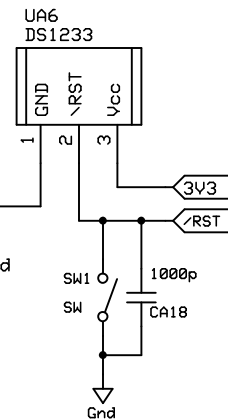
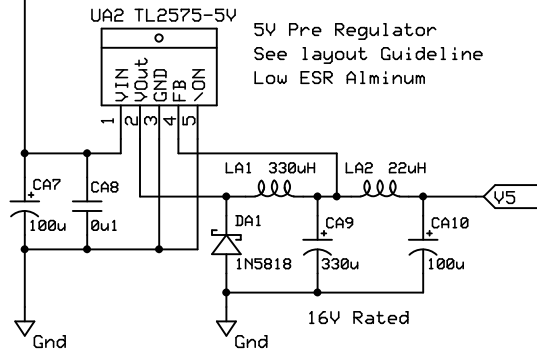


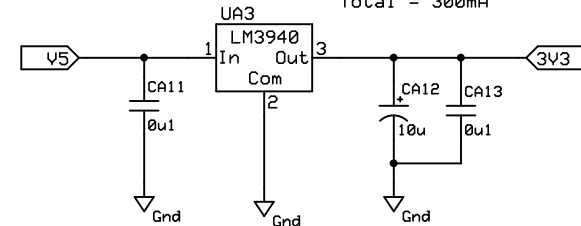
For 12V Direct



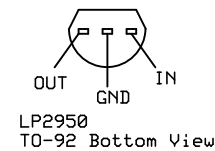
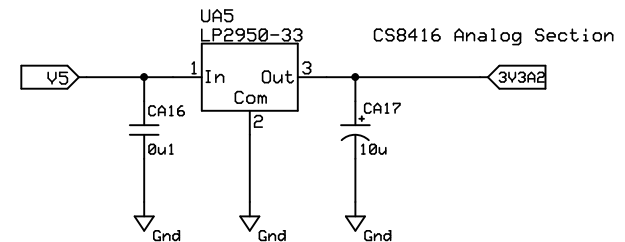
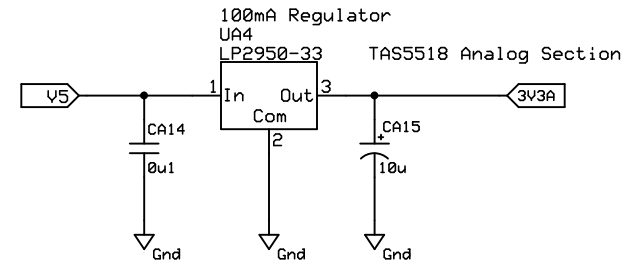
0.1uF, 50V 0805 KEMET 399-1170-1-ND
 10uF, 50V 2.5mm Panasonic P997-ND
 47uF, 50V 2.5mm Panasonic P10321-ND
 100uF, 50V 3.5mm Panasonic P5571-ND
 330uF, 25V 3.5mm Panasonic P10272-ND
 Switch: OMRON B3WN-6002

For Digital Section
 TAS5518, DVDD max = 155mA
 TAS5518, AVDD max = 6mA
 CS8416 max = 40mA
 ATmega64 max = 20mA
 TAS5142 max = $17 \text{ mA} \times 4 = 70 \text{ mA}$

