

TPA3221EVM Bill of Materials

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
!PCB1	1		Printed Circuit Board		AMPS005	Any
C1	1	0.047uF	CAP, CERM, 0.047 µF, 25 V, +/- 10%, X7R, 0402	0402	GRM155R71E473KA88D	MuRata
C2	1	0.1uF	CAP, CERM, 0.1 µF, 100 V, +/- 10%, X7R, 0603	0603	GRM188R72A104KA35J	MuRata
C3, C32, C33, C34, C42, C47, C48	7	1uF	CAP, CERM, 1 µF, 100 V, +/- 10%, X7R, 1206	1206	GRM31CR72A105KA01L	MuRata
C4, C14, C15	3	2.2uF	CAP, CERM, 2.2 µF, 100 V, +/- 10%, X7R, 1210	1210	C1210C225K1RACTU	Kemet
C5	1	47uF	CAP, AL, 47 µF, 16 V, +/- 20%, 0.36 ohm, SMD	SMT Radial D	EEE-FK1C470P	Panasonic
C6	1	4.7uF	CAP, CERM, 4.7 µF, 25 V, +/- 10%, X7R, 1206	1206	GRM31CR71E475KA88L	MuRata
C7	1	5600pF	CAP, CERM, 5600 pF, 50 V, +/- 10%, X7R, 0603	0603	GRM188R71H562KA01D	MuRata
C8	1	0.47uF	CAP, CERM, 0.47 µF, 25 V, +/- 10%, X7R, 0603	0603	GRM188R71E474KA12D	MuRata
C9, C13, C18, C22, C67	5	0.1uF	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603	C0603C104K5RACTU	Kemet
C10, C49	2	100uF	CAP, AL, 100 µF, 6.3 V, +/- 20%, 0.7 ohm, SMD	SMT Radial C	EEE-FK0J101UR	Panasonic
C11	1	0.01uF	CAP, CERM, 0.01 µF, 100 V, +/- 10%, X7R, 0603	0603	06031C103KAT2A	AVX
C12	1	4700pF	CAP, CERM, 4700 pF, 50 V, +/- 10%, X7R, 0603	0603	C0603X472K5RACTU	Kemet
C16, C27, C29, C52, C54	5	0.033uF	CAP, CERM, 0.033 µF, 25 V, +/- 10%, X7R, 0603	0603	GRM188R71E333KA01D	MuRata
C17, C28, C41, C55, C63, C66	6	1uF	CAP, CERM, 1 µF, 16 V, +/- 10%, X7R, 0603	0603	GRM188R71C105KA12D	MuRata
C19, C30, C58, C64	4	100pF	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H101JA01D	MuRata
C21, C57	2	1000pF	CAP, CERM, 1000 pF, 500 V, +/- 10%, X7R, 1206_190	1206_190	C1206C102KCRCTU	Kemet
C24, C35, C43, C59	4	1uF	CAP, Film, 1 µF, 250 V, +/- 5%, TH	18x9.5x17.5mm	PHE426HB7100JR06	Kemet
C31, C46	2	1000uF	CAP, AL, 1000 µF, 50 V, +/- 20%, 0.034 ohm, AEC-Q200 Grade 2, TH	D16xL25	EEU-FC1H102	Panasonic
C38, C40	2	10uF	CAP, AL, 10 µF, 16 V, +/- 20%, 1.35 ohm, SMD	SMT Radial B	EEE-FK1C100R	Panasonic
C39	1	47uF	CAP, AL, 47 µF, 63 V, +/- 20%, 0.65 ohm, SMD	SMT Radial F	EEE-FK1J470P	Panasonic
D1	1	100V	Diode, Schottky, 100 V, 1 A, SMA	SMA	B1100-13-F	Diodes Inc.
D2	1	Orange	LED, Orange, SMD	LED 0805	LTST-C170KFKT	Lite-On
D3	1	100V	Diode, Schottky, 100 V, 3 A, SMA	SMA	SK310A-TP	Micro Commercial Component
D4	1	Red	LED, Red, SMD	Red 0805 LED	LTST-C170KRKT	Lite-On
D5	1	Green	LED, Green, SMD	LED 0805	LTST-C171GKT	Lite-On
H1	1		HEATSINK TI TAS5612 AND TAS5614	HEATSINK TI TAS5612 AND TAS5614	ATS-TI10P-563-C1-R0	Advanced Thermal Solutions
H2, H3, H4, H5, H6, H12, H13	7		MACHINE SCREW PAN PHILLIPS M3 5mm	Screw M3 Phillips head	MPMS 003 0005 PH	B&F Fastener Supply
H7, H8, H9, H10, H11	5		Standoff, Hex, 25mm Length, M3, Aluminum	Standoff M3	24438	Keystone
J1, J2, J9	3		Dual Binding Posts with Base, 2x1, TH	Dual Binding Posts with Base, 2x1, TH	6883	Pomona Electronics
J3	1		RCA Jack, Vertical, Red, TH	RCA JACK, RED	RCJ-022	CUI Inc.
J4, J5, J6, J7, J8, J12, J13, J19, J24, J26, J27, J29, J30	13		Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator	PBC02SAAN	Sullins Connector Solutions
J10, J11, J20, J21, J22, J25	6		Header, 100mil, 3x1, Gold, TH		PBC03SAAN	Sullins Connector Solutions
J14, J15	2		Receptacle, 160mil, 3 Position, R/A, TH	Receptacle, 160mil, 3 Position, R/A, TH	PQG3FRA112	Switchcraft
J16	1		Header, 100mil, 4x2, Tin, TH	Header, 4x2, 100mil, Tin	PEC04DAAN	Sullins Connector Solutions
J17	1		Header (friction lock), 100mil, 4x1, Gold, TH	Header 4x1 keyed	0022112042	Molex
J18	1		RCA Jack, Vertical, White, TH	RCA JACK, WHITE	RCJ-023	CUI Inc.
J23	1		Header, 100mil, 8x2, Gold, TH		PBC08DAAN	Sullins Connector Solutions
J28	1		Receptacle, 100mil, 14x2, Gold, TH	14x2 Receptacle	SSW-114-01-G-D	Samtec

