

xTIDA-010203 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		xTIDA-010203	Any	Printed Circuit Board	
Brd1	1		LMG3422EVM-043	TEXAS INSTRUMENTS	GaN daughter card with LMG342xR030	eg: 0603
Brd2	1		AUXP60W	Texas Instrument	60W AuxPower	
C1, C2, C3, C4	4	680uF	450MXK680MEFCSN35X45	Rubycon	CAP, AL, 680 μ F, 450 V, +/- 20%, TH	Dia 35mm
C5	1	2.2uF	ECWFG2J225	Panasonic	CAP, Film, 2.2 uF, 630 V, +/- 20%, TH	ECWFG2J225
C6	1	4.7uF	C1608X5R1V475K080AC	TDK	CAP, CERM, 4.7 uF, 35 V, +/- 10%, X5R, 0603	0603
C7, C14	2	330pF	DE2B3KY331KB3BU02F	MuRata	CAP, CERM, 330 pF, X1 250 VAC/Y2 300 VAC, +/- 10%, B, TH	TH, 2- Leads, Body 7x5mm, Pin Spacing 7.5mm
C8, C9, C13, C15	4	1500pF	CD45-E2GA152M-NKA	TDK	CAP, CERM, 1500 pF, V, +/- 20%, E, D8xT6mm	D8xT6mm
C10, C11, C12	3	1.2uF	890324027012	Würth Elektronik	CAP, Film, 1.2 uF, 630 V, +/- 10%, 0.017 ohm, TH	B32924 21.5mm
C16, C26	2	22pF	CGA3E2C0G1H220J080AA	TDK	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C17, C22, C25, C48, C51	5	10uF	GRM21BR61E106MA73L	MuRata	CAP, CERM, 10 uF, 25 V, +/- 10%, X5R, 0805	0805
C18	1	4700pF	C0603C472J5RACTU	Kemet	CAP, CERM, 4700 pF, 50 V, +/- 5%, X7R, 0603	0603
C19	1	10uF	GRM21BZ71E106KE15L	MuRata	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 0805	0805
C20, C21, C27	3	1000pF	GCJ188R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	0603
C23, C29	2	0.01uF	C0603X103K5RACTU	Kemet	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0603	0603
C24, C32, C34, C35, C40, C46, C47, C49, C50, C64, C65, C66, C68	13	0.1uF	GRM188R71E104KA01D	MuRata	CAP, CERM, 0.1 μ F, 25 V, +/- 10%, X7R, 0603	0603
C28, C59	2	1uF	GRM185R60J105KE26D	MuRata	CAP, CERM, 1uF, 6.3V, +/-10%, X5R, 0603	0603
C30, C31, C33, C36, C37, C39, C42, C43	8	1000pF	GRM188R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	0603
C38	1	470pF	GRM188R71H471KA01D	MuRata	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603
C44	1	0.47uF	GRM188R61E474KA12D	MuRata	CAP, CERM, 0.47 uF, 25 V, +/- 10%, X5R, 0603	0603
C52, C53	2	0.01uF	GRM188R71H103KA01D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603
C54, C55	2	1uF	C1608X7R1E105K080AB	TDK	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603
C56	1	0.1uF	C1608X7R1E104K080AA	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603
C57, C62, C63	3	22uF	C1608X5R1A226M080AC	TDK	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0603	0603
C58	1	4.7uF	GRM188R61E475KE11D	MuRata	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X5R, 0603	0603
C60, C61	2	33uF	C3216X5R1E336M160AC	TDK	CAP, CERM, 33 uF, 25 V, +/- 20%, X5R, 1206	1206
C67	1	4.7uF	GCM21BR71C475KA73L	MuRata	CAP, CERM, 4.7 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
D1, D3, D4, D5, D6, D7, D9, D10	8	100V	BAS316	Toshiba	Diode, Ultrafast, 100 V, 0.25 A, SOD-323	SOD-323
