Application Circuit of Low Power Consumption Op-Amp TC75S102F

BOM List

RD229-BOM-01

TOSHIBA ELECTRONIC DEVICES & STORAGE CORPORATION

2022-11-18
Rev.1

Contents

1. Design A1

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D4	2		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
4	OP1	1		TC75S102F	TOSHIBA	Op-Amp	SMV		
5	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
6	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	
7	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
8	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
9	R4	1				Jumper, 1 A		1.6 x 0.8 (0603)	
10	R5	1	2.2 MΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
11	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
12	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
13	C1, C2	2	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
14	C3	1	0.1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
15	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	
16	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
17	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
18	JP1, JP4	2				Jumper, 1 A		1.6 x 0.8 (0603)	
19	D2	1		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		Not Mounted
20	OP2	1		TC75S102F	TOSHIBA	Op-Amp	SMV		Not Mounted
21	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	Not Mounted
22	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	Not Mounted
23	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	Not Mounted
24	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
25	R3	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
26	R6, R7, R8, R9, R10, R11, R15	7	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
27	C4, C5	2	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	Not Mounted
28	C7	1	4.7 µF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	Not Mounted
29	C8	1	10 µF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	Not Mounted
30	JP2, JP3, JP5	3				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

2. Design A2

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D4	2		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
4	OP1, OP2	2		TC75S102F	TOSHIBA	Op-Amp	SMV		
5	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
6	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
7	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	
8	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
9	R4	1				Jumper, 1 A		1.6 x 0.8 (0603)	
10	R5	1	2.2 MΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
11	R6, R7, R8, R9	4	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
12	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
13	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
14	C1, C2	2	1 μF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
15	C3	1	0.1 μF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
16	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	
17	C7	1	4.7 μF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	
18	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
19	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
20	JP1, JP5	2				Jumper, 1 A		1.6 x 0.8 (0603)	
21	D2	1		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		Not Mounted
22	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	Not Mounted
23	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	Not Mounted
24	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	Not Mounted
25	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
26	R3	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
27	R10, R11, R15	3	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
28	C4, C5	2	1 μF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	Not Mounted
29	C8	1	10 μF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	Not Mounted
30	JP2, JP3, JP4	3				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

3. Design A3

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D2, D4	3		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
4	OP1, OP2	2		TC75S102F	TOSHIBA	Op-Amp	SMV		
5	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
6	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
7	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	
8	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	
9	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
10	R4	1				Jumper, 1 A		1.6 x 0.8 (0603)	
11	R5	1	2.2 MΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
12	R6, R7, R8, R9	4	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
13	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
14	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
15	C1, C2	2	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
16	C3	1	0.1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
17	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	
18	C7	1	4.7 µF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	
19	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
20	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
21	JP1, JP5	2				Jumper, 1 A		1.6 x 0.8 (0603)	
22	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	Not Mounted
23	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	Not Mounted
24	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
25	R3	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
26	R10, R11, R15	3	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
27	C4, C5	2	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	Not Mounted
28	C8	1	10 µF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	Not Mounted
29	JP2, JP3, JP4	3				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

4. Design B1

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D4	2		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
4	OP1	1		TC75S102F	TOSHIBA	Op-Amp	SMV		
5	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
6	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	
7	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
8	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
9	R4	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
10	R5	1				Jumper, 1 A		1.6 x 0.8 (0603)	
11	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
12	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
13	C1, C2	2	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
14	C3	1	0.1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
15	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
16	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
17	JP1, JP2, JP4	3				Jumper, 1 A		1.6 x 0.8 (0603)	
18	D2	1		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		Not Mounted
19	OP2	1		TC75S102F	TOSHIBA	Op-Amp	SMV		Not Mounted
20	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	Not Mounted
21	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	Not Mounted
22	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	Not Mounted
23	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
24	R3	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
25	R6, R7, R8, R9, R10, R11, R15	7	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
26	C4, C5	2	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	Not Mounted
27	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	Not Mounted
28	C7	1	4.7 µF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	Not Mounted
29	C8	1	10 µF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	Not Mounted
30	JP3, JP5	2				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

5. Design B2

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D4	2		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
4	OP1, OP2	2		TC75S102F	TOSHIBA	Op-Amp	SMV		
5	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
6	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	
7	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
8	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
9	R4	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
10	R5	1				Jumper, 1 A		1.6 x 0.8 (0603)	
11	R6, R7, R8, R9	4	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
12	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
13	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
14	C1, C2	2	1 μF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
15	C3	1	0.1 μF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
16	C7	1	4.7 μF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	
17	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
18	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
19	JP1, JP2, JP5	3				Jumper, 1 A		1.6 x 0.8 (0603)	
20	D2	1		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		Not Mounted
21	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	Not Mounted
22	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	Not Mounted
23	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	Not Mounted
24	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
25	R3	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
26	R10, R11, R15	3	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
27	C4, C5	2	1 μF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	Not Mounted
28	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	Not Mounted
29	C8	1	10 μF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	Not Mounted
30	JP3, JP4	2				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