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
L1	1	100uH	Inductor, Shielded Drum Core, Ferrite, 100 µH, 1.5 A, 0.165 ohm, SMD	SMD	7447714101	Würth Elektronik
L2, L3, L4, L5	4	10uH	Inductor, 10 µH, 4.6 A, 0.0234 ohm, TH	14x9.6mm	7G14J-100M-R	Sagami Elec Co Ltd
L6	1	10uH	Inductor, Wirewound, 10 µH, 0.08 A, 0.36 ohm, SMD	0603	GLFR1608T100M-LR	TDK
Q1, Q2	2	60V	MOSFET, N-CH, 60 V, 0.17 A, SOT-23	SOT-23	2N7002-7-F	Diodes Inc.
R1, R24, R28	3	47k	RES, 47 k, 5%, 0.1 W, 0603	0603	RC0603JR-0747KL	Yageo America
R2	1	182k	RES, 182 k, 1%, 0.125 W, 0805	0805	ERJ-6ENF1823V	Panasonic
R3, R30, R37	3	0	RES, 0, 5%, 0.1 W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale
R4, R12, R44, R46	4	0	RES, 0, 5%, 0.125 W, 0805	0805	ERJ-6GEY0R00V	Panasonic
R5, R10, R19, R23, R33, R35	6	100	RES, 100, 1%, 0.1 W, 0603	0603	CRCW0603100RFKEA	Vishay-Dale
R6, R42, R61, R76, R77	5	100k	RES, 100 k, 1%, 0.1 W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale
R9, R25, R43, R45, R48, R70	6	100k	RES, 100 k, 1%, 0.063 W, 0402	0402	CRCW0402100KFKEA	Vishay-Dale
R15	1	49.9k	RES, 49.9 k, 1%, 0.1 W, 0603	0603	RC0603FR-0749K9L	Yageo America
R17	1	30.0k	RES, 30.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0730KL	Yageo America
R20	1	10.0k	RES, 10.0 k, 1%, 0.1 W, 0402	0402	ERJ-2RKF1002X	Panasonic
R21, R74	2	51.0k	RES, 51.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0751KL	Yageo America
R26	1	4.02k	RES, 4.02 k, 1%, 0.1 W, 0603	0603	CRCW06034K02FKEA	Vishay-Dale
R27, R72	2	47.0k	RES, 47.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0747KL	Yageo America
R29, R31, R32, R38	4	1.00k	RES, 1.00 k, 1%, 0.1 W, 0603	0603	CRCW06031K00FKEA	Vishay-Dale
R34, R71	2	39.0k	RES, 39.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0739KL	Yageo America
R36	1	16.0k	RES, 16.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0716KL	Yageo America
R39	1	4.99k	RES, 4.99 k, 1%, 0.063 W, 0402	0402	CRCW04024K99FKED	Vishay-Dale
R40	1	1.00k	RES, 1.00 k, 1%, 0.063 W, 0402	0402	CRCW04021K00FKED	Vishay-Dale
R41	1	5.60k	RES, 5.60 k, 1%, 0.1 W, 0603	0603	RC0603FR-075K6L	Yageo America
R52, R59, R60, R62	4	0	RES, 0, 5%, 0.25 W, 1206	1206	CRCW12060000Z0EA	Vishay-Dale
R57	1	1.00k	RES, 1.00 k, 1%, 0.1 W, 0402	0402	ERJ-2RKF1001X	Panasonic
R58	1	499	RES, 499, 1%, 0.063 W, 0402	0402	CRCW0402499RFKED	Vishay-Dale
R68	1	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale
R69	1	20.0k	RES, 20.0 k, 1%, 0.1 W, 0603	0603	CRCW060320K0FKEA	Vishay-Dale
R73, R78	2	75.0k	RES, 75.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0775KL	Yageo America
R75	1	3.3	RES, 3.3, 5%, 0.1 W, 0603	0603	CRCW06033R30JNEA	Vishay-Dale
S1, S2	2		Switch, SPDT, On-On, 2 Pos, TH	Switch, 7x4.5mm	200USP1T1A1M2RE	E-Switch
SH1, SH2, SH3, SH4, SH5, SH6, SH7, SH8, SH9, SH10, SH11, SH12, SH13, SH14, SH15, SH16, SH17, SH18, SH19, SH20	20	1x2	Shunt, 100mil, Gold plated, Black	Shunt	969102-0000-DA	3M
TP1, TP13, TP14, TP17, TP29, TP30, TP31, TP35	8		Test Point, Compact, Grey, TH	TestPoint, Grey, 220mil, TH	5123	Keystone
TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP18, TP25, TP27, TP28, TP36	16		Test Point, Multipurpose, Grey, TH	Grey Multipurpose Testpoint	5128	Keystone
TP32	1		Test Point, Compact, Red, TH	Red Compact Testpoint	5005	Keystone