D2	1	600V	D25XB60-7000	Shindengen	Diode, Switching-Bridge, 800 V, 25 A, TH	5S
D8	1	18V	CRZ18	Toshiba	Diode, Zener, 18 V, 700 mW, SOD-123	SOD-123
D15	1		KMB23STR	SMC	Bridge Rectifier Single Phase Schottky 30V Surface Mount MBS	SMT_4MM725_3MM85
D16	1	16V	BZT52C16-7-F	Diodes Inc.	Diode, Zener, 16 V, 500 mW, AEC-Q101, SOD-123	SOD-123
DC1	1			Texas Instruments	F280049C control card	
F1	1		0325020.MXP	Littelfuse	Fuse, 20 A, 250 VAC, 60 VDC, TH	3AB
J2	1		HSEC8-160-01-L-DV-A-BL	Samtec	C2000 controlCARD-120HSEC connector, SMT	C2000 pin numbering
J3	1			Any	Header, 4-Pin, Dual row, 2.54mm	

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J4, J5	2		0448120024	Molex	Receptacle, 2.54mm, 6x1, Gold, TH	Receptacle, 2.54mm, 6x1, TH
L1	1	300uH	ARLDC807842C201N1B	Sunlord	PFC CHOKE 480uH 33A	D80x35mm
L2, L5	2		ARLDC472145C500N1B	Sunlord	DM CHOKE	
L3	1	1mH	ARCDC422740E102N2B	Sunlord	Coupled inductor, 2x 1.01 mH, 2 x 0.0022ohm, 1650V TH	
L4	1	1.6mH	ARCDC522747E152N2B	Sunlord	Coupled inductor, 2x 1.6 mH, 2 x 0.0022ohm, 1650V TH	52x27mm
L6	1	10uH	74438323100	Würth Elektronik	Inductor, Wirewound, Ferrite, 10 uH, 0.68 A, 0.46 ohm, SMD	2.5x1x2mm
L7	1		ACM2520-601-2P-T002	TDK	Coupled inductor, 0.2 A, 0.45 ohm, SMD	2.5x2mm
Q1, Q2, Q4, Q5	4		IPT60R035CFD7XTMA1	Infineon	MOSFET N-CH 600V 67A 8HSOF	HSOF-8
Q3	1		IPT60R022S7XTMA1	Infineon	MOSFET N-CH 650V 23A HSOF-8	HSOF-8
R1, R3, R5, R6, R7, R8, R9, R10, R11, R22, R23, R24	12	1.00Meg	RCV12061M00FKEA	Vishay Dale	RES SMD 1M OHM 1% 1/4W 1206	1206
R2, R12	2	100k	RC0603FR-07100KL	Yageo	RES, 100 k, 1%, 0.1 W, 0603	0603
R4, R13, R74, R75, R76, R99, R100, R101, R102, R103, R104, R105	12	100R	100R 0603	Yageo	RES, 100R, 1%, 0.1 W, 0603	0603
R14, R16, R31, R64	4	10.0k	ERJ-3EKF1002V	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R15, R17, R18	3	330k	RV1206FR-07330KL	Yageo	RES SMD 330K OHM 1% 1/4W 1206	1206
R19, R20, R21	3	0.01	WSLP1206R0100FEA	Vishay-Dale	RES, 0.01, 1%, 1 W, 1206	1206
R25, R36, R39, R41, R43, R44, R69, R70	8	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R26, R27, R29, R30, R42, R48, R54, R60, R66, R78, R93, R94, R95	13	1.00k	ERJ-3EKF1001V	Panasonic	RES, 1.00 k, 1%, 0.1 W, 0603	0603
R28	1	50	CRCW060350R0FKEA	Vishay-Dale	RES, 50, 1%, 0.1 W, 0603	0603
R32	1	51.1	RC0603FR-0751R1L	Yageo	RES, 51.1, 1%, 0.1 W, 0603	0603
R33, R91	2	88.7k	CRCW060388K7FKEA	Vishay-Dale	RES, 88.7 k, 1%, 0.1 W, 0603	0603
R35, R77, R83, R84, R85, R88, R89, R90	8	9.31k	RC0603FR-079K31L	Yageo	RES, 9.31 k, 1%, 0.1 W, 0603	0603
R37	1	51.1k	RC0603FR-0751K1L	Yageo	RES, 51.1 k, 1%, 0.1 W, 0603	0603
R40, R45	2	22.0k	ERJ-3EKF2202V	Panasonic	RES, 22.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R46	1	4.30k	RC0603FR-074K3L	Yageo	RES, 4.30 k, 1%, 0.1 W, 0603	0603
R47	1	7.50k	ERJ-3EKF7501V	Panasonic	RES, 7.50 k, 1%, 0.1 W, 0603	0603
