

Bill of Materials
TSW3085 Rev D

Item Number	Quantity	Note	Part Reference	Value	PCB Footprint	Mfr_Name	Mfr_Part_Number
1	17		C1 C2 C3 C4 C75 C155 C162 C215 C233 C234 C237 C242 C243 C245 C247 C302 C307	.01uF	0402	KEMET	C0402C103J3RACTU
2	19		C5 C6 C15 C17 C19 C20 C21 C22 C23 C24 C25 C26 C27 C29 C38 C41 C42 C43 C49	.22uF	0201	TAIYO YUDEN	JMK063BJ224MP-F
3	1		C7	0.01uF	0603	KEMET	C0603C103K1RACTU
4	1		C8	4.7uF	0603	AVX	06036D475KAT2A
5	17		C9 C133 C134 C143 C144 C145 C146 C147 C148 C149 C150 C161 C171 C172 C173 C304 C305	10uF	0805	MURATA	GRM21BR71A106KE51L
6	4		C13 C30 C40 C53	10uF	TANT_A	KEMET	T491A106M016AT
7	39		C34 C36 C52 C60 C65 C77 C78 C79 C80 C81 C82 C83 C84 C86 C87 C88 C89 C90 C97 C99 C100 C101 C102 C112 C113 C117 C119 C135 C138 C139 C153 C182 C250 C251 C253 C254 C301 C303 C337	.1uF	0402	MURATA	GRM155R71C104KA88D
8	6		C35 C47 C50 C175 C288 C289	1000pF	0402	AVX	04025C102JAT2A
9	1		C48	.1uF	0201	TAIYO YUDEN	JMK063BJ104KP-F
10	1		C59	10uF	0805	MURATA	GRM21BR61C106KE15L
11	9		C63 C72 C128 C178 C179 C180 C181 C298 C312	10uF	1206	MURATA	GRM31CR61E106KA12L
12	2		C64 C110	100pF	0402	MURATA	GRM1555C1H101JZ01B

13	12		C76 C111 C114 C115 C120 C164 C170 C174 C176 C238 C244 C246	1uF	0603	AVX	0603YC105KAT2A
14	1		C85	4.7uF	0402	TDK	C1005X5R0J475M
15	4		C95 C96 C259 C260	47pF	0402	TDK CORP	C1005C0G1H470G
16	1		C107	8.2pF	0402	AVX	04025A8R2CAT2A
17	0	DNI	C121 C122 C131 C132	.5pF	0402	MURATA	GRM1555C1HR50CZ01D_DNI
18	0	DNI	C125 C126	1.0pF	0402	Murata	GJM1555C1H1R0CB01D_DNI
19	1		C127	1500pF	0402	AVX	04025C152JAT2A
20	1		C152	47uF	tant_b	Kemet	T491B476M010AT
21	1		C154	1uF	0402	AVX	0402ZD105KAT2A
22	1		C156	.2pF	0402	Johanson Technology Inc	500R07S0R2BV4T
23	0	DNI	C157	.5pF	0402	Taiyo Yuden	UVK105CH0R5BW-F_DNI
24	1		C163	2.2uF	1206	TDK CORP	CGJ5L2X7R1E225K
25	2		C165 C167	22uF	1206	Murata	GRM31CR60J226KE19L
26	1		C166	33pF	0402	Johansen Technology	250R07S330GV4T
27	2		C169 C240	2.2uF	0603	TDK CORP	C1608X7R1A225K
28	0	DNI	C177 C300	.1uF	0402	MURATA	GRM155R71C104KA88D_DNI
29	4		C184 C185 C204 C205	3.3pF	0402	Murata	GJM1555C1H3R3CB01D
30	0	DNI	C186 C190 C206 C222	3.3pF	0402	MURATA	GJM1555C1H3R3CB01D_DNI
31	0	DNI	C187	100pF	0402	MURATA	GRM1555C1H101JZ01D_DNI
32	0	DNI	C191 C192 C193 C194 C195 C196 C197 C198 C199 C200 C216 C217 C218 C219 C220 C221	CAP NP_1	0402	DNI	DNI
33	0	DNI	C214 C227 C228 C229	1uF	0402	AVX	0402ZD105KAT2A_DNI
34	2		C249 C257	20pF	0402	MURATA	GRM1555C1H200JZ01B
35	2		C252 C255	3.3pF	0402	Murata	GRM1555C1H3R3CZ01D
36	1		C256	2.2uF	0805	TDK CORP	CGJ4J2X7R1A225K
37	1		C258	6.8pF	0402	Murata	GJM1555C1H6R8CB01D
38	2		C290 C291	4.7uF	tant_a	AVX	TAJA475K020R

