

Bill of Materials

TI DESIGNS TIDA-00284

Current Controlled Driver for AC solenoid

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
2	C1, C3	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E104KA01D	0603	Fitted
2	C2, C7	CAP, CERM, 100pF, 50V, +/-5%, COG/NPO, 0603	AVX	06035A101JAT2A	0603	Fitted
1	C4	CAP ALUM 10UF 400V 20% RADIAL	Nichicon	UVC2G100MPD	RCAP, TH, 10 x 20mm	Fitted
1	C5	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0603	Kemet	C0603C105K8PACTU	0603	Fitted
1	C6	CAP, CERM, 1uF, 35V, +/-10%, X5R, 0603	Taiyo Yuden	GMK107B1J05KA-T	0603	Fitted
1	D1	Diode, Zener, 20 V, 5 W, SMB	Micro Commercial Components	SMBJ5357B-TP	SMB	Fitted
3	D2, D3, D4	DIODE SCHOTTKY 20V 0.5A SOD523	Diodes Inc.	NSR0520V2T1G	SOD-523	Fitted
4	D5, D6, D7, D8	Diode, P-N, 1000V, 1A, 3.9x1.7x1.8mm	Comchip Technology	CGRM4007-G	3.9x1.7x1.8mm	Fitted
1	D9	Diode, Ultrafast, 600V, 1A, SMB	Diodes Inc.	MURS160-13-F	SMB	Fitted
1	F1	Fuse, 0.5A, 250V, SMD	Littelfuse	0443.500DR	FUSE 10.1x3.12x3.13mm	Fitted
2	J1, J2	Header, 100mil, 3x1, TH	Mill-Max	800-10-003-10-001000	Header, 3x1, 100mil, TH	Fitted
2	J3, J4	Terminal Block, 2x1, 2.54mm, TH	TE Connectivity	282834-2	Terminal Block, 2x1, 2.54mm, TH	Fitted
1	Q1	TRANS NPN LP 100MA 45V SOT23	ON Semiconductor	BC850CLT1G	SOT-23-3	Fitted
1	Q2	MOSFET, N-CH, 600V, 2A, DPAK	AOS	AOD2N60	DPAK	Fitted
4	R1, R3, R17, R18	RES, 51.1 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060351K1FKEA	0603	Fitted
2	R11, R13	RES, 39.0 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-0739KL	0603	Fitted
2	R14, R15	RES, 121 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603121KFKEA	0603	Fitted
2	R16, R25	RES, 59.0k ohm, 1%, 1W, 2512	Vishay-Dale	CRCW251259K0FKEG	2512	Fitted
1	R19	RES, 196 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603196KFKEA	0603	Fitted
1	R2	RES, 499 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603499KFKEA	0603	Fitted
1	R20	RES, 10.0, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060310R0FKEA	0603	Fitted
1	R22	RES, 20.0 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060320K0FKEA	0603	Fitted
2	R23, R24	RES 2.00 OHM 1/2W 1% 1210 SMD	Vishay Dale	CRCW12102R00FKEA	1210	Fitted
1	R4	RES 2K OHM 1/4W 1% 1210 SMD	Rohm Semiconductor	MCR25JZH2001	1210	Fitted
2	R5	RES, 0.5%, 0.1 W, 0603	Vishay-Dale	CRCW0603000Z0EA	0603	Fitted
1	R6	RES, 1.00 M, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031M00FKEA	0603	Fitted
