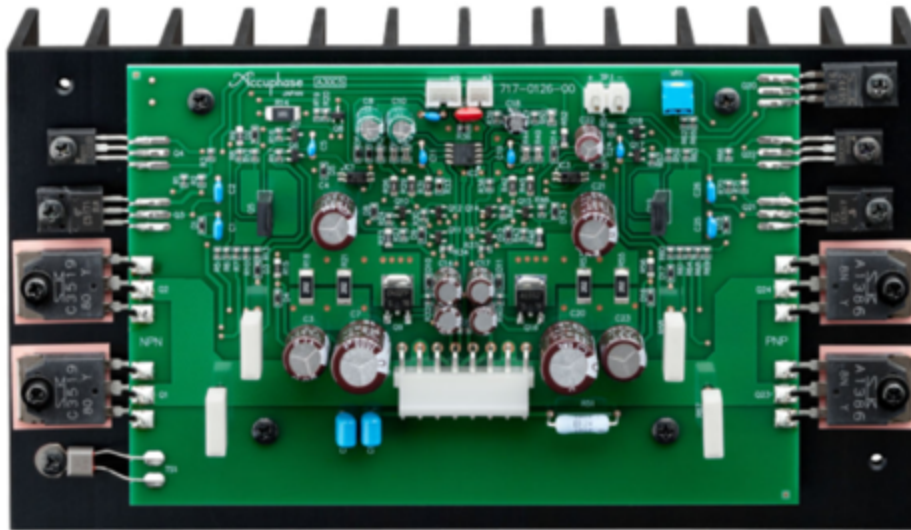
An index of speaker driving ability.

Higher Damping Factor amplifier has higher speaker driving ability.

D.F. = 8Ω / Output-impedance

Technology for super high D.F.

- Power amplifier
 - Output stage with parallel push-pull bipolar transistors



Bipolar transistor
160V / 15A
**E-370: 150V / 10A

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Same as other Accuphase self-standing power amplifiers, E-380 applies "Instrumentation Amplifier principle" for its power amplifier section.

The output impedance of power amplifier is decreased by the parallel push-pull final stage arrangement of high output current with high linearity bipolar transistor.

E-380 has the new bipolar transistor which is heavy-duty and has the large absolute maximum ratings.

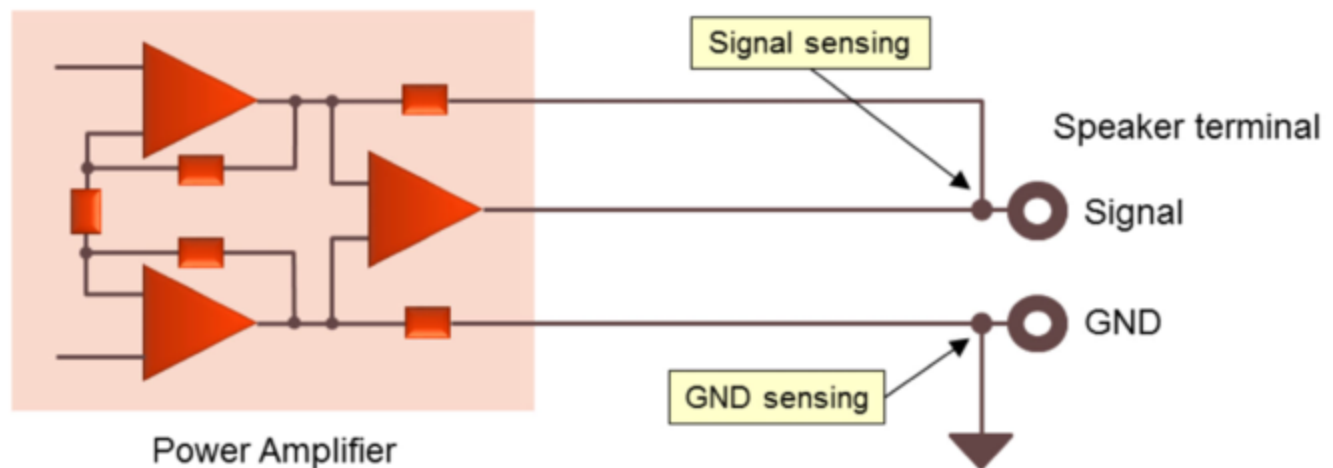
**Absolute maximum ratings of bipolar transistor on final stage

E-370's transistor: 150V / 10A

E-380's transistor: 160V / 15A

Technology for super high D.F.

