Sheet Listing
1. Title page and contents
2. Microcontroller GPIO and Memory
3. Microcontroller Support
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6. Encoder
7. VC, Offload & Snubber Hall Sensors
8. Comm and Power I/O
9. Fixed Power Supplies
10. Variable Power Supplies
11. Voice Coil Driver
12. Offload Motor Driver
13. Snubber Motor Driver

4. Diagnostic (Aux) Headers mate with Samtec TCSD, 2mm pitch, cable assemblies.
3. Place GND1, GND2, and GND 3 on the front of the board near the edges. Place GND4, GND5, and GND6 on the rear side, opposite the GNDs on the front. Label each instance on the silkscreen with "GND".
2. All capacitors are 20% tolerance.
1. All resistors are 1% tolerance.

NOTES: UNLESS OTHERWISE SPECIFIED
AUX_ADC

-10 to +10V maps with sign flip
to 12-bit unsigned [4095 to 0]
One real pole 1.6kHz

If desired, semi-isolate all GND nets on
this page (GNDA) from the main GND.

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Route all paired traces on this page, digital and analog, as 120 ohm differential pairs.

Optionally, remove RS422 terminating resistors: R11, R13, and R46.
PINOUT FOR HALL SENSORS

Each connector supports two hall sensors. All sensor pairs are enabled together.

1. nSLEEP2
2. nSLEEP1
3. OUT2
4. OUT1
5. GND
6. VREF/VCC
ADC Driver for 16-bit VC Current Monitoring
Place this IC and its parts near U1.
Route VC_16BIT_P and VC_16BIT_N as a differential pair.

Route VC_16BIT_P and VC_16BIT_N as a differential pair.

VC_16BIT_P +5.12 V/A
VC_16BIT_N -5.12 V/A

+/-1.024 A maps to:
0 to 4.096 V (P output)
4.096 V to 0 (N output)
which maps to
0 to 65535 counts (16 bit ADC)

20x Gain
400 kHz 3dB bandwidth
Offload Driver

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