## A DSP Based Class D Audio Amplifier by YU3MA DRAFT VERSION 100v SMD Kondenzatori 100v SMD Kondenzatori +3V3 ▲ 1 9 9 9 9 CON1 100R 2 ICSP-PORT C25 C26 DGND +3V3**↑** 0.1uf R10 4.7uf 1000uF 10R P1 R1 1K AGND 1<sub>1uf</sub> GND DGND AGND MCLR N4937 R2 1k DGND 🗸 ANO/VREF+/CN2/RAO DGND R25 AN9/DAC1LN/RP15/CN11/PMCS1/RB15 5R 1K Q1 PGD1/EMUD1/AN2/C2IN-/RP0/CN4/RB0 AN10/DAC1LP/RTCC/RP14/CN12/PMWR/RB14 DGND PGC1/EMUC1/AN3/C2IN+/RP1/CN5/RB1 AN11/DAC1RN/RP13/CN13/PMRD/RB13 AN4/C1IN-/RP2/CN6/RB2 AN12/DAC1RP/RP12/CN14/PMD0/RB12 BLO AGND<sub>4</sub> AN5/C1IN+/RP3/CN7/RB3 PGC2/FMUC2/TMS/RP11/CN15/PMD1/RB11 VSS BLS PGD2/EMUD2/TDI/RP10/CN16/PMD2/RB10 BLI VDD C17 OSCI/CLKI/CN30/RA2 VCAP/VDDCORE DGND 🕹 ALI R26 10R VCC R20 R21 5R SR OSCO/CLKO/CN29/PMA0/RA3 AHI ALS → DGND SOSCI/RP4/CN1/PMBE/RB4 TDO/SDA1/RP9/CN21/PMD3/RB9 HDEL ALO SOSCO/T1CK/CN0/PMA1/RA4 TCK/SCL1/RP8/CN22/PMD4/RB8 LDEL AHS C18 5R AGND AGND AHB AHO C10 C11 R15 5R HIP4081AIBZ DGND 🗸 PGD3/EMUD3/ASDA1/RP5/CN27/PMD7/RB5 PGC3/EMUC3/ASCL1/RP6/CN24/PMD6/RB6 dsPIC33F DGND DSPIC33F1XXXGP802SMT R14 5R D3 1N4937 DGND 🕁 C19 0.1uf 0 R16 AGND DGND 🕁 DGND 🗸 P3 P4 AGND CON4 +3V3 ^ **Amplifier features** - DSP digital PWM modlator - Open loop design Full bridge output stage3-level PWM modulation - Digital Input Signal clipping ihdicator A DSP Based Class D Audio Amplifier by YU3MA - Over current speaker protection http://yu3ma.net - Adjustable death-time - High efficiency D-Class-D TITLE: - Compact design without headsink Document Number: REV: Date: 11/21/2016 10:12 PM Sheet: