

TPA3255EVM Rev A - Bill of Materials

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
!PCB1	1		Printed Circuit Board		AAP053	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, C47, C48, C83, C84	7	1uF	CAP, CERM, 1 µF, 100 V, +/- 10%, X7R, 1206	1206	GRM31CR72A105KA01L	MuRata
C4	1	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, C50	2	0.47uF	CAP, CERM, 0.47 µF, 25 V, +/- 10%, X7R, 0603	0603	GRM188R71E474KA12D	MuRata
C9, C13, C14, C15, C22, C51, C67, C68, C69, C72, C82	11	0.1uF	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603	C0603C104K5RACTU	Kemet
C10	1	100uF	CAP, AL, 100 µF, 6.3 V, +/- 20%, 0.7 ohm, SMD	SMT Radial C	EEE-FK0J101UR	Panasonic
C11, C26, C37, C45, C61	5	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, C53, C70, C81	4	10uF	CAP, CERM, 10 µF, 16 V, +/- 10%, X5R, 0805	0805	EMK212BJ106KG-T	Taiyo Yuden
C17, C28, C55, C63	4	10uF	CAP, CERM, 10 µF, 16 V, +/- 10%, X7R, 1206	1206	GRM31CR71C106KAC7L	MuRata
C18, C23, C57, C65	4	22pF	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H220JA01D	MuRata
C19, C30, C58, C64	4	100pF	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H101JA01D	MuRata
C20, C38, C62, C66, C71	5	10uF	CAP, AL, 10 µF, 16 V, +/- 20%, 1.35 ohm, SMD	SMT Radial B	EEE-FK1C100R	Panasonic
C21, C34, C42, C56	4	1500uF	CAP, AL, 1500 µF, 63 V, +/- 20%, 0.03 ohm, AEC-Q200 Grade 2, TH	Dia 18mm	EEU-FC1J152	Panasonic
C24, C35, C43, C59	4	1uF	CAP, Film, 1 µF, 250 V, +/- 5%, TH	18x9.5x17.5mm	PHE426HB7100JR06	Kemet
C25, C36, C44, C60	4	1000pF	CAP, CERM, 1000 pF, 100 V, +/- 5%, C0G/NP0, 1206	1206	12061A102JAT2A	AVX
C27, C29, C52, C54	4	0.033uF	CAP, CERM, 0.033 µF, 25 V, +/- 10%, X7R, 0603	0603	GRM188R71E333KA01D	MuRata
C31, C46	2	4700uF	CAP, AL, 4700 µF, 80 V, +/- 20%, 0.071 ohm, TH	D35xL30mm	SLPX472M080H3P3	Cornell Dubilier Electronics
C39	1	47uF	CAP, AL, 47 µF, 63 V, +/- 20%, 0.65 ohm, SMD	SMT Radial F	EEE-FK1J470P	Panasonic
C40, C41	2	1uF	CAP, CERM, 1 µF, 16 V, +/- 10%, X7R, 0603	0603	GRM188R71C105KA12D	MuRata
C49	1	0.047uF	CAP, CERM, 0.047 µF, 50 V, +/- 10%, X7R, 0603	0603	GRM188R71H473KA61D	MuRata
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, D6	2	Green	LED, Green, SMD	LED_0805	LTST-C171GKT	Lite-On
H1	1		Heat Sink, Vertical	Heatsink	ATS-TI10P-519-C1-R3	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, J19, J26, J27	8		Header, 100mil, 3x1, Gold, TH	PBC03SAAN	PBC03SAAN	Sullins Connector Solutions
J10, J12	2		Header, 2.54 mm, 3x1, TH	Header, 2.54mm, 3x1, TH	22-11-2032	Molex
J11, J20	2		Binding Post, BLACK, TH	11.4x27.2mm	7007	Keystone
J14	1		RCA Jack, Vertical, Black, TH	RCA Jack, Vertical, Black, TH	RCJ-021	CUI Inc.
J15	1		RCA Jack, Vertical, Blue, TH	RCA Jack, Vertical, Blue, TH	RCJ-025	CUI Inc.
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