39	1		C299	22pF	0402	JOHANSON TECH	500R07S220GV4T
40	1		C306	2.2uF	TANT_A	AVX	TAJA225K010RNJ
41	3		D1 D4 D5	LED GREEN	LED_0805	PANASONIC	LNJ306G5UUX
42	1		D2	LED BLUE	LED_0805	Lite On	LTST-C170TBKT
43	1		D3	LED AMBER	LED_0805	PANASONIC	LNJ406K54RX
44	0	DNI	F1	1 AMP FUSE	NANO_SMF	LITTELFUSE	0154001_DNI
45	0	DNI	F2	2 AMP 63V FAST SMD	1206	TE CONNECTIVITY	1206SFF200F/63-2_DNI
46	2		FB1 FB2	1K OHM @ 100MHz	1806	MURATA	BLM41PG102SN1L
47	1	OR EQUIVA LENT	FB8	31 OHM @ 100MHz	0805	STEWART	HI0805Q310R-10
48	5		FB10 FB12 FB18 FB19 FB20	68 OHM @ 100MHz	1206	PANASONIC	EXC-ML32A680U
49	8		FB22 FB24 FB33 FB34 FB35 FB36 FB39 FB40	1K OHM @ 100MHz	1810	Taiyo Yuden	FBMH4525HM102NT
50	0	DNI	FB23	600 OHMS @ 100MHz	0603	MURATA	BLM18AG601SN1D_DNI
51	1		FB26	120 OHM @ 100MHz	1206	MURATA	BLM31PG121SN1L
52	3		FB28 FB30 FB31	27uF	1206_BEAD_N FM31P	MURATA	NFM31PC276B0J3
53	1		J1	SMA END LAUNCH HEADER,	SMA_SMEL_D UAL_PSF- S01_250x215	Johnson Components	142-0711-821
54	1		J13	SMT, 180POS, HS GND PLANE	CON_SMVT_1 80POS_QTH_ SAMTEC_RT1	SAMTEC	QTH-090-01-L-D-A
55	5		J2 J3 J5 J6 J11	SMA THRU HOLE R/A	SMA_THRT_2 76X276	AMPHENOL CONNEX	132136
56	1		J4	CONN JACK PWR	CON_RAPC72 2_JACK_THVT _3	Switchcraft	RAPC722

57	1		J7	SMA END LAUNCH	SMA_SMEL_D UAL_PSF- S01_250x215	Johnson Components	142-0711-821
58	1		J10	SMP_PCB_S MT	smp_b120	Molex Inc.	0853050232
59	1		J12	SMA THRU HOLE	SMA_THVT_3 20x320	Johnson Components	142-0701-201
60	1		J14	USB_MINI_A B	CON_SMRT_U SBMNE20_F	JAE	DX3R005HN2E700
61	1		J15	HTSW-105-07- G-D	HDR_THVT_2 x5_100_M	SAMTEC	HTSW-105-07-G-D
62	5	SEE NOTES	JP1 JP2 JP3 JP4 JP5	HEADER, 3POS	HDR_THVT_1 x3_100_M	SAMTEC	HMTSW-103-07-G-S-.230
63	4		L1 L2 L3 L4	33nH	0402	COILCRAFT	0402CS-33NXJB
64	1		L5	5.6nH	0402	TOKO	LL1005-FHL5N6S
65	3		L7 L25 L26	2.2uH	LPS3015	Coilcraft	LPS3015-222ML
66	0	DNI	PP1	PROBE POINT	PROBE_POIN T_30PAD	N/A	N/A
67	1		Q1	CSD17313Q2	SON_8_2MMX 2MM_0P65MM	TI	CSD17313Q2
68	0	DNI	R1 R2 R3 R4 R7 R18 R93 R106 R133 R136 R137 R161 R163 R181 R185 R273 R274	0	0402	PANASONIC	ERJ-2GE0R00X_DNI
69	2		R5 R15	100	0402	PANASONIC	ERJ-2RKF1000X
70	31		R6 R25 R26 R27 R28 R50 R58 R59 R94 R103 R108 R165 R167 R169 R174 R175 R177 R208 R210 R212 R214 R275 R276 R277 R278 R279 R280 R296 R297 R302 R303	0	0402	PANASONIC	ERJ-2GE0R00X
71	3		R8 R9 R11	750	0603	DALE	CRCW0603750RFKEA
72	2		R10 R12	330K	0402	Panasonic	ERJ-2RKF3303X
73	10		R16 R17 R19 R20 R21 R22 R23 R24 R107 R120	4.75K	0402	PANASONIC	ERJ-2RKF4751X

