

Richards TDA8932 “Maxed Out” board version

Brief

A board based on Richards TDA8932 amplifier board that allows for a large selection of component types, for extreme customisation.

Objective

The outcome is sonic improvement and further amplifier stability/longevity, attributed by higher quality/overrated (specs) components.

Reasoning

The stock board has excellent sonic performance and very few parts. With this ethos component changes are easily heard and can be reasonably economical.

Bottlenecks

Richard’s philosophy has been to create economically priced amplifier boards, very successfully.

The “maxed out” version will be very much the opposite – practically money no object design, supported by the low component count makes this entirely reasonable.

“Maxed Out” version requirements

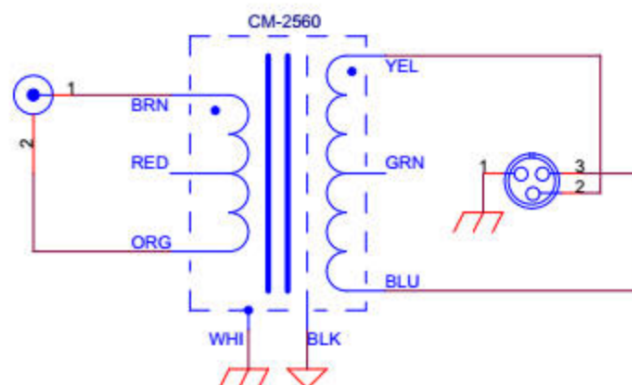
Maxed Out version will be referred to as MOV from here onwards

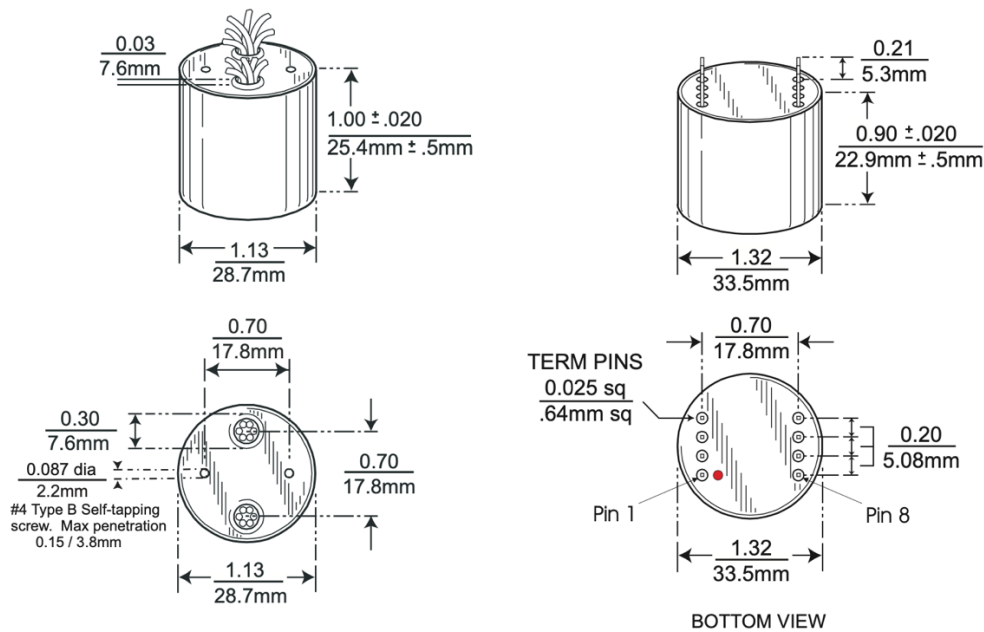
Original version will be known as OV from here onwards.

Input transformer

The MOV will allow the use of several input transformers, to allow maximum flexibility across the most commonly used manufacturers, with drop in through holes for;

- Cinemag (picture below)
- Richards custom transformers





CM-2560

Capacitors

This category will be split into types of capacitors.

Electrolytic

3300uf –

- Regular through holes, as the OV.
- Snap in holes with, 10mm pitch, 1.5mm holes.
- 25mm diameter allowance for brand flexibility.

560uf –

- Regular through holes as the OV.
- 20mm diameter for brand flexibility.

Film @ output

0.68uf –

- Radial - 50mm diam with 30mm gap between leads, leads holes 1.7 mm diameter.
- Axial – 70mm length hole to hole, 50mm diam, lead holes are 1.7mm diameter.
- Axial – 30mm length hole to hole, lead holes 1.2mm
- Axial – as per the OV.
- Marking for outer foil orientation.

SMD

- High quality, chosen for sonics and specifications, super low tolerances, overrated, thoughts? Established manufacturers only - Vishay, Murata, Philips etc

Resistors

- Vishay thin film MELF in key higher stress areas, for instance R17.

- Susumu RS thin films elsewhere.

Regulators TO-220

- 10mm perimeter to allow Sparkos/other discrete types that have a larger footprint.
- Ability to easily short the 2 SOT-223 types on board for the adjustable regs.

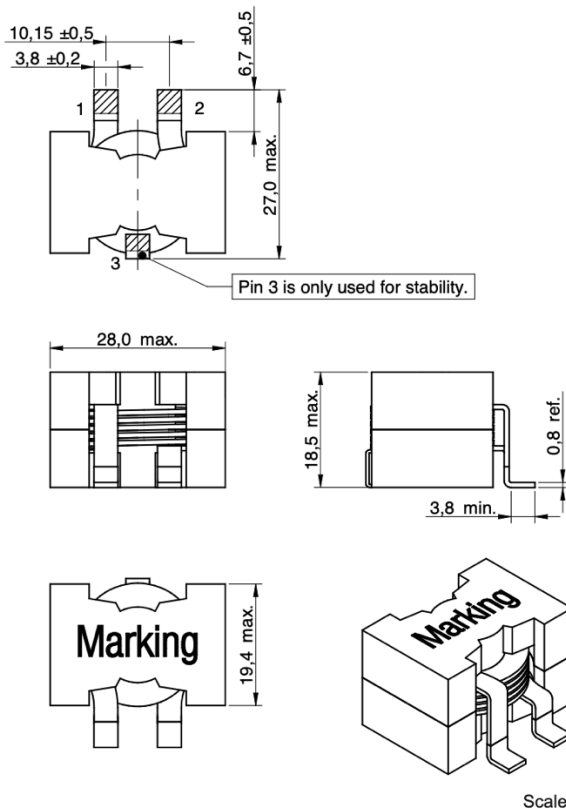
D1

- Would there be a benefit to use a high-quality overrated regulator in this position?

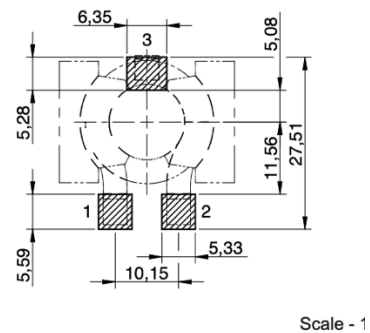
Inductors

- Same pad spacing in MOV as OV, with the addition of the 3rd 'stability' foot pad.
- Set so polarity is symmetrical for both inductors arranged onboard, both inductors sit flat & snug.

Dimensions: [mm]



Recommended Land Pattern: [mm]



Schematic:



LED

- A nice feature would be through holes to attach the warning/health LED's, allowing the yellow/red LED to be seen from outside the amplifier housing, thus providing ample time to react.

Transistor Q1

- Is there a benefit to using an overrated quality transistor here?

Solder

- Lead free.

Feedback

Please use this document to add feedback, below or beside each point, in a different colour, the same colour for each round of feedback.