

BILLOFMATERIALS BOM

COUNT	RefDes	Value	Description	Size	PART NUMBER	MFR
2	C1, C2	2.2 uF	Capacitor, Ceramic,	1206	STD	
1	C10	100uF	Capacitor, Ceramic, 6.3V, X5R, 15%	1210	TDK	
2	C11, C19	150 uF	Capacitor, Tant, Low ESR, 10V, ±10%	7343 (D)	AVX	
1	C12	0.47uF	Capacitor, Ceramic, 50V, X7R, 15%	0603	Std	
1	C13	0.01uF	Capacitor, Ceramic, 16V, X7R, 10%	0603	Std	
1	C16	1uF	Capacitor, Ceramic, 16V, X7R, 10%	0603	Std	
1	C21	Open	Capacitor, Ceramic, 50V, X7R, 15%	0603	Std	
1	C22	2700 pF	Capacitor, Ceramic, 16V, X7R, 10%	0603	Std	
2	C3, C17	10uF	Capacitor, Ceramic, 10V, X5R, 10%	0805	Std	
1	C4	1000 uF	Capacitor, multi pattern, SM 1210 to E case + F THole	0.492 inch	Rubycon	
4	C5, C14, C18, C20	0.1uF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	
1	C6	270 pF	Capacitor, Ceramic, 50V,NPO, 15%	0603	Std	
2	C7, C15	0.1uF	Capacitor, Ceramic, 50V, X7R, 15%	0603	Std	
1	C8	100pF	Capacitor, Ceramic, 50V, NPO, 10%	0603	Std	
1	C9	0.01 uF	Capacitor, Ceramic, 50V, X7R,10%	0603	Std	
1	D1	BAT54	Diode, Schottky, 200-mA, 30-V	SOT23	Vishay-Liteon	
1	J1	896-43-008-90-00	Connector, Dual USB Downstream (Type A)	0.52 x 0.67 inch	Mill-Max	
1	J2	B3P-VH	Connector, Top 3-pin, 156 mil spacing,	0.465 X 0.335 inch	JST	
1	J3	B2P-VH	Connector, Top Entry 2-pin, 156 mil spacing,	0.465 X 0.370 inch	JST	
4	JP1, JP2, JP3, JP4	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	Sullins	
1	L1	6.8uH	Inductor, SMT, 10.3A, 9.4 milliohms	0.543x 0.516 inch	Cooper	
2	L2, L3	370-Ohm	Inductor, Coupled	0.050 x 0.080 inch	Coilcraft	
2	Q2, Q3	CSD18501Q5A	MOSFET, N-Chan, 40V, 25 A, 3.3 mOhm	QFN-8	POWER TI	
2	R1, R12	80.6k	Resistor, Chip, 1/16W, 1%	0603	Std	
2	R11, R18	16.9k	Resistor, Chip, 1/16W, 1%	0603	Std	
1	R15	1.18K	Resistor, Chip, 1/16-W, 1%	0603	Std	
1	R16	6.20K	Resistor, Chip, 1/16-W, 1%	0603	Std	
1	R17	49.9	Resistor, Chip, 1%, 0603	0603	Std	
2	R19, R20	0	Resistor, Metal Film, 1/4 watt, ± 5%	1206	Std	
1	R2	13.0K	Resistor, Chip, 1/16-W, 1%	0603	Std	
1	R21	Open	Resistor, Metal Film, 1/4 watt, ± 5%	1206	Std	
1	R22	100	Resistor, Metal Film, 1/4 watt, ± 5%	1206	Std	
4	R3, R5, R13, R14	100k	Resistor, Chip, 1/16W, 1%	0402	Std	
1	R4	54.9K	Resistor, Chip, 1/16-W, 1%	0603	Std	
1	R6	100K	Resistor, Chip, 1/16-W, 1%	0603	Std	
1	R7	0	Resistor, Chip, 1/16-W, 1%	0603	Std	
1	R8	0.015	Resistor, Chip, 1/2W, 5%	2010	Std	
2	R9, R10	10K	Resistor, Chip, 1/16-W, 1%	0603	Std	
9	TP1, TP2, TP4, TP5, TP6, TP7, TP8, TP11, TP12	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	Keystone	
3	TP3, TP9, TP10	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	Keystone	
1	U1	LM25117PSQ	IC, Wide Input Range Synchronous Buck Controller with Anak LLP-24		TI	
2	U2, U4	TPD2E001DZDR	IC, Low-Capacitance 2-Chan ±15-kV ESD-Protection Array	SOP	TI	
2	U3, U5	TPS2543RTE	IC, USB Charging Port Power Switch & Controller with Load D	QFN-16	TI	
Notes:						
1. These assemblies are ESD sensitive, ESD precautions shall be observed.						
2. These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.						
3. These assemblies must comply with workmanship standards IPC-A-610 Class 2.						
4. Ref designators marked with an asterisk ("**") cannot be substituted.						
All other components can be substituted with equivalent MFG's components.						

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 which meet ISO/TS16949 requirements, mainly for automotive use. Components which have not been so designated are neither designed nor intended for automotive use; and TI will not be responsible for any failure of such components to meet such requirements.

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