Total = 300mA



$1.7 \text{ V} \times 0.3 \text{ A} = 0.5 \text{ W max}$
 T0220



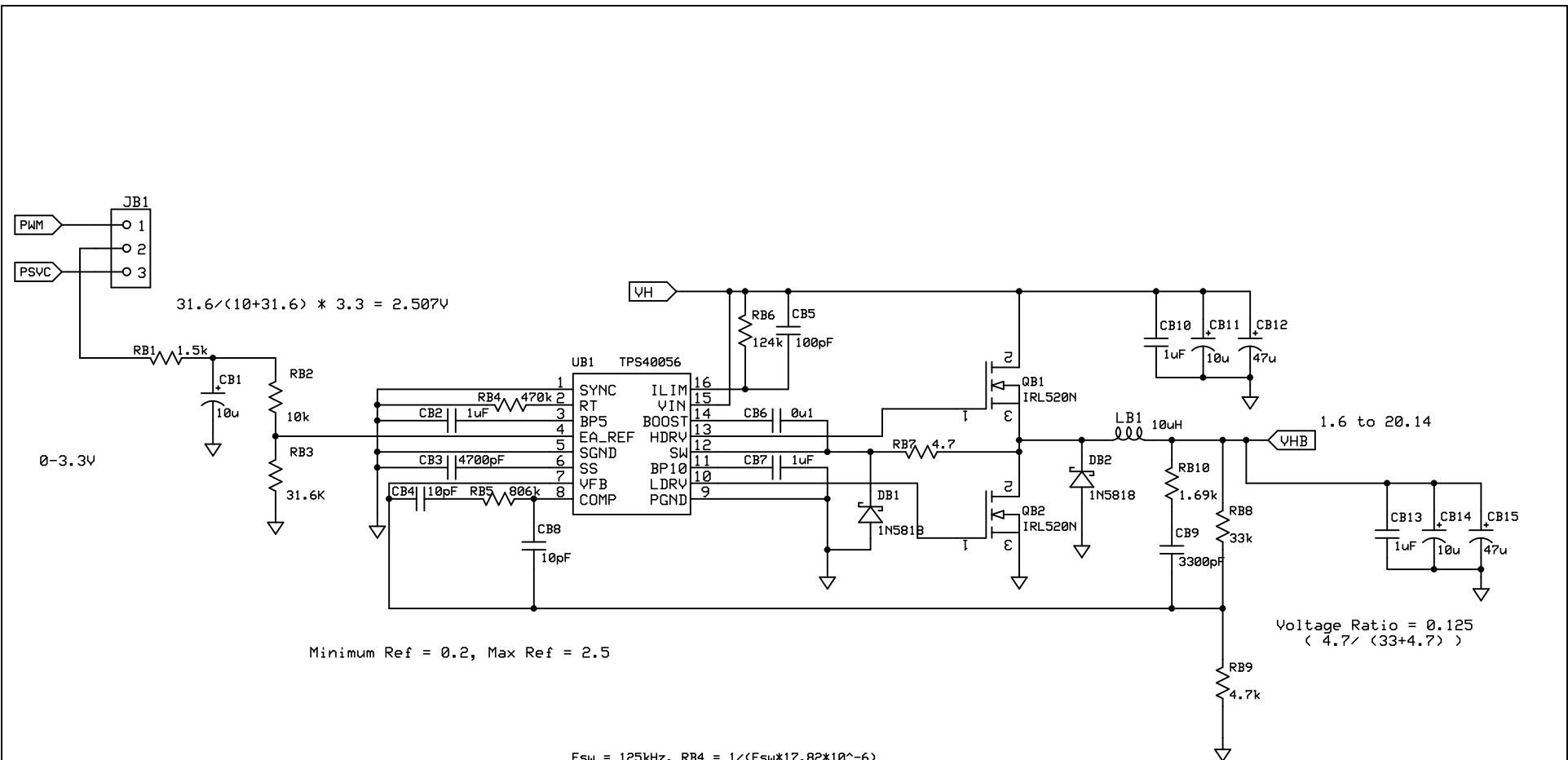
Sheet "A"

