

C. Bill Of Materials “BOM”

Below is a listing of the parts used in the TSDMTX-5V2-EVM. An excel spreadsheet file with this information is available on the Semtech website as an added convenience.

Item	Designator	Value	Detail	Manufacturer	Qty
REQUIRED CIRCUIT COMPONENTS					
1	C1, C6, C39	0603 4.7uF 6.3V	885012106005	WURTH Elektronik	3
2	C11, C48, C51	0402 10nF 50V	C1608X7R1H103K080AA	TDK	3
3	C12, C19, C20, C26, C27	1206 10uF 16V X7R	885012208069	WURTH Elektronik	5
4	C13, C14, C18, C25	0402 100nF 25V	C3225C0G2E104J250AA	TDK	4
5	C2, C3, C4, C5, C7, C38, C45, C49, C50	0402 100nF 10V	885012205018	WURTH Elektronik	9
6	C21, C34	0402 47nF 25V	GRM188R71E473KA01D	Murata	2
7	C23, C36	0603 2.7nF 25V	CC0603KRX7R9BB272	Yageo	2
8	C28, C29, C30, C31	1206 100nF 100V C0G	C3216C0G2A104K160AC	TDK	4
9	C37	0603 10uF 10V	C2012X5R1E106K085AC	TDK	1
10	C46	0603 1nF 100V X7R	GCM188R72A102KA37D	Murata	1
11	C43	1206 4.7nF 100V X7R	C3216C0G2A472K	TDK	1
12	C44	0402 33pF 10V	885012005010	WURTH Elektronik	1
13	C8, C47	0402 4.7nF 10V	885012205010	WURTH Elektronik	2
14	D1	Led Dual Color	APHB1608ZGSURKC	Kingbright	1
15	D3	USB protection	RCLAMP1255P	Semtech	1
16	D4	Zener Diode 5.1V	DDZ9689T-7	Diodes	1
17	D5	Schottky Diode	BAT54SW-7-F	Zetex	1
18	D6	Diode	BAS101S,215	NXP	1
19	J4	Micro-B USB, Receptacle, 5 Position, SMT and Trough-Hole	ZX62D-B-5P8	Hirose	1
20	J6	6.3uH 13A Q=80 Typ. RDC=0.017ohm	760308111	WURTH Elektronik	1
21	L1	Ferrite Bead 0603 600ohm	742863160	WURTH Elektronik	1
22	Q2, Q3, Q4, Q5	N-Channel Power MOSFET	BSZ065N03LS	Infineon	4
23	R1	0402 1R			1
24	R15	0603 0R02 1% 75 PPM/C	WSL0603R0200FEA	Vishay	1
25	R2, R39	0402 10K			2
26	R23, R29	0402 0R5			2
27	R24, R30	0603 2R			2
28	R26	0402 0R			1
29	R3	0402 220R			1
30	R32, R34	0402 7K5			2
31	R33	0603 100K			1
32	R35	0603 7K5			1
33	R36	0805 100K			1
34	R37	0402 2K7			1
35	R38	0402 75K			1
36	R4	0402 47K			1
37	R40	0402 1K			1
38	R6, R28	0402 100K			2
39	U4	Full-Bridge FET driver	TS61002	Semtech	1
40	U5	Current Sense Amplifier	TS94033	Semtech	1
41	Y1	Ceramic Resonator 8MHz	CSTCE8M00G55-R0	Murata	1
42	C41	0402 10nF 50V	C1608X7R1H103K080AA	TDK	1
43	C40	0603 1nF 100V X7R	GCM188R72A102KA37D	Murata	1

	Designator	Value	Detail	Manufacturer	Qty
OPTIONAL CIRCUIT COMPONENTS FOR PMA DEMODULATION					
44	C42	0402 220pF 10V	C0402C0G1C221J020BC	TDK	1
45	R31	0402 100K			1
46	R9, R11	0402 150R			2
47	U1	Wireless Power Transmitter Controller	TS80000-QFNR	Semtech	1
REQUIRED CIRCUIT COMPONENTS FOR 5V ONLY MODE					
48	R7	0402 1.5K			1
49	R16,R22	0402 0R			2
REQUIRED CIRCUIT COMPONENTS FOR 9V AND 5V MODE					
48	Q1	DUAL MOSFET	DMC3400SDW-7	Diodes	1
49	C15	10uF 16V 1206	885012208069		1
50	C16,C17	0402 100nF 25V			2
51	R7	0402 27K			1
52	R8	0402 1.5K			1
53	R10,R14,R17,R19,R21	0402 10K			5
54	R12	0402 100K			1
55	R13	0402 13K			1
56	R18	0402 15K			1
57	R20	0402 33K			1
58	R16,R22	NP			2
59	D4	Zener Diode 5.1V	DDZ9689T-7	Diodes	1
60	U2,U3	Linear Regulator	TS31023	Semtech	2
OPTIONAL CIRCUIT COMPONENTS FOR DEMO BOARD					
1	C22, C35	0603 2.2nF 25V C0G	CL10C222GA8NNNC	Samsung	2
2	C24, C33	0402 47pF 10V			2
3	C32	1206 C0G			1
4	C9, C10	0402 8pF 10V			2
5	J1	Header 1x5pin, 2.00mm, Male	951105-8622-AR	3M	1
6	J2	Header 1x4pin, 2.54mm, Male	68000-104HLF	FCI	1
7	J3	Led connector	950404-6102-AR	3M	1
8	J5	Coil Thermistor			1
9	R25, R27	0402 100K			2
10	R5	0402 10K			1

Attention:

1. C28/C29/C30/C31/C32 should be C0G capacitor for better thermal performance;
2. R15 should be resistor with 75PPM/C;

D. Board Layout Recommendations

The diagram below shows the locations of the components used in the TSDMTX-5V2-EVM PCB.