74	1		R40	3.01K	0402	PANASONIC	ERJ-2RKF3011X
75	4		R42 R99 R100 R101	49.9	0201	PANASONIC	ERJ-1GEF49R9C
76	3		R43 R46 R122	1K	0402	PANASONIC	ERJ-2RKF1001X
77	1		R44	1.27K	0402	PANASONIC	ERJ-2RKF1271X
78	1		R45	10	0402	Vishay/Dale	CRCW040210R0FKED
79	2		R48 R49	30.1	0402	PANASONIC	ERJ-2RKF30R1X
80	4		R51 R52 R60 R92	240	0402	PANASONIC	ERJ-2RKF2400X
81	1		R53	30.1	0201	PANASONIC	ERJ-1GEF30R1C
82	1		R54	22.1	0402	PANASONIC	ERJ-2RKF22R1X
83	0	DNI	R55 R56 R57 R91	240	0402	PANASONIC	ERJ-2RKF2400X_DNI
84	0	DNI	R61 R62	1K	0402	PANASONIC	ERJ-2RKF1001X_DNI
85	1		R63	18	0402	PANASONIC	ERJ-2RKF18R0X
86	0	DNI	R70 R72 R90	10K	0402	PANASONIC	ERJ-2RKF1002X_DNI
87	3		R88 R96 R117	0	0603	PANASONIC	ERJ-3GEY0R00V
88	1		R89	15K	0402	PANASONIC	ERJ-2RKF1502X
89	2		R95 R151	150K	0402	Yageo	RC0402FR-07150KL
90	2		R104 R148	750K	0402	Vishay/Dale	CRCW0402750KJNED
91	2		R105 R130	270	0402	PANASONIC	ERJ-2RKF2700X
92	0	DNI	R115 R118 R289 R290 R291 R292 R293	0	0603	PANASONIC	ERJ-3GEY0R00V_DNI
93	5		R121 R125 R129 R159 R171	10K	0402	PANASONIC	ERJ-2RKF1002X
94	0	DNI	R127	0	0805	Stackpole Electronics Inc	RMCF0805ZT0R00_DNI
95	1		R128	0	0805	Stackpole Electronics Inc	RMCF0805ZT0R00
96	1		R143	10K	0603	Panasonic	ERJ-3EKF1002V
97	1		R150	191K	0402	Vishay/Dale	CRCW0402191KFKED
98	1		R153	182K	0402	Vishay/Dale	CRCW0402182KFKED
99	1		R157	31.6K	0402	Stackpole Electronics Inc	RMCF0402FT31K6
100	1		R176	53.6K	0402	Stackpole Electronics Inc	RMCF0402FT53K6
101	0	DNI	R198 R199 R200 R201 R206 R207 R225 R226	49.9	0402	PANASONIC	ERJ-2RKF49R9X_DNI
102	5		R313	49.9	0402	PANASONIC	ERJ-2RKF49R9X
103	0	DNI	R209 R211 R213 R215	2.74K	0402	PANASONIC	ERJ-2RKF2741X_DNI

104	2		R221 R257	174K	0402	Panasonic	ERJ-2RKF1743X
105	1		SH1 SH2 SH3 SH4 SH5 SH6	RF SHIELD	MFG053_PTH	LEADER TECH	SL-11101
106	0	SEE NOTES	SJP1 SJP6 SJP7 SJP8	SOLDER JUMPER, 0603	JUMPER_SMD _3POS_0402	DNI	DNI
107	0	SEE NOTES	SJP2 SJP4 SJP5	SOLDER JUMPER, 0402	SMD_JUMPER _L_0402	DNI	DNI
108	0	SEE NOTES	SJP3	SOLDER JUMPER, 0603	JUMPER_SMD _L_0603	DNI	DNI
109	2		SW1 SW2	SW PUSHBUTTO N	SW_RESET_P TS635	ITT Industries/C&K Div	PTS635SL43
110	2		T1 T2	TC1-1-13M	XFMR_MINICI RCUITS_AT22 4_1	Mini Circuits	TC1-1-13M+
111	5		TP6 TP7 TP8 TP9 TP13	TEST POINT, BLK	testpoint_62di a	KEYSTONE	5011
112	14		TP1 TP2 TP3 TP4 TP5 TP10 TP12 TP15 TP16 TP17 TP18 TP19 TP20 TP21	TEST POINT, RED	testpoint_62di a	KEYSTONE	5005
113	1		U1	DAC3482	WQFN_88_354 X354_0P60MM	TI	DAC3482IRKDT
114	1		U2	TPS62290	SON_DRV_6	TI	TPS62290DRVT
115	1		U3	FT245RL	ssop_28_413x 220_26	FTDI Chip	FT245RL
116	1		U4	EPM3064A	TQFP_44_39X 39_32	ALTERA	EPM3064ATC44-10
117	1		U5	25AA512	SO_8_210X21 2_50	MICROCHIP TECHNOLOGY	25AA512-I/SM
118	1		U6	LP2985-50	SOT_5_120X6 9_37	TI	LP2985-50DBVR