TAS5518 Amplifier

Rev 2.0

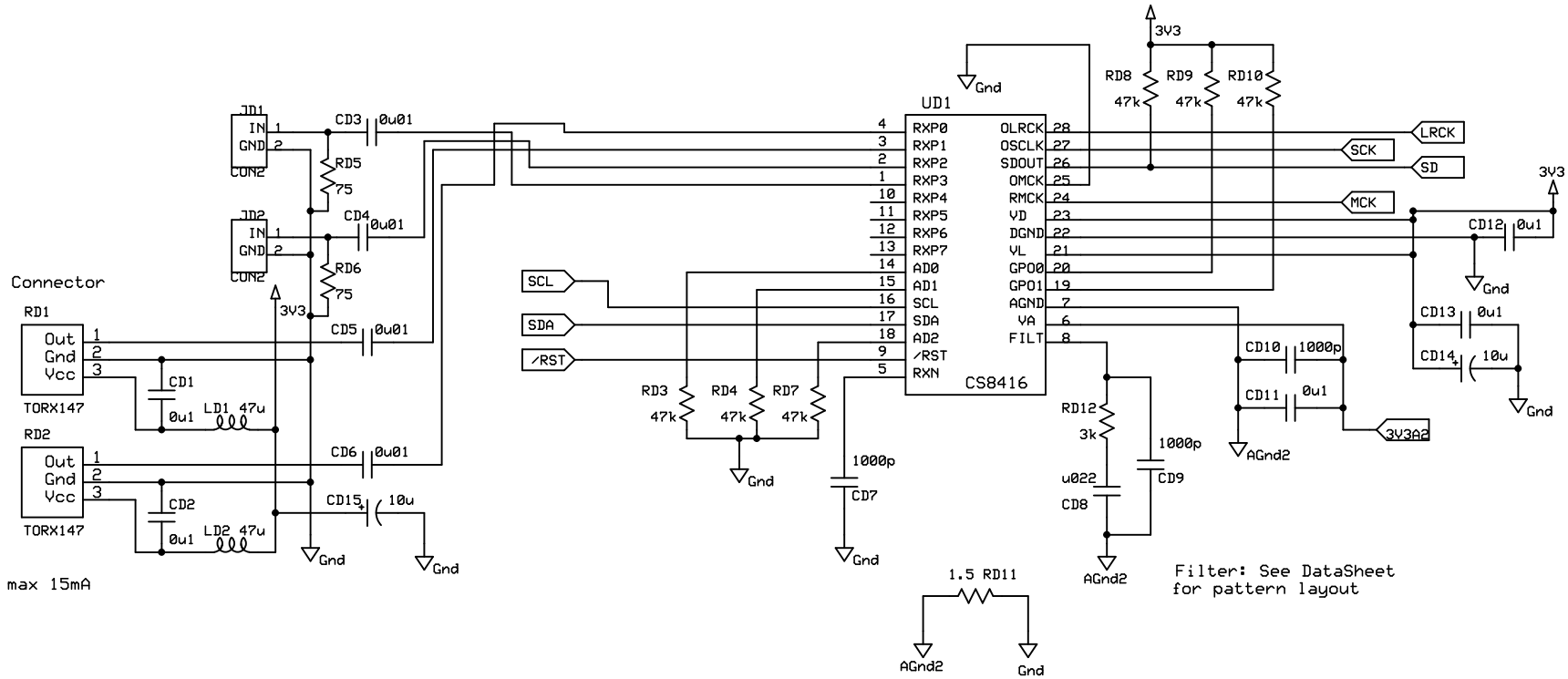
2007/07/15

POWER



Fsw = 125kHz. RB4 = $1 / (Fsw * 17.82 * 10^{-6})$
 Soft Start 1ms, 2.3uA / 0.7V * ms, CB3 = 4700pF
 OutPut LC: 10uH, 800uF, F1c=1780Hz
 ESR Pall = 33kHz
 Fcrossover = 25kHz
 Calculate RB10, CB9, CB4, CB8
 RB6 = $4A * 0.27 < IRL520 Rds > / 8.6uA Ilim = 125k$
 Too many Cout makes TPS40056 unstable.
 LB1 can be 4.7uH or higher