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
J18	1		RCA Jack, Vertical, White, TH	RCA JACK, WHITE	RCJ-023	CUI Inc.
J21, J29, J30, J32, J33	5		Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator	PBC02SAAN	Sullins Connector Solutions
J22, J23, J24, J25, J31	5		JUMPER TIN SMD	6.85x0.97x2.51 mm	S1911-46R	Harwin
J28	1		Receptacle, 100mil, 14x2, Gold, TH	14x2 Receptacle	SSW-114-01-G-D	Samtec
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, Toroid, Powdered Iron, 10 µH, 6.1 A, 0.026 ohm, TH	28.6x12.3mm	MA5172-AE	Coilcraft
L6	1	10uH	Inductor, Wirewound, 10 µH, 0.8 A, 0.204 ohm, SMD	2-Pin SMD, Body 4 x 4 mm, Height 1.2 mm	NRS4012T100MDGJV	Taiyo Yuden
L7	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, R3, R4, R12, R30, R44, R46	7	0	RES, 0, 5%, 0.1 W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale
R2	1	182k	RES, 182 k, 1%, 0.125 W, 0805	0805	ERJ-6ENF1823V	Panasonic
R5, R10, R19, R23, R33, R35	6	100	RES, 100, 1%, 0.1 W, 0603	0603	CRCW0603100RFKEA	Vishay-Dale
R6	1	100k	RES, 100 k, 1%, 0.1 W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale
R7, R8, R20, R21, R25, R27, R37, R38, R41, R42	10	10.0k	RES, 10.0 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD0710KL	Yageo America
R9, R43, R45, R48	4	100k	RES, 100 k, 1%, 0.063 W, 0402	0402	CRCW0402100KFKEA	Vishay-Dale
R11, R14, R18, R22	4	3.3	RES, 3.3, 5%, 0.1 W, 0603	0603	CRCW06033R30JNEA	Vishay-Dale
R13	1	22.0k	RES, 22.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0722KL	Yageo America
R15, R36, R52	3	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale
R16	1	20.0k	RES, 20.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0720KL	Yageo America
R17	1	30.0k	RES, 30.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0730KL	Yageo America
R24, R28	2	47k	RES, 47 k, 5%, 0.1 W, 0603	0603	RC0603JR-0747KL	Yageo America
R26	1	3.30k	RES, 3.30 k, 1%, 0.1 W, 0603	0603	RC0603FR-073K3L	Yageo America
R29, R31	2	1.00k	RES, 1.00 k, 1%, 0.1 W, 0603	0603	CRCW06031K00FKEA	Vishay-Dale
R32	1	9.10k	RES, 9.10 k, 1%, 0.1 W, 0603	0603	RC0603FR-079K1L	Yageo America
R34	1	360	RES, 360, 5%, 0.063 W, 0402	0402	CRCW0402360RJNED	Vishay-Dale
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
R57	1	1.00k	RES, 1.00 k, 1%, 0.1 W, 0402	0402	ERJ-2RKF1001X	Panasonic
R58	1	1.50k	RES, 1.50 k, 1%, 0.063 W, 0402	0402	CRCW04021K50FKED	Vishay-Dale
S1	1		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	13	1x2	Shunt, 100mil, Gold plated, Black	Shunt	969102-0000-DA	3M
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		FIXED LOW-DROPOUT VOLTAGE REGULATOR, DCY0004A	DCY0004A	TLV1117-33IDCY	Texas Instruments
U4	1		150W Stereo/300W MONO PurePath HD Analog-input Power Stage, DDV0044D	DDV0044D	TPA3255D2DDVR	Texas Instruments
U5, U6	2		Dual Low-Noise Operational Amplifier, 10 to 30 V, 0 to 70 degC, 8-pin SOIC (D0008A), Green (RoHS & no Sb/Br)	D0008A	NE5532ADR	Texas Instruments
U7	1		ULTRA-SMALL SUPPLY VOLTAGE SUPERVISORS, DCK0005A	DCK0005A	TPS3802K33DCKR	Texas Instruments
C73, C74, C75, C76	0	22pF	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H220JA01D	MuRata
C77, C78, C79, C80	0	1uF	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 1206	1206	GRM31MR71H105KA88L	MuRata
C85, C86, C87, C88	0	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 1%, C0G/NP0, 0603	0603	GRM1885C1H102FA01J	MuRata
FID1, FID2, FID3, FID4, FID5, FID6	0		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	N/A
J13	0		Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator	PBC02SAAN	Sullins Connector Solutions
R47, R49, R50, R51	0	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
R53, R54, R55, R56	0	3.3	RES, 3.3, 5%, 0.75 W, 2010	2010	CRCW20103R30JNEF	Vishay-Dale
R59, R60, R61, R62	0	10.0	RES, 10.0, 1%, 0.1 W, 0603	0603	CRCW060310R0FKEA	Vishay-Dale
R63, R64, R65, R66	0	0	RES, 0, 5%, 0.1 W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale
R67	0	0	RES, 0, 5%, 0.125 W, 0805	0805	ERJ-6GEY0R00V	Panasonic
TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14	0		Test Point, Multipurpose, Grey, TH	Grey Multipurpose Testpoint	5128	Keystone

Notes:

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

IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve 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 (also referred to herein as "components") 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 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.

TI does not warrant or represent that any license, either express or implied, is granted under 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.

Reproduction of significant portions of TI information in TI data books or data sheets 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.

Resale of TI components or services with statements different from or beyond the parameters stated by TI for that component or service voids all express and any implied warranties for the associated TI component or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

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 which anticipate dangerous consequences of failures, monitor failures and their consequences, lessen the likelihood of failures that might cause harm 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 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 a special agreement specifically governing such use.

Only those TI components which 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 which have **not** been so designated is solely at the Buyer's risk, and that 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.

Products

Audio	www.ti.com/audio
Amplifiers	amplifier.ti.com
Data Converters	dataconverter.ti.com
DLP® Products	www.dlp.com
DSP	dsp.ti.com
Clocks and Timers	www.ti.com/clocks
Interface	interface.ti.com
Logic	logic.ti.com
Power Mgmt	power.ti.com
Microcontrollers	microcontroller.ti.com
RFID	www.ti-rfid.com
OMAP Applications Processors	www.ti.com/omap
Wireless Connectivity	www.ti.com/wirelessconnectivity

Applications

Automotive and Transportation	www.ti.com/automotive
Communications and Telecom	www.ti.com/communications
Computers and Peripherals	www.ti.com/computers
Consumer Electronics	www.ti.com/consumer-apps
Energy and Lighting	www.ti.com/energy
Industrial	www.ti.com/industrial
Medical	www.ti.com/medical
Security	www.ti.com/security
Space, Avionics and Defense	www.ti.com/space-avionics-defense
Video and Imaging	www.ti.com/video

TI E2E Community

e2e.ti.com