119	1		U7	PE43701	QFN_32_197X 197_20_PWRP AD	PEREGRINE SEMI	PE43701
120	1		U8	MGA-30689	SOT_89_4321	AVAGO TECHNOLOGIES	MGA-30689
121	1		U11	TPS62420	SON_DRC_10	Texas Instruments	TPS62420DRCR
122	2		U12 U15	TPS79633	SOT_223_6_T G	Texas Instruments	TPS79633DCQ
123	2		U13 U22	TPS71701	SC70_DCK_G 5	Texas Instruments	TPS71701DCKR
124	2		U14 U18	TPS7A8001D RB	SON_8_124x1 24_pwrpad_D RB	TI	TPS7A8001DRB
125	1		U16	LMK04806B	QFN_64_360X 360_0P50MM_ SQA64	NATIONAL SEMI	LMK04806BISQ
126	1		U21	TPS2400	DBV5	Texas Instruments	TPS2400DBVT
127	1		U23	TRF3705	QFN_24_163x 163_0p50mm_ pwrpad	TI	TRF3705IRGE
128	1		U26	CDCV304PW	TSSOP_8_177 x122_26	TI	CDCV304PW
129	1		Y1	10.000MHz	OSC_6_SM_2 95X205_100_C USTOM	FOX ELECTRONICS	FVXO-HC73BR-10.000000
130	1			BARE BOARD, TSW3085		DDI	TSW3085 REV D
131	4	OR EQUIVA LENT		SCREW PANHEAD 4- 40 X 3/4"		Building Fasteners	PMSSS 440 0075 PH
132	5	OR EQUIVA LENT		SHUNT- HEADER		KELTRON	MJ-5.97-G

133	5	SHUNT FOR JUMPE R		SHUNT- JUMPER- 0603		PANASONIC	ERJ-3GE0R00V
134	3	SHUNT FOR JUMPE R		SHUNT- JUMPER- 0402		PANASONIC	ERJ-2GE0R00X
135	4	STAND OFF		STANDOFF ALUM HEX 4- 40 X 1"		KEYSTONE	2205

NOTES:

**1. USE WATER SOLUBLE
FLUX DURING BOARD
ASSEMBLY.**

**2. RoHS COMPLIANT AND
LEAD FREE ASSEMBLY.**

**3. DNI = DO NOT INSTALL
THESE PARTS.**

4. INSTALL ITEM 132:

JP1 PINS 2-3

JP2 PINS 1-2

JP3 PINS 2-3

JP4 PINS 1-2

JP5 PINS 2-3

5. INSTALL ITEM 133:

SJP1 PINS 1-2

SJP3 PINS 1-2

SJP6 PINS 2-3

SJP7 PINS 2-3

SJP8 PINS 2-3

6. INSTALL ITEM 134:

SJP2 PINS 2-3

SJP4 PINS 1-2
SJP5 PINS 2-3

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Buyers") who are developing systems that incorporate TI semiconductor products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products.

TI reference designs have been created using standard laboratory conditions and engineering practices. **TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design.** TI may make corrections, enhancements, improvements and other changes to its reference designs.

Buyers are authorized to use TI reference designs with the TI component(s) identified in each particular reference design and to modify the reference design in the development of their end products. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI REFERENCE DESIGNS ARE PROVIDED "AS IS". TI MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. TI DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO TI REFERENCE DESIGNS OR USE THEREOF. TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY BUYERS AGAINST ANY THIRD PARTY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON A COMBINATION OF COMPONENTS PROVIDED IN A TI REFERENCE DESIGN. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES, HOWEVER CAUSED, ON ANY THEORY OF LIABILITY AND WHETHER OR NOT TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING IN ANY WAY OUT OF TI REFERENCE DESIGNS OR BUYER'S USE OF TI REFERENCE DESIGNS.

TI reserves the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques for TI components are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

Reproduction of significant portions of TI information in TI data books, data sheets or reference designs is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards that anticipate dangerous failures, monitor failures and their consequences, lessen the likelihood of dangerous failures and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in Buyer's safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed an agreement specifically governing such use.

Only those TI components that TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components that have **not** been so designated is solely at Buyer's risk, and Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.