

Bill of Materials

TI DESIGNS

TIPD167: Phase Compensated 8-Channel Multiplexed Data Acquisition System for Power Automation

Item	QTY	Value	Ref Des	Description	Manufacturer	Part Number
1	4	0.1uF	C1, C2, C3, C6	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	AVX	06033C104JAT2A
2	1	1uF	C10	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603	Kemet	C0603C105K4PACTU
3	1	3000pF	C11	CAP, CERM, 3000pF, 50V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C1H302JA01D
4	6	0.1uF	C16, C24, C26, C30, C45, C64	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	AVX	06035C104KAT2A
5	4	2200pF	C17, C22, C27, C28	CAP, CERM, 2200pF, 50V, +/-5%, C0G/NP0, 0603	TDK	C1608C0G1H222J
6	4	1000p	C23, C25, C29, C31	CAP, CERM, 1000pF, 50V, +/-5%, C0G/NP0, 0402	MuRata	GRM1555C1H102JA01D
7	4	22uF	C32, C35, C49, C50	CAP, CERM, 22uF, 25V, +/-10%, X7R, 1210	MuRata	GRM32ER71E226KE15L
8	3	10uF	C34, C36, C53	CAP, CERM, 10uF, 25V, +/-10%, X7R, 1206	MuRata	GRM31CR71E106KA12L
9	2	10uF	C37, C54	CAP, CERM, 10uF, 35V, +/-10%, X7R, 1206	Taiyo Yuden	GMK316AB7106KL
10	15	10000pF	C4, C12, C13, C14, C15, C18, C19, C20, C21, C38, C39, C40, C41, C56, C58	CAP, 10000pF, 0603, 5%, 50V, C0G	TDK	C1608C0G1H103J080AA
11	1	0.22uF	C42	CAP, CERM, 0.22uF, 16V, +/-10%, X7R, 0603	TDK	C1608X7R1C224K
12	2	2.2uF	C44, C46	CAP, CERM, 2.2uF, 10V, +/-10%, X7R, 0603	MuRata	GRM188R71A225KE15D
13	1	10uF	C48	CAP, CERM, 10uF, 50V, +/-20%, X7R, 2220	TDK	C5750X7R1H106M
14	1	10uF	C5	CAP, CERM, 10uF, 6.3V, +/-20%, X5R, 0603	Kemet	C0603C106M9PACTU
15	1	0.1uF	C51	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	Kemet	C0603C104J3RAC
16	1	0.39uF	C52	CAP, CERM, 0.39uF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C394KA88D
17	1	470pF	C57	CAP, CERM, 470pF, 50V, +/-10%, X7R, 0603	TDK	C1608X7R1H471K
18	2	10uF	C59, C60	CAP, CERM, 10uF, 35V, +/-10%, X7R, 1210	MuRata	GRM32ER7YA106KA12L
19	7	10uF	C7, C33, C43, C47, C55, C61, C62	CAP, CERM, 10uF, 10V, +/-10%, X7R, 0805	MuRata	GRM21BR71A106KE51L
20	1	22uF	C8	CAP, CERM, 22uF, 16V, +/-20%, X7R, 1210	TDK	C3225X7R1C226M
21	2	1uF	C9, C63	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	TDK	C1608X7R1C105K
22	2		D2, D4	Diode, Schottky, 60V, 2A, SMA	Diodes Inc.	B260A-13-F
23	2		D3, D5	Diode, Zener, 5.6V, 500mW, SOD-123	ON Semiconductor	MMSZ4690T1G
24	2		D6, D8	Diode, Zener, 27V, 500mW, SOD-123	Vishay-Semiconductor	MMSZ4711-V
25	1		D7	Diode, Zener, 3.9V, 500mW, SOD-123	ON Semiconductor	MMSZ4686T1G
26	2		D9, D10	Diode, Schottky, 30V, 0.2A, SOT-23	Diodes Inc.	BAT54C-7-F
27	6		FID1, FID2, FID3, FID4, FID5, FID6	Fiducial mark. There is nothing to buy or mount.	N/A	N/A
28	4		H1, H2, H3, H4	Bumpon, Hex, 0.063mil, 11mm Dia, Lt Brn	3M	SJ5202
29	2		J1, J7	Header, 100mil, 10x2, SMD	Samtec, Inc.	TSM-110-01-T-DV-P
30	1		J18	Terminal Block, 6A, 3.5mm Pitch, 3-Pos, TH	On-Shore Technology, Inc.	ED555/3DS
31	1		J19	Receptacle, Micro High Speed Socket Strip, 0.8mm, 25x2, R/A, SMT	Samtec, Inc.	ERF8-025-01-L-D-RA-L-TR

