

Bill of Materials

TI DESIGNS TIDM-LPBP-HAPTOUCH

Qty	Parts	Value	Description	Manufacturer P/N	Manufacturer	Footprint
4	C1,C3,C5,C6	100nF	X7R Ceramic Capacitor,16V,10%,SMD	GRM188R71C104KA01D	MURATA	0603
4	C2,C4,C7,C46	10uF	X5R Ceramic Capacitor,16V,10%,SMD	GRM21BR61C106KE15L	MURATA	0805
6	D1,D2,D3,D4,D5,D7	Red	Chip LED,Red	15-21SURC/S530-A2/TR8	Everlight	1206
1	D6	Blue	Chip LED,Blue	15-21/BHC-AN1P2/2T	Everlight	1206
2	FB1,FB2	220R	Ferrite Bead,220ohm@100MHz,25%,2A,0.045ohm,SMD	BLM21PG221SN1D	MURATA	0805
2	J1,J2	Socket 2x10	Double Row Header Sockets,2.54mm Pitch,20 pins	FH254-S180-850-210WP	JXT	
1	J12	Header 2x7	Double Row Pin Header,2.54mm Pitch,2 pins	P101-2*07MGF-116-1X	TOWNES	
1	J13	Header 2x3	Double Row Pin Header,2.54mm Pitch,6 pins	PD254NV-06GR310	JXT	
1	J3	KJ-328	3.5mm ,Audio Jack,Right Angle,Black,SMD	KJ328KYS-1BBJ02A	Kaler	
1	M1	LRA	LRA Vibrator Motor ,Φ10×3.6mm	ELV1036C	AAC	Φ10×3.6mm
1	M2	ERM	ERM Vibrator Motor,15.5x4.5x4.85mm	RP1342	ZLIFE	15.5x4.5x4.85mm
3	R1,R7,R35	OR	0603 Chip Resistor,5%,1/10W,SMD	RC0603JR-070RL	YAGEO	0603
1	R10	820R	0603 Chip Resistor,5%,1/10W,SMD	RC0603JR-07820RL	YAGEO	0603
2	R11,R12	49.9K	0603 Chip Resistor,1%,1/10W,SMD	RC0603FR-0749K9L	YAGEO	0603
7	R13,R14,R15,R16,R17,R18,R21	470R	0603 Chip Resistor,5%,1/10W,SMD	RC0603JR-07470RL	YAGEO	0603
8	R2,R4,R5,R19,R20,R22,R23,R24	4.7K	0603 Chip Resistor,5%,1/10W,SMD	RC0603JR-074K7L	YAGEO	0603
1	R8	330R	0603 Chip Resistor,5%,1/10W,SMD	RC0603JR-07330RL	YAGEO	0603
2	S1,S2	SS-2205S-WV1	Slide Switch,Right Angle,SMD	SS-2205S-WL11	TONE PARTS	
1	U1	DRV2603	DC Motor Driver	DRV2603RUNT	TI	QFN10
1	U2	MSP430TCH5E	MSP430 Microcontroller	MSP430TCH5E	TI	QFN32

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.