

AMP32 kit

Component	Q	Type	Pos
Bag 0 AMP32 PCB	1	-	PCB
<i>Comment:</i>			
<i>Spec: Double weight copper</i>			
Bag 1 Cap 50V Elect 3.3uF Low ESR D5	2	hmt	C14,C15
<i>Comment: Input DC blocking</i>			
<i>Spec: Low ESR 3.3uF 10V D5 RM2</i>			
Bag 1 Cap 25V Cer 1uF X7R 10% 1206	1	smt	C5
<i>Comment: Charge pump cap</i>			
<i>Spec: X7R 16V</i>			
Bag 1 Cap 16V Elect 330uF U-low ESR D8	2	hmt	C18,C19
<i>Comment: Close-up supply capacitors</i>			
<i>Spec: U-low ESR 16V 220 uF, max 10 mm tall</i>			
Bag 1 Cap 25V Elect 10uF std Low Prof	1	hmt	C2
<i>Comment: 5V bulk cap</i>			
<i>Spec: 10uF min 10V</i>			
Bag 1 Res 22.0Kohm 1/10W 0.5% 0805	4	smt	R2,R4,R5,R6
<i>Comment: Input and input feedback</i>			
<i>Spec: Low noise 1%</i>			
Bag 1 Cap 50V Cer 10000pF X7R 0805	2	smt	C29,C30
<i>Comment: Output speaker cables ESR damping</i>			
<i>Spec: X7R 0805 0.01 uF</i>			
Bag 2 Cap 50V Cer 0.1uF X7R 0805	8	smt	C1,C3,C7,C9(=C17),C16,C20,C26,C50
<i>Comment: Decoupling</i>			
<i>Spec: X7R 0805 25V</i>			
Bag 2 Ferrite chip 60 Ohm 3000mA 0805	1	smt	L11
<i>Comment: Separates AGND <=> GND</i>			
<i>Spec: HF choke 60 to 300 ohm 100MHz 0805</i>			
Bag 2 Res 10R 1/4W 1% 1206	2	smt	R9,R10
<i>Comment: Output filter</i>			
<i>Spec: 10 ohm 0.25W</i>			
Bag 2 Cap 50V Cer 0.22uF X7R 0805	2	smt	C12,C13
<i>Comment: Output filter</i>			
<i>Spec: 0.22uF 25V X7R 0805</i>			
Bag 2 Cap 25V Cer 0.47uF 10% X7R 0805	4	smt	C22,C25,C27,C28
<i>Comment: Output filter</i>			
<i>Spec: 0.47uF 25V X7R 0805</i>			
Bag 2 Res 1.0Mohm 1/8W 5% 0805	1	smt	R1
<i>Comment: Pull-up for sleep pin</i>			
<i>Spec: Between 470K and 1.2 M 0805</i>			
Bag 3 Res 47Kohm 1/10W 0.5% 0805	2	smt	(R2,R4,R5,R6 alternative values)
<i>Comment: Input Feedback</i>			
<i>Spec: Low Noise 1% alternate value</i>			
Bag 3 Cap 50V Cer 1000pF X7R 0805	1	smt	C21
<i>Comment: Power supp ESR damping</i>			
<i>Spec: X7R or NPO 0805</i>			
Bag 3 Cap 50V Cer 100pF NP0 0805	2	smt	C23,C24
<i>Comment: Input cable EMI reduction</i>			

Spec: NPO 100pF 0805

Bag 3 Res 8.2Kohm 1/10W 0.5% 0805 1 smt R7
Comment: REF voltage
Spec: 8.2Kohm 1% 0805

Bag 4 Res 5.6Kohm 1/10W 0.5% 0805 1 smt R3
Comment: Current limiting for LED
Spec: 2 mA from 12V 0805, see LED spec.

Bag 4 Ferrite 6A 50 ohm 1206 SMD 1 smt L10
Comment: Power supp EMI damping
Spec: 6A Ferrite choke 50-100 Ohm at 100MHz

Bag 4 Cap 10V Cer 2.2uF 10% X7R 0805 2 smt C14,C15 alternative type
Comment: Input DC blocking capacitors alternative type
Spec: X7R 10V 0805

Bag 4 Dual inductor 10uH 5A SMD 2 smt L1,L2
Comment: Output filter
Spec: 5A, Good linearity, non-standard footprint

Bag 5 Tripath TA2021B 1 smt[⊠] U1
Comment: Main Tripath chip
Spec:

Bag 5 LED 3mm Hi-eff Red Diffused 1 hmt[⊠] Off board
Comment: MUTE indicator
Spec: 2 to 3 mA radial LED red, diffused

Bag 5 Diode Schottky 1A 60V SMA 8 smt[⊠] D5,D6,D7,D8,,D9,D10,D11,D12
Comment: Output clamping
Spec: 30V, 1A Ultra-fast or Schottky

Bag 5 MOSFET N-ch 115mA 60V SOT23 (702) 1 smt[⊠] Q3
Comment: LED driver
Spec: N-chan FET 25V, 50 mA SOT23 package

(c) www.41hz.com

Notes:
[⊠] = ESD sensitive
hmt=Hole Mount
smt=Surface Mount