5	R7, R8, R9, R10, R12	RES, 1.0k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031K00JNEA	0603	Fitted
1	RV1	Varistor, 300V, 1.75kA, 7MM Radial, TH	EPCOS Inc	B72207S2301K101	Varistor, TH, 7MM	Fitted
1	U1	TVS DIODE 15VWM 29VC SC746	ON Semiconductor	SMS15T1G	SC-74	Fitted
1	U2	IC, 550 uA single Chan, R-R Output Op-Amp	Texas Instruments	TLV271IDB	SOT23-5	Fitted
1	U3	POWER SAVING SOLENOID CONTROLLER WITH INTEGRATED SUPPLY REGULATION, PW0014A	Texas Instruments	DRV110APW	PW0014A	Fitted
0	C8	CAP, CERM, 0.01uF, 100V, +/-10%, X7R, 0805	AVX	08051C103KAT2A	0805	Not Fitted
0	R21	RES, 1.0k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031K00JNEA	0603	Not Fitted
0	R26	RES, 100 ohm, 0.1%, 0.125W, 0805	Yageo America	RT0805BRD07100RL	0805	Not Fitted
6	C1, C2, C3, C4, C12, C13	CAP X1Y1 250VAC	TDK Corporation	CD12-E2GAXxxMYGS	YCAP_MODIFIED	Fitted
2	C5, C9	CAP FILM 0.033UF 1.6KVDC RADIAL	EPCOS Inc	B32672L1333J	CAP_18X9_17.5	Fitted
3	C6, C7, C8	CAP, AL, 47uF, 450V, +/-20%, 0.609529 ohm, TH	Panasonic	EEUED2W470	CAPPR7.5-18X31.5	Fitted
1	C10	CAP, AL, 10uF, 35V, +/-20%, TH	Nichicon	UVR1V100MDD1TA	CAPPR2-5x11	Fitted
5	C11, C15, C16, C18, C19	CAP 120UF 50V RADIAL	United Chemi-Con	EKZN500ELL121MH15D	HE_800x1150	Fitted
2	C14, C17	CAP ALUM 330UF 35V 20% RADIAL	Rubycon	35ZL330MEFC10X16	R7_1000x1250	Fitted
6	C20, C21, C22, C23, C27, C39	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0805	Kemet	C0805C104K5RACTU	0805_HV	Fitted
1	C24, C26	CAP, CERM, 2.2uF, 100V, +/-10%, X7R, 1210	MuRata	GRM32ER72A225KA35L	1210	Fitted
1	C25	CAP, CERM, 1uF, 35V, +/-10%, X7R, 0603	Taiyo Yuden	GMK107AB7105KAHT	0603	Fitted
1	C28	CAP, CERM, 330pF, 630V, +/-5%, COG/NPO, 1206	TDK	C3216C0G2J331J	1206	Fitted
3	C29, C30, C31	CAP, CERM, 0.1uF, 35V, +/-10%, X7R, 0603	Taiyo Yuden	GMK107B7104KAHT	0603	Fitted
1	C32	CAP, CERM, 1uF, 35V, +/-10%, X7R, 0805	Taiyo Yuden	GMK212B7105KG-T	0805_HV	Fitted
1	C33	CAP, CERM, 4700pF, 1000V, +/-10%, X7R, 1206	MuRata	GRM31BR73A472KW01L	1206	Fitted
1	C34	CAP, CERM, 47pF, 1000V, +/-5%, COG/NPO, 1206	Vishay-Vitramon	VJ1206A470JXGAT5Z	1206	Fitted
1	C35	CAP, CERM, 680pF, 100V, +/-10%, X7R, 0603	AVX	06031C681KAT2A	0603	Fitted
0	C36	CAP, CERM, 1uF, 35V, +/-10%, X7R, 0805	Taiyo Yuden	GMK212B7105KG-T	0805_HV	Not Fitted
1	C37	CAP, CERM, 1000pF, 100V, +/-10%, X7R, 0805	Kemet	C0805C102K1RACTU	0805_HV	Fitted
1	C38	CAP, CERM, 100pF, 50V, +/-5%, COG/NPO, 0603	TDK	C1608COG1H101J	0603	Fitted
0	C40, C41	CAP, CERM, 47pF, 1000V, +/-5%, COG/NPO, 1206	Vishay-Vitramon	VJ1206A470JXGAT5Z	1206	Not Fitted
