

PCB1	45.0X52.0X0.8	1	
PCB2	41.5X28.5X0.8	1	
CAPACITOR	CAP CHIP CERAMIC 105	1808	C25
CAPACITOR	CAP CHIP CERAMIC 334	2012	C8, C17
CAPACITOR	CAP CHIP CERAMIC 104	1808	C1, C3, C4, C7, C15, C21, C23, C31, C38, C41
CAPACITOR	CAP CHIP CERAMIC 223	2012	C46, C88, C94
CAPACITOR	CAP CHIP CERAMIC 103	1808	C28, C30
CAPACITOR	CAP CHIP CERAMIC 102	1808	C2, C9, C11, C14, C18, C20, C24, C28, C28
CAPACITOR	CAP CHIP CERAMIC 560P	1808	C82, C89, C72, C95
CAPACITOR	CAP CHIP CERAMIC 270P	1808	C22, C48, C56, C95, C97, C98, C93, C96
CAPACITOR	CAP CHIP CERAMIC 270P	1808	C75, C78
CAPACITOR	CAP CHIP CERAMIC 270P	1808	C54
CAPACITOR	CAP CHIP CERAMIC 82P	1808	C78, C79
CAPACITOR	CAP CHIP CERAMIC 82P	1808	C58, C99, C90, C90, C91
CAPACITOR	CAP CHIP CERAMIC 12P	1808	C12, C17
CAPACITOR	CAP CHIP CERAMIC 10P	1808	C46, C53, C54
CAPACITOR	CAP CHIP CERAMIC 8.2P	1808	C16, C19, C44, C45, C70, C71, C73, C74
CAPACITOR	TANTALCAP 100U	1808	C52
CAPACITOR	TANTALCAP 22U	B	C8, C10, C95, C81
CAPACITOR	TANTALCAP 4.7U	C	C5, C13, C57
CAPACITOR	TANTALCAP 3.3U	A	C92, C47, C64, C92
CAPACITOR	CHIP 1M	1808	C33, C63
CAPACITOR	CHIP 500K	1808	R42
CAPACITOR	CHIP 100K	1808	R16, R20, R43, R59, R71
CAPACITOR	CHIP 51K	1808	R14, R28, R39, R40, R55, R56
CAPACITOR	CHIP 24K	1808	R1, R8, R18, R49, R50
CAPACITOR	CHIP 22K	1808	R19
CAPACITOR	CHIP 15K	1808	R22
CAPACITOR	CHIP 13K	1808	R12, R68, R89
CAPACITOR	CHIP 10K	1808	R78, R79
CAPACITOR	CHIP 5K	1808	R24
CAPACITOR	CHIP 4.7K	1808	R2, R4, R7, R17, R31, R41, R48, R75
CAPACITOR	CHIP 3.9K	1808	R23, R26, R72, R73, R76, R77, R80, R81
CAPACITOR	CHIP 2.2K	1808	R51, R52
CAPACITOR	CHIP 1.5K	1808	R27, R38
CAPACITOR	CHIP 1K	1808	R28
CAPACITOR	CHIP 1K	1808	R30, R53, R54
CAPACITOR	CHIP 1K	1808	R44, R92, R95
CAPACITOR	CHIP 1K	1808	R5, R6, R10, R11, R21, R25, R57, R98
CAPACITOR	CHIP 100	1808	R82
CAPACITOR	CHIP 33	1808	R37, R47, R74, R83
CAPACITOR	CHIP 8.8	1808	R45, R46, R80, R84
CAPACITOR	CHIP 81K(1%)	1808	R70
CAPACITOR	CHIP 120K(1%)	1808	R9, R15
CAPACITOR	CHIP 120K(1%)	1808	R3, R13
CAPACITOR	NETWORK ARRAY 200K/4EA	1808	R98, R97, R98
CAPACITOR	NETWORK ARRAY 100K/4EA	1808	RP1, RP3
CAPACITOR	NETWORK ARRAY 10K/4EA	1808	RP4
CAPACITOR	NETWORK ARRAY 1K/4EA	1808	RP2
CAPACITOR	NETWORK ARRAY 101/4EA	1808	RP5
CAPACITOR	STP1(87/250)	1808	S1, S2, S3, S4, S7, S8, S9, S10, S11
CAPACITOR	SKQ-302(250)	1808	S5, S8
CAPACITOR	SKOLC(E010Q220)	1808	SW1
CAPACITOR	SSM120	1808	
CAPACITOR	SSP1280A	1808	
CAPACITOR	SSSS&S-501	1808	
CAPACITOR	MBR0620	1808	D1, D4, D5, D6, D7
CAPACITOR	KDS184	1808	D2, D8
CAPACITOR	1M4148	1808	D3
CAPACITOR	KTC3875S	1808	O1, O2, O3
CAPACITOR	100H(MAX)170S(800)(800)	1808	L1