Sheet "B"	
TAS5518 Amplifier	
Rev 2.0	PSVC
2007/07/15	



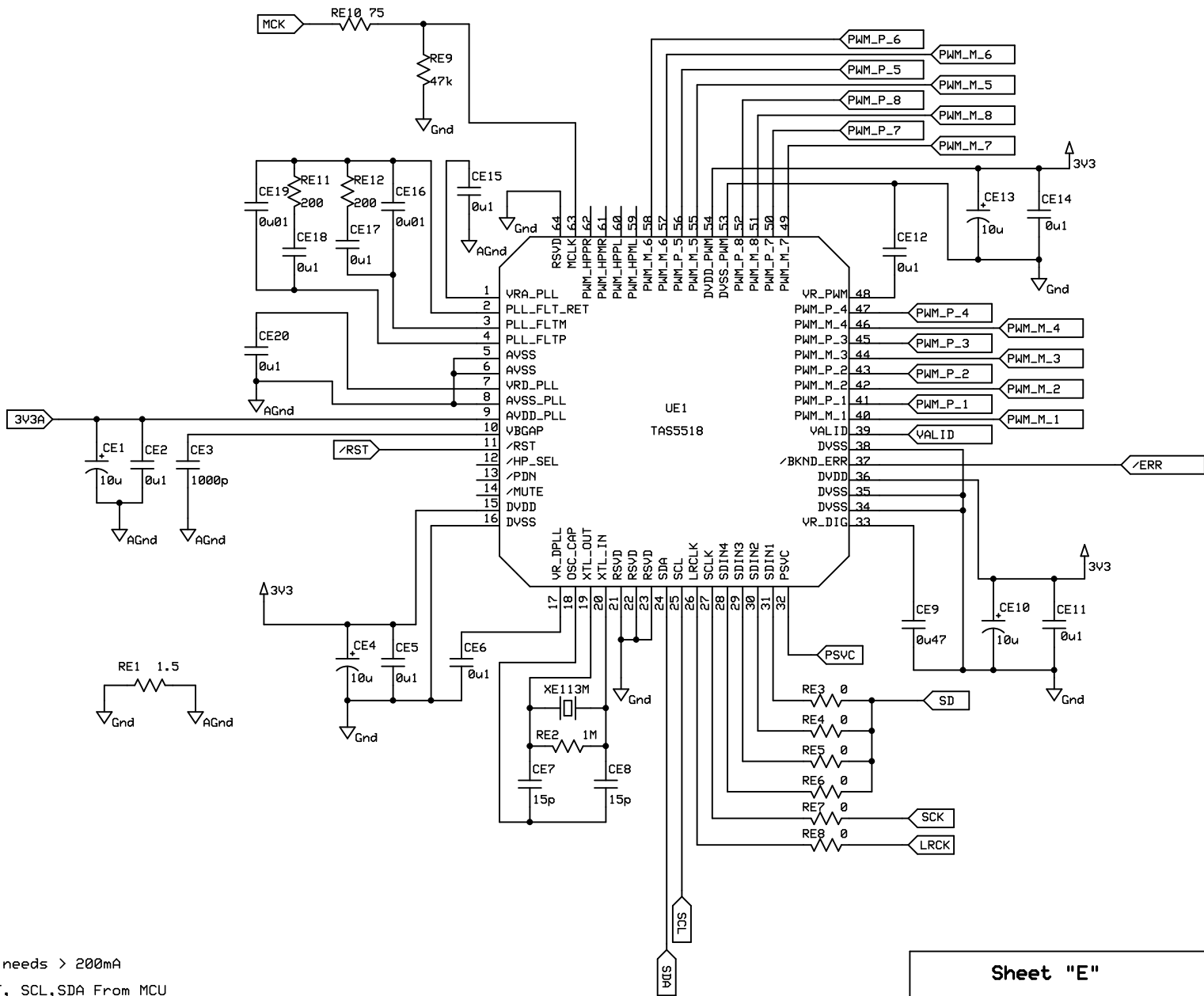
Sheet "D"

TAS5518 Amplifier

Rev 2.0

2007/07/15

DAI



3V3 needs > 200mA

/RST, SCL,SDA From MCU

RC1-7 can be Jumper for changing I2S Source

All /OTW, /SD_PWR can be wired OR

OutPut to Power Stage = VALID, PW1_P-x, PW1_M-x

Sheet "E"

