

# Bill of Materials

**TI DESIGNS TIDA-00703**

Reference Design to convert a power supply into real time programmable CC-CV source

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	Note
1	!PCB1	Printed Circuit Board	Any	TIDA-00703	Fitted
1	C1	CAP, CERM, 1 $\mu$ F, 6.3 V, +/- 10%, X6S, 0603	MuRata	GRM185C80J105KE26D	Fitted
9	C2, C3, C6, C8, C12, C16, C17, C18, C20	CAP, CERM, 100 pF, 25 V, +/- 10%, X7R, 0603	AVX	06033C101KAT2A	Fitted
1	C4	CAP, CERM, 1 $\mu$ F, 50 V, +/- 10%, X7R, 1206	TDK	C3216X7R1H105K	Fitted
1	C5	CAP, CERM, 2.2 $\mu$ F, 10 V, +/- 10%, X5R, 0805	AVX	0805ZD225KAT2A	Fitted
1	C7	CAP, CERM, 0.22 $\mu$ F, 16 V, +/- 5%, X7R, 0805	AVX	0805YC224JAT2A	Fitted
1	C9	CAP, CERM, 0.1 $\mu$ F, 16 V, +/- 5%, X7R, 0603	AVX	0603YC104JAT2A	Fitted
1	C10	CAP, CERM, 0.022 $\mu$ F, 50 V, +/- 10%, X7R, 0603	AVX	06035C223KAT2A	Fitted
1	C11	CAP, CERM, 10000 pF, 50 V, +/- 10%, X7R, 0603	AVX	06035C103KAT2A	Fitted
3	C13, C14, C22	CAP, CERM, 4700 pF, 100 V, +/- 5%, X7R, 0603	AVX	06031C472JAT2A	Fitted
1	C15	CAP, CERM, 1 $\mu$ F, 10 V, +/- 10%, X7R, 0805	AVX	0805ZC105KAT2A	Fitted
1	C19	CAP, CERM, 1 $\mu$ F, 16 V, +/- 10%, X6S, 0805	MuRata	GRM216C81C105KA12D	Fitted
2	C21, C30	CAP, CERM, 2200 pF, 100 V, +/- 5%, X7R, 0603	AVX	06031C222JAT2A	Fitted
2	D1, D2	Diode, Schottky, 30 V, 0.2 A, SOT-23	Diodes Inc.	BAT54S-7-F	Fitted
1	D3	Diode, Switching, 75 V, 0.3 A, SOD-523	Micro Commercial Components	1N4148X-TP	Fitted
1	D4	LED, Rgb, SMD	Rohm	SMLP36RGB2W3	Fitted
2	H1, H2	Bumpon, Hemisphere, 0.44 X 0.20, Clear	3M	SJ-5303 (CLEAR)	Fitted
1	J1	Receptacle, 100mil, 5x1, Gold, R/A, TH	Sullins Connector Solutions	PPPC051LGBN-RC	Fitted
1	J2	Header, 100mil, 6x1, Gold, R/A, TH	Samtec	TSW-106-08-G-S-RA	Fitted
1	J3	Header, 100mil, 4x1, Gold, TH	Samtec	TSW-104-07-G-S	Fitted
1	J4	Header, 2.54 mm, 2x1, Gold, TH	Sullins Connector Solutions	GBC02SAAN	Fitted
2	R1,R4	RES, 115 k, 0.1%, 0.1 W, 0603	Panasonic	ERA-3AEB1153V	Fitted
1	R2	RES, 9.31 k, 1%, 0.1 W, 0603	Panasonic	ERA-3AEB9311V	Fitted
5	R3,R21, R22, R23,R24	RES, 10.0 k, 0.1%, 0.1 W, 0603	Panasonic	ERA-3AEB103V	Fitted
1	R5	RES, 132 k, 0.5%, 0.1 W, 0603	Yageo America	RT0603DRE07132KL	Fitted
1	R6	RES, 100 k, 0.5%, 0.1 W, 0603	Yageo America	RT0603DRE07100KL	Fitted
2	R7, R8	RES, 4.7 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06034K70JNEA	Fitted
1	R9	RES, 1.0 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06031K00JNEA	Fitted
2	R10, R16	RES, 10 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060310K0JNEA	Fitted
6	R11, R12, R13, R14, R15, R27	RES, 1.00 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K00FKEA	Fitted
4	R17, R18, R19, R20	RES, 470, 5%, 0.1 W, 0603	Vishay-Dale	CRCW0603470RJNEA	Fitted
1	R26	RES, 47 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060347K0JNEA	Fitted
1	R30	RES, 681, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603681RFKEA	Fitted
1	U1	Single Output Automotive LDO, 50 mA, Adjustable 1.275 to 28 V Output, 3 to 50 V Input, 8-pin MSOP (DGN), -40 to 125 degC, Green (RoHS & no Sb/Br)	Texas Instruments	TPS79801QDGNRQ1	Fitted
1	U2	High-Accuracy, Wide Common-Mode Range, Bi-Directional CURRENT SHUNT MONITOR Zero-Drift Series, D0008A	Texas Instruments	INA286AIDR	Fitted
1	U3	2.4V, 10 $\mu$ A Temperature Sensor, 5-pin SC-70 Micro SMD, Pb-Free	Texas Instruments	LM20BIM7/NOPB	Fitted
1	U4	16 MHz Mixed Signal Microcontroller with 8 KB Flash, 512 B SRAM and 24 GPIOs, -40 to 85 degC, 20-pin SOP (PWL), Green (RoHS & no	Texas Instruments	MSP430G2453IPW20R	Fitted

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	Note
1	U5	Precision, Low Noise, Low Iq Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	Texas Instruments	OPA376AIDBVR	Fitted
1	U6	Precision Micropower Shunt Voltage Reference, 0.1% accuracy, 1.2 V, 15 ppm / degC, 12 mA, -40 to 85 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	Texas Instruments	LM4041A12IDBZR	Fitted
2	FID1, FID2	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Not Fitted

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