R49	1	21.5k	CRCW060321K5FKEA	Vishay-Dale	RES, 21.5k ohm, 1%, 0.1W, 0603	0603
R50	1	100k		Panasonic	RES, 100 k, 1%, 0.1 W, 0603	0603
R52, R55, R61, R63	4	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, 0603	0603
R53, R62	2	43.0k	RC0603FR-0743KL	Yageo America	RES, 43.0 k, 1%, 0.1 W, 0603	0603
R57	1	430k	RC0603FR-07430KL	Yageo	RES, 430 k, 1%, 0.1 W, 0603	0603
R58, R68	2	2.2k		Panasonic	RES, 2.2 k, 1%, 0.1 W, 0603	0603
R65	1	20.0k	RC0603FR-0720KL	Yageo	RES, 20.0 k, 1%, 0.1 W, 0603	0603
R71	1	0	0R 0603	Yageo	RES, 0, 1%, 0.1 W, 0603	0603

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R72, R79, R80, R81, R82, R86, R87	7	5.10k	RC0603FR-075K1L	Yageo	RES, 5.10 k, 1%, 0.1 W, 0603	0603
R73	1	100k	100k 0603	Yageo	RES, 100 k, 1%, 0.1 W, 0603	0603
R92	1	22.1k	CRCW060322K1FKEA	Vishay-Dale	RES, 22.1 k, 1%, 0.1 W, 0603	0603
R96	1	8.45k	RC0603FR-078K45L	Yageo	RES, 8.45 k, 1%, 0.1 W, 0603	0603
R97	1	4.70k	RC0603FR-074K7L	Yageo	RES, 4.70 k, 1%, 0.1 W, 0603	0603
R98	1	0	RC0603JR-070RL	Yageo	RES, 0, 5%, 0.1 W, 0603	0603
RT1	1	50	MS22 50004	Ametherm	Thermistor NTC, 50 ohm, 25%, D23 x T10mm, P7.8mm	D23 x T10 x P7.8
RV1	1		S10K275E2	EPCOS Inc	Varistor 275V RMS 10MM Radial, TH	10mm Radial
T1	1	105uH	750315371	Würth Elektronik	Transformer, 105uH, TH	12.6x8.3mm
TP8, TP9, TP10, TP11, TP12, TP13	6		0312-0-15-15-34-27-10-0	Mill-Max	Pin Receptacle, .032-.046" .075" Dia, Gold, TH	Pin Receptacle
U1	1		UCC21222D	Texas Instruments	4-A, 6-A, 3.0-kVRMS Isolated Dual-Channel Gate Driver, D0016A (SOIC-16)	D0016A
U2	1		OPA607IDBVR	Texas Instruments	50-MHz, Low-Power, Gain of 6-V/V Stable, Rail-to-Rail Output CMOS Operational Amplifier, DBV0005A (SOT-23-5)	DBV0005A
U3	1		UCC23511BDWY	Texas Instruments	5-kVRMS, 3-A Single Channel Isolated Gate Driver with Opto Compatible Input, DWY0006A (SOIC-6)	DWY0006A
U4, U6	2		LM358B	Texas Instruments	Low Power Dual Operational Amplifier, 8-pin Narrow SOIC	D0008A
U5	1		TLV3502AID	Texas Instruments	4.5ns Rail-to-Rail Comparator, D0008A (SOIC-8)	D0008A
U7	1		UCC12050DVER	Texas Instruments	500 mW, High-Efficiency, Low-Emissions, 5 kVRMS Isolated DC-DC Converter, DVE0016A (SO-MOD-16)	DVE0016A
U8	1		ISO7763DWR	Texas Instruments	High Speed, Robust EMC, Reinforced Six-Channel Digital Isolator, DW0016B (SOIC-16)	DW0016B
U9	1		TPS560430XDBVR	Texas Instruments	4V to 36 V 0.6 A Synchronous Step-Down Converter, DBV0006A (SOT-23-6)	DBV0006A
U10	1		TLV431BQDBZT	Texas Instruments	Low-Voltage Adjustable Precision Shunt Regulator, 15 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
U12	1		SN6505BDBVR	Texas Instruments	Low-Noise 1 A, 420 kHz Transformer Driver, DBV0006A (SOT-23-6)	DBV0006A
U13, U14	2		SN74LV1T125DBVR	Texas Instruments	Single Power Supply, Single BUFFER GATE w/ 3-State Output (active low enable), DBV0005A (SOT-23-5)	DBV0005A