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32	19		J2, J3, J4, J5, J6, J15, J16, J17, J21, J22, J23, J24, J25, J26, J27, J28, J29, J30, J31	Header, TH, 100mil, 2x1, Gold plated, 230 mil above insulator	Samtec	TSW-102-07-G-S
33	1		J20	SD Memory Card Connector	Molex	502570-0893
34	2		J32, J33	Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	On-Shore Technology	ED555/2DS
35	7		J8, J9, J10, J11, J12, J13, J14	Header, TH, 100mil, 3x1, Gold plated, 230 mil above insulator	Samtec, Inc.	TSW-103-07-G-S
36	1		L1		Würth Electronics	744870471
37	8	10.0k	R1, R79, R80, R81, R82, R83, R84, R85	RES, 10.0k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040210K0FKED
38	5	10.0M	R11, R21, R22, R74, R76	RES, 10.0Meg ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040210M0FKED
39	3	47.0k	R13, R15, R18	RES, 47.0k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-0747KL
40	1	100	R19	RES, 100 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603100RFKEA
41	17	49.9	R2, R3, R5, R6, R7, R8, R9, R10, R14, R16, R86, R87, R88, R89, R90, R91, R93	RES, 49.9 ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040249R9FKED
42	16	357	R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R34, R35, R37, R38, R40, R41	RES, 357 ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402357RFKED
43	13		R36, R44, R48, R52, R94, R95, R96, R98, R99, R100, R102, R103, R107	Resistor, Uninstalled	NI	NI
44	16	0	R4, R33, R39, R47, R49, R61, R69, R77, R78, R92, R97, R101, R104, R105, R106, R108	RES, 0 ohm, 5%, 0.063W, 0402	Yageo America	RC0402JR-070RL
45	4	3.57k	R42, R46, R50, R54	RES, 3.57k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04023K57FKED
46	4	6.65k	R43, R45, R51, R53	RES, 6.65k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04026K65FKED
47	1	576k	R55	RES, 576k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402576KFKED
48	2	232k	R56, R71	RES, 232k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402232KFKED
49	1	182k	R57	RES, 182k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402182KFKED
50	4	499k	R58, R60, R62, R72	RES, 499k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402499KFKED
51	2	20k	R59, R73	RES, 20k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040220K0JNED
52	1	33k	R63	RES, 33k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040233K0JNED
53	2	82k	R64, R75	RES, 82k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040282K0JNED
54	1	15k	R65	RES, 15k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040215K0JNED
55	1	1.1k	R66	RES, 1.1k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04021K10JNED
56	1	44.2k	R67	RES, 44.2k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040244K2FKED
57	1	412k	R68	RES, 412k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402412KFKED
58	1	20.5k	R70	RES, 20.5k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040220K5FKED
59	1		SD1	SanDisk MicroSD Card, 2GB	SanDisk	SDSDQ-002G
60	26		SH-J2, SH-J3, SH-J4, SH-J5, SH-J6, SH-J8, SH-J9, SH-J10, SH-J11, SH-J12, SH-J13, SH-J14, SH-J15, SH-J16, SH-J17, SH-J21, SH-J22, SH-J23, SH-J24, SH-J25, SH-J26, SH-J27, SH-J28, SH-J29, SH-J30, SH-J31	Shunt, 100mil, Gold plated, Black	3M	969102-0000-DA

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61	1		TP11	Test Point, Miniature, Black, TH	Keystone	5001
62	6		TP12, TP13, TP14, TP15, TP16, TP17	Test Point, Miniature, Red, TH	Keystone	5000
63	9		TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10	Test Point, Miniature, White, TH	Keystone	5002
64	2		U1, U3	Op Amp, Precision, 20MHz, 0.9pA, Low-Noise, RRIO, CMOS, with Shutdown	Texas Instruments	OPA320AIDBVR
65	1		U10	IC, -3V to -36V, -200mA, Ultralow Noise, High-PSRR LDO Negative Linear Regulator	TI	TPS7A3001DGN
66	1		U11	IC, 2K, Serial EEPROM	Atmel	AT24C02B
67	1		U2	16 bit 500KSPS 8 Channel SAR ADC	TI	ADS8688IDBT
68	2		U4, U5	OpAmp, Low Noise, Low Power, 36V	Texas Instruments	OPA2209AIDGKR
69	2		U6, U7	IC, VIN 3V to 35V, 150mA, Ultralow Noise, High-PSRR, LDO Regulator	TI	TPS7A4901DGN
70	1		U8	IC, SWITCHED CAP, BUCK BOOST CONVERTER 1.8V to 5.5V in 65uA	TI	REG71055DDC
71	1		U9	Buck Inverting Buck-Boost Step Down Regulator with 3.5 to 60 V Input and 0.8 to 58 V Output, -40 to 150 degC, 10-Pin MSOP-PowerPAD (DGQ), Green (RoHS & no Sb/Br)	Texas Instruments	TPS54060DGQ