BOM

Component Name	Part Number	Quantity	Location	Notes
CHIP INDUCTOR	3.3uH (MAX1705&applicable)	1	L5	
CHIP INDUCTOR	22uH (MAX1705&applicable)	2	L2, L4	
CHIP INDUCTOR	1uH	1	L1	
CHIP INDUCTOR	FCI3216-1R0K(1uH)	1	L3	
CHIP INDUCTOR	FCI3216-1471K(470uH)	1	L4	
LCD DISPLAY	LCD_P0184044	1	U5	
LCD DRIVER	HT16218	1	U7	
EL LAMP	EL_LAMP	1	U6	
DC-DC CONVERTER	MAX1705	1	U3	
EL LAMP DRIVER	HY828081	1	U8	
FET SWITCH	FDG8325L0	2	U1, U2	
STEREO AUDIO DAC	DAC3560A	1	U12	
MP3 LAYER3 DECODER	MAS3907D	1	U14	
REGULATOR	MIC5205-3.3	1	U10	
REGULATOR	MAS9124A-1.3.3V	1	U4	
MCU	PIC17C156A-18PPT	1	U6	
TRANSCIEVER(3-STATE)	MC74VCG244	1	U13	
USBFPGA	GD530C8001	1	U11	
FLASH MEMORY	KM29U128T	1	Y1	
X-TAL	16.0 MHz	1	Y3	
X-TAL	48.0 MHz	1	Y2	
X-TAL	14.725 MHz	1	J/P2	
MMC SOCKET	8PIN MMC(2SLOTS)	1	J2	
HEADPHONE JACK	CON7	1	H41, H42	H:5.5mm
CONNECT 10PIN -	PIN:151001 10PIN	2	H81, H82	H:5.5mm
CONNECT 10PIN +	PIN:151001 10PIN	2	H43	H:5.5mm
CONNECT 20PIN -	PIN:151001 20PIN	1	H83	H:5.5mm
CONNECT 20PIN +	PIN:151001 20PIN	1	H83	H:5.5mm

## Operation Description

The operation description of the MP3 Player are :

1. MP3 File Download : Download the MP3 files to the Flash Memory or MMC Memory of MP3 Player from the PC via USB Interface.
  
  2. Player Operation : MP3 player operates according to the each key function.
  
  3. Operation principle of MP3 Play :
    - 3-1) Main function is controlled by RISC 8bit CPU. The CPU reads MP3 files which is downloaded to each memory, and transmit the MP3 files to Audio Decoder.
    - 3-2) Audio Decoder archives the compressed MP3 files, and send it to the D/A Converter.
    - 3-3) D/A Converter converts the digital data received from the Audio Decoder to Analog Data, and then transfer it to the earphone.
    - 3-4) Earphone sounds the analog data received from the D/A converter.
  
  4. Others
    - 4-1) EL LAMP : operates when user press the key.
    - 4-2) LCD Driver and LCD display : Displays each key function when each key is pressed.
-