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
TP33, TP34	2		Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint	5010	Keystone
U1	1		High Voltage 1A Step Down Switching Regulator, 10-pin LLP, Pb-Free	SDC10A	LM5010ASD/NOPB	Texas Instruments
U2	1		1A Low Dropout Regulator, 4-pin SOT-223, Pb-Free	MP04A	LM2940IMP-12/NOPB	Texas Instruments
U3	1		LDO with 4.7 to 15 V Input and 3.3 V Output, -40 to 125 degC, 8-Pin SON (DRJ), Green (RoHS & no Sb/Br)	DRJ0008A	TLV1117-33IDRJR	Texas Instruments
U4	1		100-W Stereo, 200-W Mono HD-Audio, Analog-Input, Class-D Amplifier, DDV0044D (TSSOP-44)	DDV0044D	TPA3221DDVR	Texas Instruments
U5	1		150-mA, 30-V, Ultra-Low IQ, Wide Input Low-Dropout Regulator with Reverse Current Protection, DRV0006A (WSON-6)	DRV0006A	TPS70950DRVR	Texas Instruments
U6	1		LDO with 6.4 to 15 V Input and 5 V Output, 0 to 125 degC, 8-Pin SON (DRJ), Green (RoHS & no Sb/Br)	DRJ0008A	TLV1117-50CDRJR	Texas Instruments
U7	1		ULTRA-SMALL SUPPLY VOLTAGE SUPERVISORS, DCK0005A	DCK0005A	TPS3802K33DCKR	Texas Instruments
C20, C23, C62, C65	0	22pF	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H220JA01D	MuRata
C25, C36, C44, C60	0	1000pF	CAP, CERM, 1000 pF, 100 V, +/- 5%, C0G/NP0, 1206	1206	12061A102JAT2A	AVX
C26, C37, C45, C61	0	220pF	CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H221JA01D	MuRata
C50, C51, C53, C56	0	1uF	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 1206	1206	GRM31MR71H105KA88L	MuRata
FID1, FID2, FID3, FID4, FID5, FID6	0		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	N/A
R7, R8	0	4.99k	RES, 4.99 k, 1%, 0.125 W, 0805	0805	CRCW08054K99FKEA	Vishay-Dale
R11, R14, R18, R22	0	2.00k	RES, 2.00 k, 1%, 0.1 W, 0603	0603	CRCW06032K00FKEA	Vishay-Dale
R13	0	1.00k	RES, 1.00 k, 1%, 0.125 W, 0805	0805	CRCW08051K00FKEA	Vishay-Dale
R16, R63, R64, R65, R66	0	0	RES, 0, 5%, 0.1 W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale
R47, R49, R50, R51	0	18.0k	RES, 18.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0718KL	Yageo America
R53, R54, R55, R56	0	3.30	RES, 3.30, 1%, 0.25 W, 1206	1206	ERJ-8RQF3R3V	Panasonic
R67	0	0	RES, 0, 5%, 0.125 W, 0805	0805	ERJ-6GEY0R00V	Panasonic

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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