6. Design B3

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D2, D4	3		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
4	OP1, OP2	2		TC75S102F	TOSHIBA	Op-Amp	SMV		
5	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
6	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	
7	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
8	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	
9	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
10	R4	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
11	R5	1				Jumper, 1 A		1.6 x 0.8 (0603)	
12	R6, R7, R8, R9	4	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
13	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
14	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
15	C1, C2	2	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
16	C3	1	0.1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
17	C7	1	4.7 µF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	
18	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
19	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
20	JP1, JP2, JP5	3				Jumper, 1 A		1.6 x 0.8 (0603)	
21	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	Not Mounted
22	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	Not Mounted
23	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
24	R3	1	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
25	R10, R11, R15	3	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
26	C4, C5	2	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	Not Mounted
27	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	Not Mounted
28	C8	1	10 µF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	Not Mounted
29	JP3, JP4	2				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

7. Design C1

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D4	2		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
4	OP1	1		TC75S102F	TOSHIBA	Op-Amp	SMV		
5	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
6	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
7	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	
8	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
9	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
10	R3, R4	2	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
11	R5	1	470 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
12	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
13	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
14	C1, C2, C4, C5	4	1 μF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
15	C3	1	0.1 μF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
16	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	
17	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
18	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
19	JP1, JP4	2				Jumper, 1 A		1.6 x 0.8 (0603)	
20	D2	1		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		Not Mounted
21	OP2	1		TC75S102F	TOSHIBA	Op-Amp	SMV		Not Mounted
22	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	Not Mounted
23	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	Not Mounted
24	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	Not Mounted
25	R6, R7, R8, R9, R10, R11, R15	7	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
26	C7	1	4.7 μF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	Not Mounted
27	C8	1	10 μF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	Not Mounted
28	JP2, JP3, JP5	3				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

8. Design C2

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D4	2		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
20	OP1, OP2	2		TC75S102F	TOSHIBA	Op-Amp	SMV		
21	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
18	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
19	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	
4	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
5	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
6	R3, R4	2	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
7	R5	1	470 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
8	R8, R10, R11, R15	4	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
9	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
10	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
11	C1, C2, C4, C5	4	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
12	C3	1	0.1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
13	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	
14	C8	1	10 µF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	
16	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
15	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
17	JP1, JP4	2				Jumper, 1 A		1.6 x 0.8 (0603)	
22	D2	1		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		Not Mounted
25	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	Not Mounted
27	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	Not Mounted
28	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	Not Mounted
23	R6, R7, R9	3	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
24	C7	1	4.7 µF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	Not Mounted
26	JP2, JP3, JP5	3				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

9. Design C3

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	Q1	1		SSM3K15AFU	TOSHIBA	N-ch MOSFET, 30 V, 100 mA	USM		
2	D1, D2, D4	3		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		
3	D3	1		CEZ5V6	TOSHIBA	Zener Diode, 5.6 V	ESC		
20	OP1, OP2	2		TC75S102F	TOSHIBA	Op-Amp	SMV		
22	U1	1		TCR3UF20A	TOSHIBA	LDO, 2 V	SMV		
18	LED1	1		APTD3216SURCK		Red LED, 1.95 V		3.2 x 1.6 (1206)	
19	M1	1		CMM_2718AT_42308_TR	CUI Devices	MEMS Microphone		2.75 x 1.85	
21	SM1	1		LR0GC02	Sharp	Solar Cell, 300 mW		67.5 x 51	
4	R1	1	1.5 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
5	R2	1	10 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
6	R3, R4	2	47 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
7	R5	1	470 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
8	R8, R10, R11, R15	4	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
9	R12, R13	2	5.1 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
10	R14	1	47 Ω			±5 %, 500 mW		2.0 x 1.25 (0805)	
11	C1, C2, C4, C5	4	1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
12	C3	1	0.1 µF			Ceramic, 6.3 V, ±10 %		1.0 x 0.5 (0402)	
13	C6	1	1000 pF			Ceramic, 50 V, ±5 %		1.0 x 0.5 (0402)	
14	C8	1	10 µF			Ceramic, 6.3 V, ±20 %		2.0 x 1.25 (0805)	
16	EDLC1	1	1 F	SE-5R5-D105VY	KAMCAP	Electric Double Layer Capacitor, 5.5 V, -20 % to +80 %		Through Hole	
15	CN1	1		UJC-HP-3-SMT-TR	CUI Devices	Connector		Through Hole	
17	JP1, JP4	2				Jumper, 1 A		1.6 x 0.8 (0603)	
25	S1	1		FSR400-S	Interlink Electronics	Pressure Sensor		Through Hole	Not Mounted
27	PD1	1		S7184	Hamamatsu Photonics	Photo Diode		7 x 5	Not Mounted
23	R6, R7, R9	3	100 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	Not Mounted
24	C7	1	4.7 µF			Ceramic, 6.3 V, ±10 %		2.0 x 1.25 (0805)	Not Mounted
26	JP2, JP3, JP5	3				Jumper, 1 A		1.6 x 0.8 (0603)	Not Mounted

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