1	C42	CAP, CERM, 1000pF, 50V, +/-5%, X7R, 0805	Kemet	C0805C102J5RACTU	0805_HV	Fitted
14	D9, D10, D11, D12, D14, D17	Diode, P-N, 1000V, 1A, TH	Fairchild Semiconductor	1N4007	DO-41	Fitted
1	D13	TVS DIODE 495VWM 798VC AXIAL	Littelfuse Inc	P4KE550	DO-41	Fitted
2	D15, D16	TVS DIODE 342VWM 548VC DO15	Fairchild Semiconductor	P6KE400A	DO-204AC_VERT	Fitted
2	D18, D24	Diode, Switching, 600V, 1A, TH	Vishay-Semiconductor	1N4937-E3	DO-41	Fitted
2	D19, D21	DIODE FAST REC 1KV 1A DO41	Fairchild Semiconductor	UF4007	DO-204AC_VERT	Fitted
2	D20, D22	TVS DIODE 171VWM 274VC AXIAL	Littelfuse Inc	1.5KE200A	Zener 1.5KE200A_VERT	Fitted
1	D23	DIODE SCHOTTKY 200V 10A TO220AB	Diodes Incorporated	MBR20200CT-LJ	TO-220AB	Fitted
4	D25, D26, D27, D28	DIODE SUPERFAST 200V 3A SMC	Diodes Incorporated	MURS320-13-F	SMC	Fitted
1	D29	DIODE SMALL SIGNAL 80V 0.1A 2UMD	Rohm	1SS355TE-17	SOD-323	Fitted
0	D30	DIODE SMALL SIGNAL 80V 0.1A 2UMD	Rohm	1SS355TE-17	SOD-323	Not Fitted
1	D31	DIODE ZENER 12V 3W SMB	ON Semiconductor	1SMB5927BT3G	SMB	Fitted
1	D32	Diode, Zener, 7.5V, 200mW, SOD-323	Diodes Inc.	MMSZ5236BS-7-F	sod-323	Fitted
6	FID6	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Fiducial10-20	Fitted
4	H1, H2, H3, H4	panhead	B&F Fastener Supply	NY PMS 440 0025 PH	NY PMS 440 0025 PH	Fitted
4	H5, H6, H7, H8	Standoff, Hex, 0.5" L #4-40 Nylon	Keystone	1902C	Keystone_1902C	Fitted
2	HS1, HS2	HEATSINK TO-218/TO-247 W/PINS 2"	Aavid	513201B02500G	HSINK_513201B02500	Fitted
1	HS3	Heat Sinks TO-220 VERTICAL MNT	Wakefield Thermal Solutions	265-118ABH-22	HEATSINK_265-118ABH-22	Fitted
1	J1	Terminal Block, 3x1, 9.52MM, TH	Phoenix Contact	1714984	Phoenix_1714984	Fitted
1	J2	Terminal Block, 3x1, 6.35 mm, TH	Phoenix Contact	1714968	Phoenix_1714968	Fitted
3	J3, J4, J5	TERM BLOCK 2POS 5mm, TH	Phoenix Contact	1729018	Phoenix_1729018	Fitted
1	J6	Terminal Block, 6x1, 5.08mm, Th	Phoenix Contact	1729160	Phoenix_1729160	Fitted
2	L1, L2	0.5A, 1.7 ohm, TH	Würth Elektronik eiSos	768772102	IND_WE-TI_8095	Fitted
1	L3	0.01 ohm, TH	Würth Elektronik eiSos	7447462022	IND_WE-TI_XS	Fitted
1	L4	Ferrite Bead, 800 ohm @ 100MHz, 8A, 1206	Würth Electronics Inc	74279244	1806	Fitted
1	LBL1	- 10,000 per roll	Brady	THT-14-423-10	Label_650x200	Fitted
5	LD1, LD2, LD3, LD4, LD5	LED SmartLED Green 570NM	OSRAM	LG L29K-G2J1-24-Z	LED0603AA	Fitted
2	Q1, Q2	MOSFET N-CH 950V 2A TO220FP	STMicroelectronics	STF2N95K5	TO-220AB	Fitted

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