TAS5518 Amplifier

Rev 2.0

2007/07/15

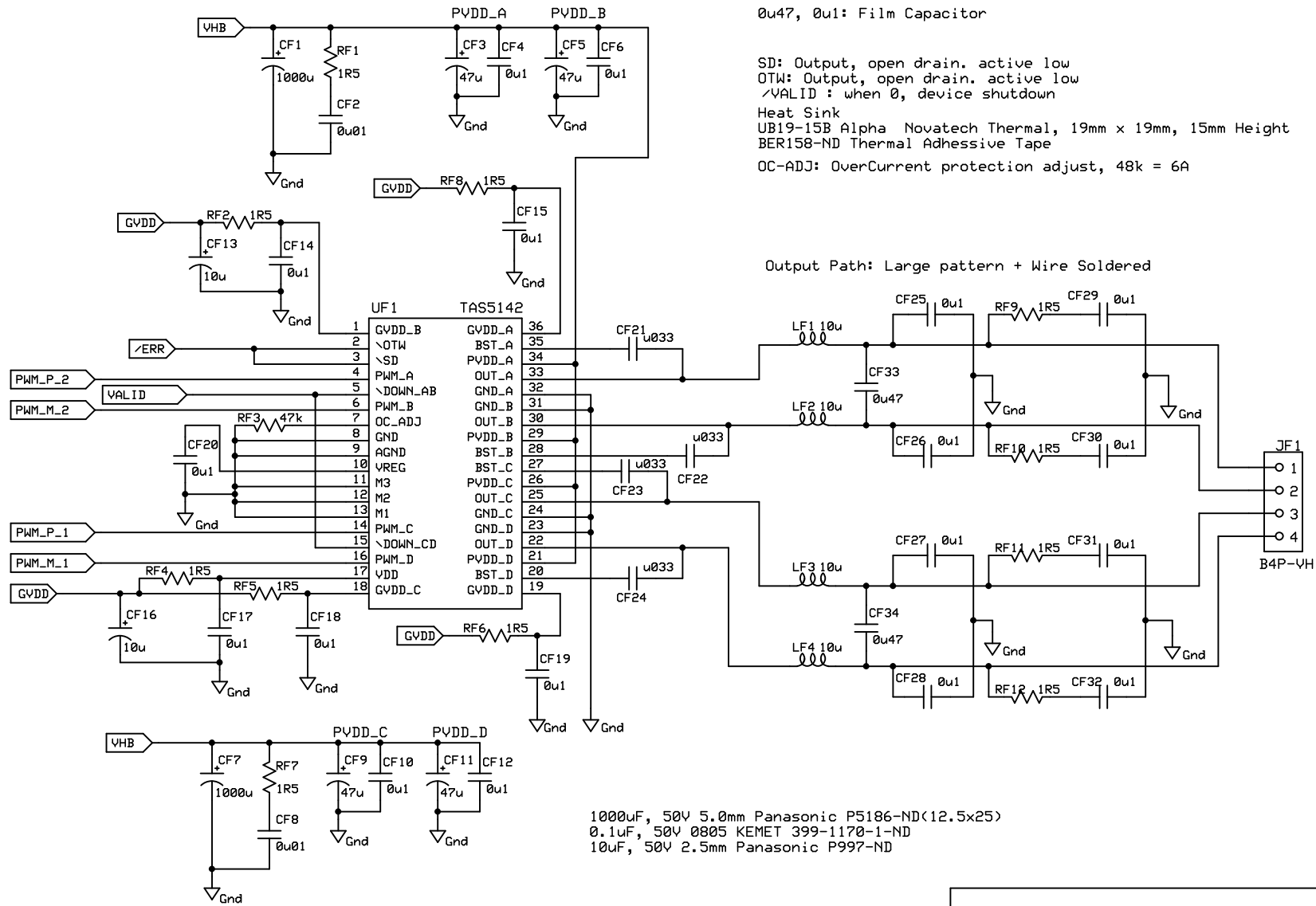
TAS5518

VHB: 50V Rated
 Output: 50V Rated
 GVDD: 25V Rated
 0u47, 0u1: Film Capacitor

Output Filter: Panasonic P13502-ND
 Output Filter: Taiyo Yuden 587-1698-1-ND

SD: Output, open drain. active low
 OTW: Output, open drain. active low
 /VALID : when 0, device shutdown
 Heat Sink
 UB19-15B Alpha Novatech Thermal, 19mm x 19mm, 15mm Height
 BER158-ND Thermal Adhesive Tape
 OC-ADJ: OverCurrent protection adjust, 48k = 6A

Output Path: Large pattern + Wire Soldered



Sheet "F"

