Texas Instruments

Bill of Materials

TI DESIGNS TIDA-00036

Item	Qty	Reference	Value	Part Description	Size	Manufacturer Part Number	Manufacturer
1	2	C1, C20	1.0uF	Capacitor, Ceramic, 25V, X7R, 10%	1206	STD	STD
2	1	C10	1.0uF	Capacitor, Ceramic, 10V, X7R, 10%	0805	STD	STD
3	1	C11	10uF	Capacitor, Ceramic, 10V, X5R, 10%	0603	STD	STD
4	0	C14	Open	Capacitor, Ceramic, 10V X5R, 10%	0805	STD	STD
5	1	C16	10uF	Capacitor, Ceramic, 10V, X5R, 10%	1206	STD	STD
6	2	C17, C18	22uF	Capacitor, Ceramic, 10V, X5R, 20%	1206	STD	STD
7	0	C2, C21, C22	Open	Capacitor, Ceramic	0603	STD	STD
8	0	C3, C12	Open	Capacitor, Ceramic, 10V X5R, 10%	1206	STD	STD
9	2	C4, C15	10uF	Capacitor, Ceramic, 25V, X5R, 10%	0805	STD	STD
10	1	C5	47nF	Capacitor, Ceramic, 16V, X7R, 10%	0603	STD	STD
11	1	C6	4.7uF	Capacitor, Ceramic, 16V, X7R, 10%	0603	STD	STD
12	3	C7, C8, C19	10uF	Capacitor, Ceramic, 25V X5R, 10%	0805	STD	STD
13	0	C9, C13	0.1uF	Capacitor, Ceramic, 25V, X7R, 10%	0603	STD	STD
14	1	D1	LTST-C190GKT	Diode, LED, Green, 2.1-V, 20-mA, 6-mcd	0603	LTST-C190GKT	Lite On
15	2	J1, J5	ED120/2DS	Connector,15A, 300V Male 2 Pole, 5.08 mm	9x12 mm	ED120/2DS	On Shore Tech
16	1	J2	ED120/3DS	Terminal Block, 3-pin, 15-A, 5.1mm	0.60 x 0.35 inch	ED120/3DS	OST
17	1	J3	N2510-6002RB	Connector, Male Straight 2x5 pin, 100mil spacing, 4 Wall	0.338 x 0.788 inch	N2510-6002RB	3M
18	1	J4	ED555/4DS	Terminal Block, 4-pin, 6-A, 3.5mm	0.55 x 0.25 inch	ED555/4DS	OST
19	1	J6	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	PEC02SAAN	Sullins
20	1	J7	A-USB B-M5	Connector, USB-B, Mini, 5-pins	0.354 X 0.307 Inches	A-USB B-M5	Assmann Electronics
21	9	JP7, JP8, JP9	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	PEC02SAAN	Sullins
22	1	L1	2.2uH	Inductor, SMT, 5A, 37milliohm	0.204 x 0.216 inch	IHLP2020BZER2R2M11	Vishay
23	1	Q1	CSD25302Q2	Trans, Pch NexFET, 20V, 5 A, 56 milliohm	SON 2X2	CSD25302Q2	TI
24	2	Q2, Q3	Si2312DS	MOSFET,N-ch, 20V, 4.9A, 33 milliohm	SOT23	Si2312DS	Vishay
25	1	R1	0	Resistor, Chip, 1/16W,	0603	STD	STD
26	1	R14	2.21k	Resistor, Chip, 1/16W, 1%	0603	STD	STD
27	1	R15	10.0k	Potentiometer, 3/8 Cermet, Single-Turn	0.25x0.17 inch	3266W-1-103LF	Bourns
28	1	R18	261k	Resistor, Chip, 1/16W, 1%	0603	STD	STD
29	1	R19	121k	Resistor, Chip, 1/16W, 1%	0603	STD	STD
30	1	R2	0	Resistor, Chip, 0.6W, 1%	2010	STD	STD
31	1	R21	30.1k	Resistor, Chip, 1/16W, 1%	0603	STD	STD
32	1	R22	5.23k	Resistor, Chip, 1/16W, 1%	0603	STD	STD
33	1	R24	768	Resistor, Chip, 1/16W, 1%	0603	STD	STD
34	1	R25	49.9k	Resistor, Chip, 1/16W, 1%	0603	STD	STD
35	1	R3	0	Resistor, Chip,1/2W, yy%	1210	STD	STD
36	4	R4, R12, R13, R27	200	Resistor, Chip, 1/16W, 1%	0603	STD	STD
37	1	R5	100k	Resistor, Chip, 1/16W, 1%	0603	STD	STD

Item	Qty	Reference	Value	Part Description	Size	Manufacturer Part Number	Manufacturer
38	0	R6, R23	Open	Resistor, Chip, 1/16W	0603	STD	STD
39	1	R7	169	Resistor, Chip, 1/16W, 1%	0603	STD	STD
40	5	R8, R11, R16, R17, R20	10.0k	Resistor, Chip, 1/16W, 1%	0603	STD	STD
41	2	R9, R26	20k	Resistor, Chip, 1/16W, 1%	0603	STD	STD
42	17	TP7, TP8, TP9, TP10, TP11,	5002	Test Point, White, Thru Hole Color Keyed	0.100 x 0.100 inch	5002	Keystone
43	2	TP12, TP18	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
44	1	TP2	131-4244-00	Adaptor, 3.5-mm probe clip (or 131-5031-00)	0.200 inch	131-4244-00	Tektronix
45	1	U1 Use bq24195 or bq24195L	BQ24195LRGE	With Narrow VDC Power Path Management and USB OTG	QFN-23	BQ24195LRGE	TI
46	1	U1 Use bq24195 or bq24195L	BQ24195RGE	With Narrow VDC Power Path Management and USB OTG	QFN-24	BQ24195RGE	TI
47	9	--		Shunt, 100-mil, Black (See notes 7 & 8)	0.100	929950-00	3M
48	1	--		PCB, 3 In x 3 In x 0.031 In		PWR193	Any
49	1	--		Label (See note 5)	1.25 x 0.25 inch	THT-13-457-10	Brady
50	4	-	SJ-5303	Rubber foot (see note 6)	.044" X 0.20"	SJ-5303	3M

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.
5. Install label after final wash. Text shall be 8 pt font. Text shall be per Table 1.
6. Install after final wash.
7. Install 4 of the shunts after final wash:

JP1: Apply Shunt across both pins
JP3: Apply Shunt across both pins
JP7: Apply Shunt across both pins
JP8: Apply Shunt across both

8. Install 5 shunts after final wash on Just ONE of the header pins:

JP2-1
JP4-1
JP5-1
JP6-1
JP9-1

Table 1

Assembly number	Text
PWR193-001	bq24195LEVM-193
PWR193-002	bq24195EVM-193

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