

MINI24/96 (CS8416+AK4393/6) BOM

Position	Role	Value	Manufacturer	Type	Value	Notes	RS Components	Distelec	Mouser
OpAmp Positive PS									
C24	Smoothing	2200 uF 25V	Nichicon	FW	2200uF 63V				647-UFW1J222MHD
C12	C24 Bypass	100 nF 50V			Position left void				
U9	15V Regulator	L7815CT	On Semiconductor	MC7812CTG	-		516-4834	647324	863-MC7812CTG
NEW	TO220 Heatsink		Fischer	TO-220	FK237SA2200	MANDATORY	189-9097	652469	532-576802B00 (**)
C38	15V Regulator C Out	330uF 25V	Elna	RFS (Silmic II)	100 uF 50V				
C14	OpAmp Decoupling	100 nF 50V	Elna	ROA (Cerafine)	47 uF 25V				
OpAmp Negative PS									
C25	Smoothing	2200 uF 25V	Nichicon	FW	2200uF 63V				647-UFW1J222MHD
C15	C25 Bypass	100 nF 50V			Position left void				
U10	-15V Regulator	L7915CT	On Semiconductor	MC7912CTG	-		516-6212	644639	863-MC7912CTG
C39	-15V Regulator C Out	330uF 25V	Elna	RFS (Silmic II)	100 uF 50V				
C17	OpAmp Decoupling	100 nF 50V	Elna	ROA (Cerafine)	47 uF 25V				
Signal Path (Common)									
C1	SPDIF Coupling	10 nF 50V	Wima	FKP2	10 nF 63V		115-758 (10 Pack)	828229	505-FKP20.01/63/2.5
C46-C47	LPF	3300 pF	Wima	FKP2	3300 pF 63V		115-720 (10 Pack)	828226	505-FKP23300/63/2.5
U3	Opamp	NE5532	Texas Instruments	OPA827	x2 on BrownDog	Alt.: OPA627, OPA2211, OP275, OPA2132	709-2097		595-OPA827AID
CNEW	OPA827 V+V- Decoupling	NEW	Wima	FKP2	10 nF 63V		115-758 (10 Pack)	828229	505-FKP20.01/63/2.5
Signal Path (AK4393/AK4395)									
R24-R34	LPF	1KOhm 1/4W	PRP	PR9372	1KOhm 1/4W		707-7666 (Carbon)		
C40, C41, C42, C43	LPF	1000 pF	Wima	FKP2	1000 pF 100V		484-2038 (10 Pack)	828223	505-FKP21000/100/2.5
Signal Path (AK4396)									
R24, R26, R30, R32, R23, R28, R29, R34	LPF	2.4 Kohm 1/4W	PRP	PR9372	2.2 Kohm 1/4W	Alt: Carbon Film matched <1%, SMA0207 0.1%	707-7694 (10 Pack) RS	714682 SMA0207 0.1%	
R25, R27, R31, R33	LPF	150 Ohm 1/4W	Takman	REX	150 Ohm 1/4W	Best: Riken 160 Ohm 1/2W Alt: PRP, Carbon Film matched <1%			
C40, C41, C42, C43	LPF	680 pF	Wima	FKP2	680 pF 100V		484-2022 (10 Pack)	828222	505-FKP2680/100/2.5
Digital 3.3V (CS8416 & AK439x)									
C23	Smoothing	2200 uF 25V	Nichicon	FW	2200uF 63V				647-UFW1J222MHD
C6	C23 Bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V			820344	
U4	9V Regulator	L7809CT	On Semiconductor	MC7809CTG	-		516-4812	644606	863-MC7809ACTG
C27	9V Regulator C Out	10 uF 16V	BC Components	038	100 uF 50V		684-2018 (5 Pack)		647-UFW1H101MPD Nichicon FW 100uF 50V (**)
C8	C27 bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V			820344	
C29	3.3V Regulator C Out	10 uF 16V	BC Components	038	47 uF 63V		684-2074 (5 Pack)		647-UFW1J470MED Nichicon FW 47uF 63V (**)
C9	C27 bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 63V			820344	
Analog 3.3V (CS8416)									
C34	3.3V Regulator C Out	10 uF 16V	BC Components	038	47 uF 63V		684-2074 (5 Pack)		647-UFW1J470MED Nichicon FW 47uF 63V (**)
C21	C34 Bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V			820344	
Analog 5V (AK439x)									
C31	5V Regulator C Out	10 uF 16V	Elna	ROA (Cerafine)	47 uF 25V	Best: Blackgate STD 22uF 16V			
C11	C31 Bypass	100 nF 50V			Position left void				
CS8416 Decoupling									
C2	RXN Decoupling	10 nF 50V			Keep the original one				
C3	VA Decoupling	100 nF 50V	BC Components	038	100 uF 50V	Alt: SEPC 180uF 16V, LS 150uF 10V, LF 100uF 16V	684-2018 (5 Pack)	813008 Sanyo SEPC 100 16V	647-UFW1H101MPD Nichicon FW 100uF 50V (**)
C36	CRIP	1 nF 50V	Wima	FKP2	1000 pF 100V				
C5	CFILT	22 nF 50V			Keep the original one				
C28	VD Decoupling	10 uF 16V	Nichicon	LF	100 uF 16V	Alt: SEPC 180uF 16V, LS 150uF 10V	714-9076 (5 Pack) Nichicon LS 100uF 16V	813008 Sanyo SEPC 100 16V	647-PLF1C101MDL4 Nichicon LF 100uF 16V
C4	VD Decoupling HF	10 nF 50V			Position left void				
AK4393/6 Decoupling									
C30	DVDD Decoupling	10 uF 16V	Nichicon	LF	100 uF 16V	Alt: SEPC 180uF 16V, LS 150uF 10V	714-9076 (5 Pack) Nichicon LS 100uF 16V	813008 Sanyo SEPC 100 16V	647-PLF1C101MDL4 Nichicon LF 100uF 16V
C18	DVDD Decoupling HF	100 nF 50V			Position left void				
C32	AVDD Decoupling	10 uF 16V	Elna	ROA (Cerafine)	10 uF 50V				
C19	AVDD Decoupling HF	100 nF 50V			Position left void				
C33	VREF Decoupling	10 uF 16V	Elna	ROA (Cerafine)	10 uF 50V				
C20	VREF Decoupling HF	100 nF 50V			Position left void				
C35	VCOM Decoupling	10 uF 16V	Elna	ROA (Cerafine)	10 uF 50V				
C22	VCOM Decoupling HF	100 nF 50V			Keep the original ceramic				

** not tested

Evov-Rifa SMR could be replaced with Panasonic ECHU (SMD but 4,8mm long), both have PPS dielectric which is best for PS bypassing, sometimes lacks bass and a ceramic is preferred

For all opamps check on eBay: they could be found much cheaper!

Bordeaux text indicates parts to be bought from 'boutique' stores like PartsConnexion, HiFi Collective

Order codes are selected by availability, often an alternate part is indicated instead of the best one