TAS5518 Amplifier

Rev 2.0

2007/07/15

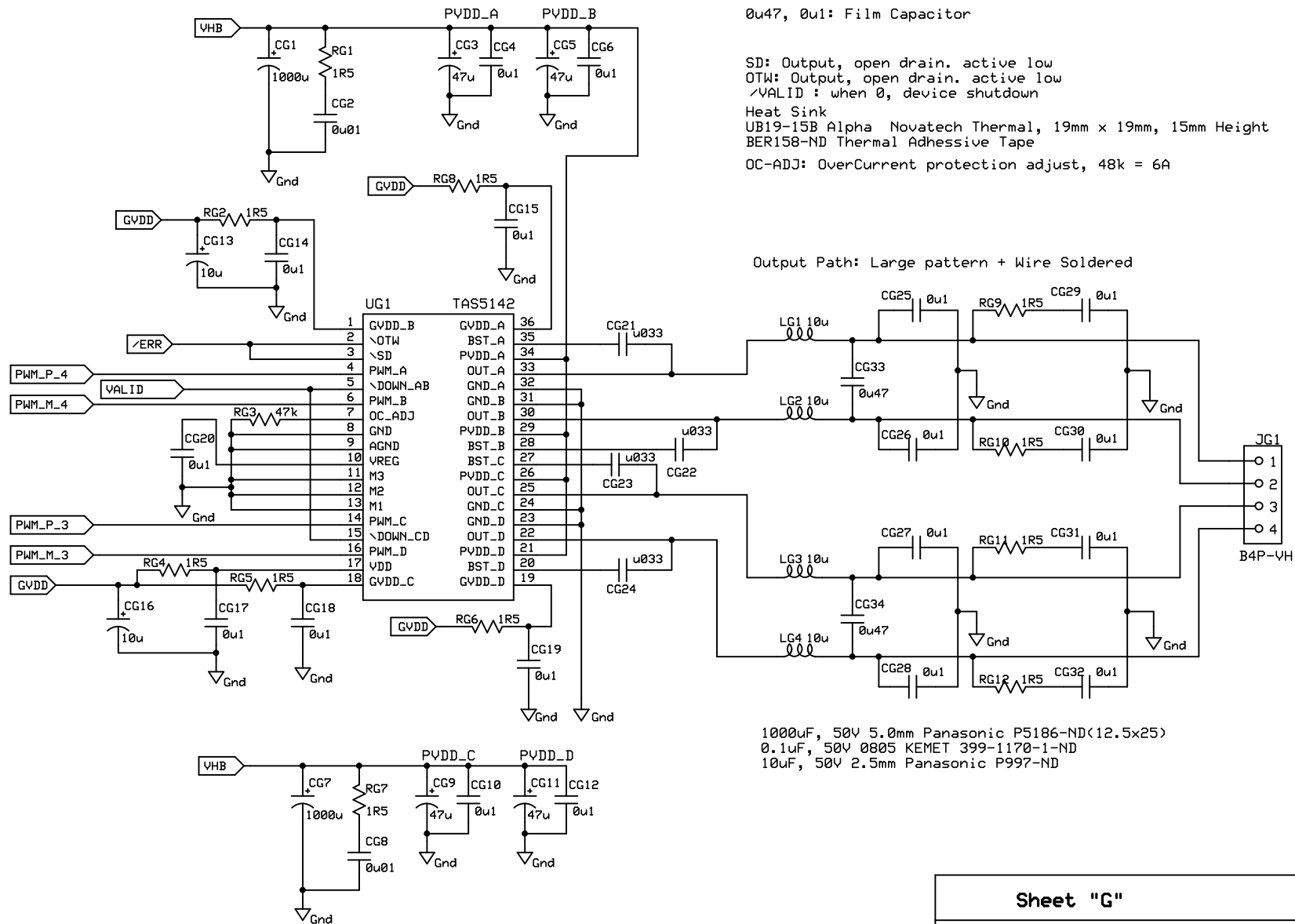
POWER1

VHB: 50V Rated
 Output: 50V Rated
 GVDD: 25V Rated
 0u47, 0u1: Film Capacitor

Output Filter: Panasonic P13502-ND
 Output Filter: Taiyo Yuden 587-1698-1-ND

SD: Output, open drain. active low
 OTW: Output, open drain. active low
 /VALID : when 0, device shutdown
 Heat Sink
 UB19-15B Alpha Novatech Thermal, 19mm x 19mm, 15mm Height
 BER158-ND Thermal Adhesive Tape
 OC-ADJ: OverCurrent protection adjust, 48k = 6A

Output Path: Large pattern + Wire Soldered



1000uF, 50V 5.0mm Panasonic P5186-ND(12.5x25)
 0.1uF, 50V 0805 KEMET 399-1170-1-ND
 10uF, 50V 2.5mm Panasonic P997-ND