- Balanced Remote Sensing
 - Feedback from nearby speaker terminals
 - Signal-line and GND-line sensing



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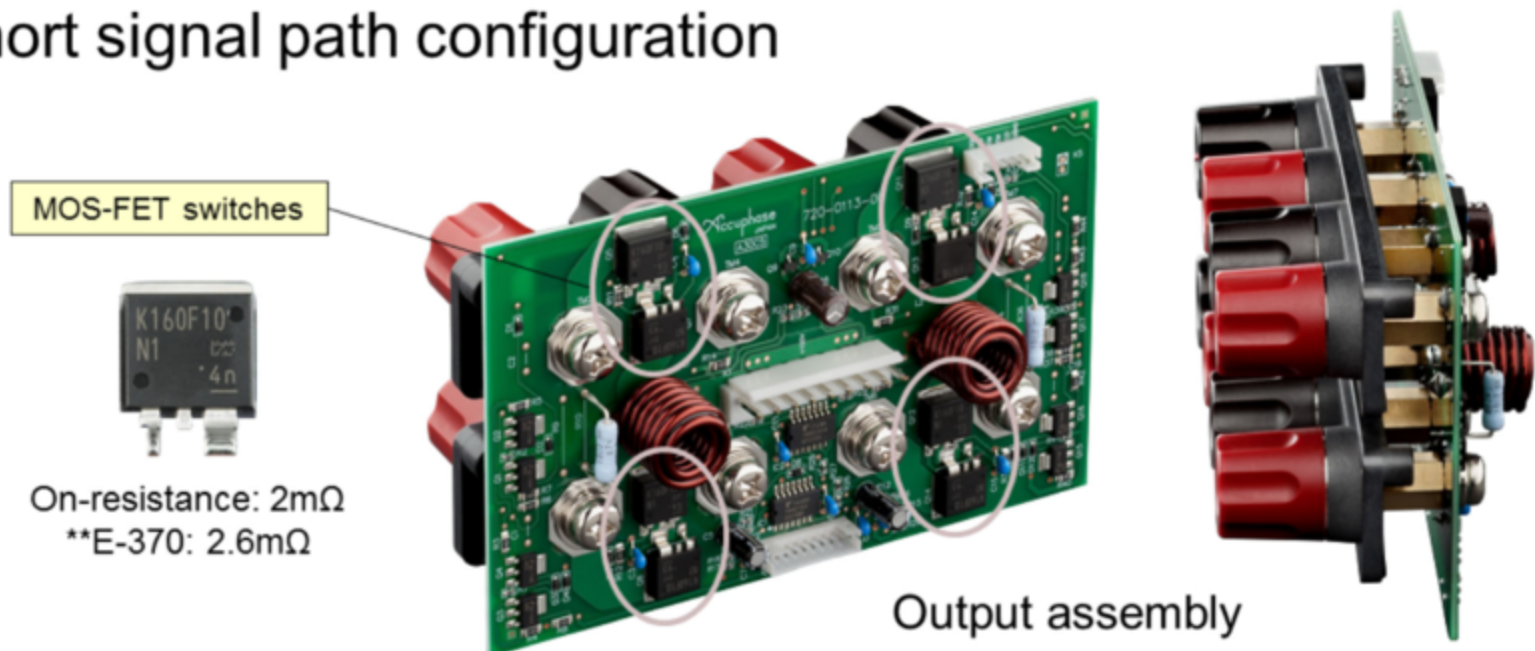
Remote Sensing is the technique to lower the output impedance of amplifier by the negative feedback with signal sensing from nearby the speaker terminals.

Balanced Remote Sensing is the technique to make the output impedance even lower by both the signal sensing and the GND sensing, that is the negative feedback of GND level.

Not only Damping Factor, but also Total Harmonic Distortion and Intermodulation Distortion are all improved by the Balanced Remote Sensing.

Technology for super high D.F.

- Speaker protection equipped with MOS-FET switch
- Short signal path configuration



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Although a mechanical relay is the most popular component for speaker protection, it does not have high reliability and low contact resistance either.

E-380 applies a MOS-FET switch instead of mechanical relay for speaker protection.

Damping-Factor, reliability and sound quality are all improved by MOS-FET switch.

MOS-FETs in E-380 are as same as the ones in A-250. They have very low on-resistance of 2.0mΩ.

**MOS-FET in E-370 is 2.6mΩ on-resistance.

By connecting speaker terminals and PC-board directly, the signal path can be made shorter to obtain the low impedance.

Pursuing further product safety and reliability

- Power amplifier
 - Newly-developed protection circuit using Photo-couplers
 - Temperature-sensors are installed on both heat sinks



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To enhance the further product safety and reliability, E-380 improves the protection circuit on Power amplifier section.

- Newly-developed protection circuit
Over current protection circuit using photo-coupler is applied, it does not affect the sound quality at all.
- Temperature-sensor
Temperature-sensors which detects the heat sink temperature are installed on L / R both heat sinks one by one (E-370: 1 sensor on chassis only).
Thanks to this, the unit accurately ascertains the high temperature alarm in power amplifier section.

**When these protection circuits are activate, the unit completely interrupts speaker output and makes the power meters flash to indicate an abnormal condition.