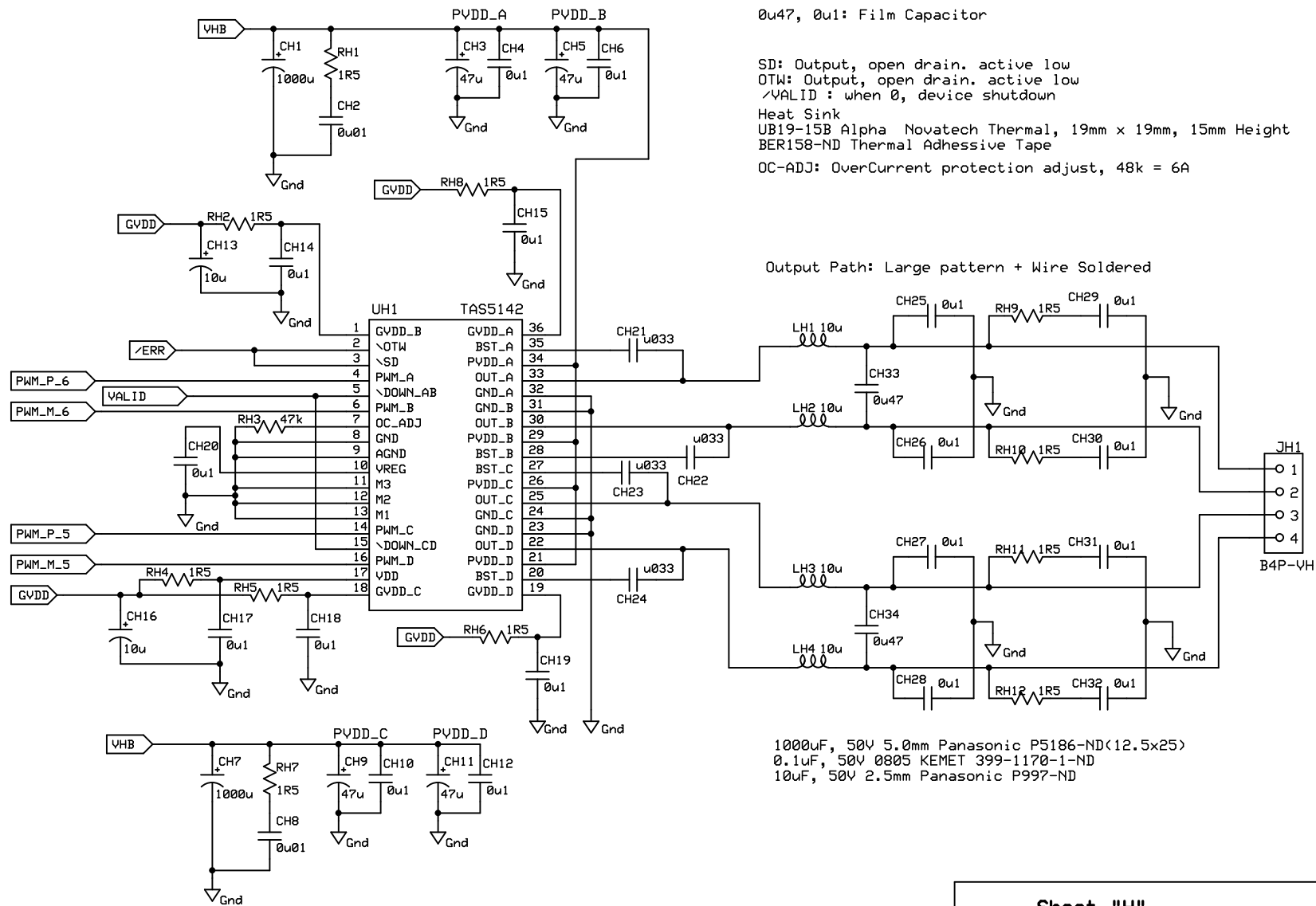
Sheet "G"

TAS5518 Amplifier

Rev 2.0

2007/07/15

POWER2



VHB: 50V Rated
 Output: 50V Rated
 GVDD: 25V Rated
 0u47, 0u1: Film Capacitor

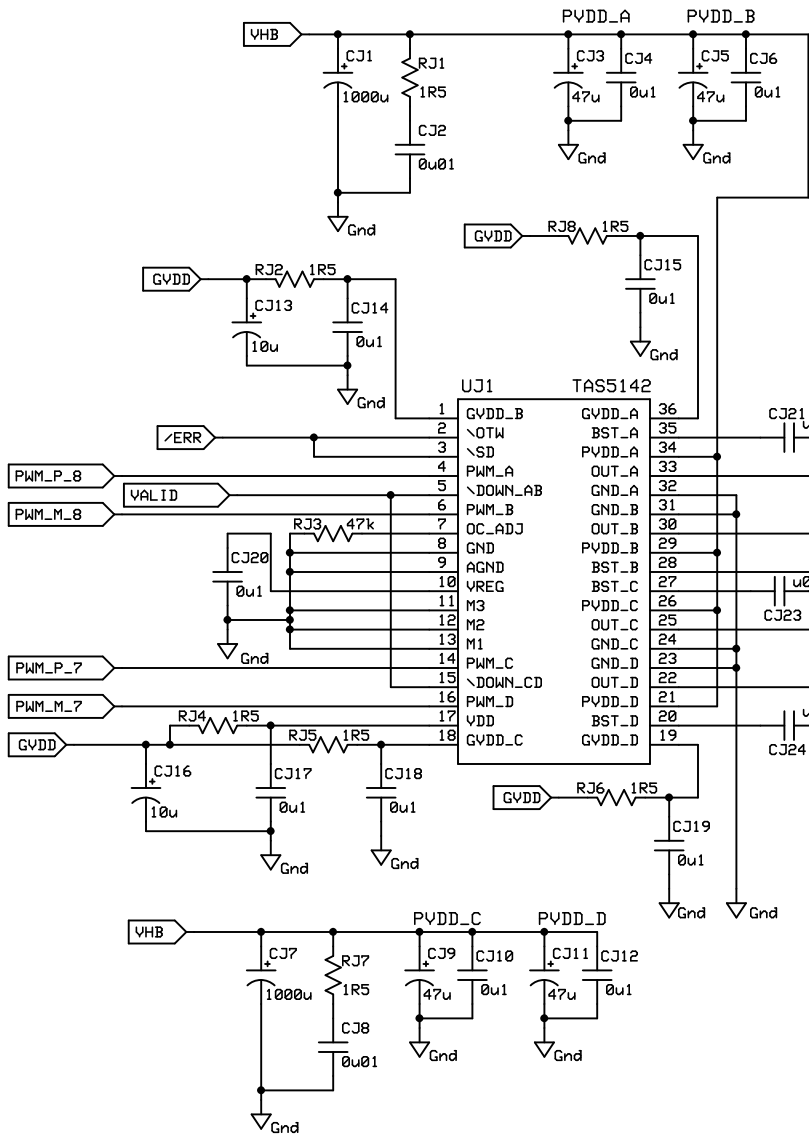
Output Filter: Panasonic P13502-ND
 Output Filter: Taiyo Yuden 587-1698-1-ND

SD: Output, open drain, active low
 OTW: Output, open drain, active low
 /VALID : when 0, device shutdown
 Heat Sink
 UB19-15B Alpha Novatech Thermal, 19mm x 19mm, 15mm Height
 BER158-ND Thermal Adhesive Tape
 OC-ADJ: OverCurrent protection adjust, 48k = 6A

Output Path: Large pattern + Wire Soldered

1000uF, 50V 5.0mm Panasonic P5186-ND(12.5x25)
 0.1uF, 50V 0805 KEMET 399-1170-1-ND
 10uF, 50V 2.5mm Panasonic P997-ND

Sheet "H"	
TAS5518 Amplifier	
Rev 2.0	POWER3
2007/07/15	



VHB: 50V Rated
 Output: 50V Rated
 GVDD: 25V Rated
 0u47, 0u1: Film Capacitor

SD: Output, open drain. active low
 OTW: Output, open drain. active low
 /VALID : when 0, device shutdown
 Heat Sink
 UB19-15B Alpha Novatech Thermal, 19mm x 19mm, 15mm Height
 BER158-ND Thermal Adhesive Tape
 OC-ADJ: OverCurrent protection adjust, 48k = 6A

Output Path: Large pattern + Wire Soldered

1000uF, 50V 5.0mm Panasonic P5186-ND(12.5x25)
 0.1uF, 50V 0805 KEMET 399-1170-1-ND
 10uF, 50V 2.5mm Panasonic P997-ND

Sheet "J"	
TAS5518 Amplifier	
Rev 2.0	POWER4
2007/07/15	