

Bill of Materials

TI DESIGNS
TIDA-00145
Automotive Brushed Motor Driver for Power Folding Side Mirrors (DRV8801EVM)

| Designator | Value | Designator | Description | Manufacturer | MFG Part Number | Size | Quantity |
|------------------------------------|-------------------------------|---------------------------|--|---------------------|--------------------|-------------------|----------|
| C1, C2, C3, C4, C10, C15, C18, C21 | 0.1 uF | C1, C2, C3, C4, C10, C15, | CAP .10UF 25V CERAMIC X7R | Kemet | C0805C104K3RACTU | 0805 | 8 |
| C5 | 100uf | C5 | CAP 100UF 63V ELECT SMG RAD | United Chemicon | ESMG630ELL101MJC5S | RB 5.0mm/12.5mm | 1 |
| C6 | .22uf | C6 | CAP CER .22UF 25V X7R 10% 0805 | TDK Corporation | C2012X7R1E224K | 0805 | 1 |
| C9 | 10uF | C9 | CAP 10UF 25V ELECT VR RADIAL | Nichicon | UVR1E100MDD | RB .1/.250 | 1 |
| D1, D2, D3 | Red LED | D1, D2, D3 | LED RED CLEAR 1206 SMD | Stanley | HBR1105W-TR | 1206 | 3 |
| J1 | 14 pin Header Connector | J1 | Header, 7-Pin, Dual row, Right Angle | ANY | PBC07DAAN | HDR2X7 0.100" | 1 |
| J2, J3 | Power Conn | J2, J3 | TERM BLOCK 5.08MM VERT 2POS PCB | Shore Tech | OSTTA024163 | 5.08 mm | 2 |
| J4 | USB Conn | J4 | CONN USB RT ANG RECPT TYPE B BLK | Molex | 67068-8000 | USB B | 1 |
| J5 | 2 pin Header Connector | J5 | Single Line, 2 Pos, 100 mil pitch Header Connector | ANY | PBC02SAAN | HDR1X2 0.100" | 1 |
| J6, JMP1 | 3 pin Header Connector | J6, JMP1 | Single Line, 3 Pos, 100 mil pitch Header Connector | ANY | PBC03SAAN | HDR1X3 0.100" | 2 |
| L1 | 10mH | L1 | Ferrite Bead 1.5A 40 ohm 0805 SMD | Steward | MI0805K400R-10 | 0805 | 1 |
| PCB1 | 5" x 2" CPG002 PCB Bare Board | PCB1 | CPG002 Customer EVM Bare Board | Selected PCB Vendor | CPG002 | 5" x 2" | 1 |
| R1 | 2.2K | R1 | RES 2.2K OHM 1/8W 5% 0805 SMD | Yageo | RC0805JR-072K2L | 0805 | 1 |
| R2 | 330 | R2 | RES NET 8RES 330 OHM 16PIN SMD | CTS | 766163331GP | SMD | 1 |
| R3 | 4.7K | R3 | RES 4.7K OHM 1/8W 5% 0805 SMD | Yageo | RC0805JR-074K7L | 0805 | 1 |
| R4, R8 | 3.3K | R4, R8 | RES 3.3K OHM 1/8W 5% 0805 SMD | Yageo | RC0805JR-073K3L | 0805 | 2 |
| R5 | .2 | R5 | RES .20 OHM 1W 1% 2512 SMD | Vishay | WSL2512R2000FEA | 2512 | 1 |
| R11 | 196K | R11 | RES 196K OHM 1/8W 1% 0805 SMD | Panasonic | ERJ-6ENF1963V | 0805 | 1 |
| R12 | 110K | R12 | RES 110K OHM 1/8W 5% 0805 SMD | Yageo | RC0805JR-07110KL | 0805 | 1 |
| S1 | Push Button | S1 | SWITCH LIGHT TOUCH 4.3MM 100GF | Panasonic | EVQ-11A04M | 4.3 mm | 1 |
| TP1 | 1 | TP1 | TEST POINT PC COMPACT | Keystone | 5005 | Test Point 0.052" | 1 |
| TP2 | 1 | TP2 | TEST POINT PC COMPACT | Keystone | 5006 | Test Point 0.052" | 1 |
| TS1, TS2, TS5, TS6, TS7, TS8, TS9, | White | TS1, TS2, TS5, TS6, TS7, | TEST POINT PC MINI .040"D | Keystone | 5002 | Test Point 0.040" | 14 |
| TS17 | Black | TS17 | TEST POINT PC MINI .040"D | Keystone | 5001 | Test Point 0.040" | 1 |
| TS18 | Red | TS18 | TEST POINT PC MINI .040"D | Keystone | 5003 | Test Point 0.040" | 1 |
| U1 | | U1 | IC MCU 16BIT 8KB FLASH 28- | Texas Instruments | MSP430F1232IDW | 28-SOIC | 1 |
| U2 | Driver | U2 | IC DMOS FUL-BRDG MOTOR | Texas Instruments | DRV8800PWP | HTSSOP-16 | 1 |

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|------------|------------|------------|---------------------------|-------------------|--------------------|---------|----------|
| U4 | | U4 | 750 mA LDO 8-SOIC | Texas Instruments | TPS77701D | 8-SOIC | 1 |
| U6 | | U6 | IC USB TO SERIAL UART 28- | FTDI | FT232RL R | 28-SSOP | 1 |
| Y1 | 32.768 KHz | Y1 | CRYSTAL 32.768 KHZ 12.5PF | Citizen | CMR200T32.768KDZF- | SMD | 1 |
| | | | | | | | 55 |

TI DESIGNS
TIDA-00145
Automotive Brushed Motor Driver for Power Folding Side Mirrors (DRV8872EVM)

| Designator | Value | Designator | Description | Manufacturer | MFG Part Number | Size | Quantity |
|---|---------|---|--|-----------------------------|------------------|-------------------|----------|
| !PCB1 | | !PCB1 | Printed Circuit Board | Any | MDBU006 | 0805 | 1 |
| C1 | 0.1uF | C1 | CAP, CERM, 0.1 µF, 16 V, +/- 20%, X7R, 0603 | Kemet | C0603C104M4RACTU | RB 5.0mm/12.5mm | 1 |
| C2, C7 | 0.01uF | C2, C7 | CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0603 | Kemet | C0603X103K5RACTU | 0805 | 2 |
| C3 | 47uF | C3 | CAP, AL, 47 µF, 63 V, +/- 20%, 0.65 ohm, SMD | Panasonic | EEE-FK1J470P | RB .1/.250 | 1 |
| C4 | 10uF | C4 | CAP, CERM, 10 µF, 50 V, +/- 10%, X7R, 1210 | Taiyo Yuden | UMK325AB7106KM-T | 1206 | 1 |
| C5 | 1uF | C5 | CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805 | AVX | 08055C105KAT2A | HDR2X7 0.100" | 1 |
| C6 | 2.2uF | C6 | CAP, CERM, 2.2uF, 10V, +/- 10%, X5R, 0603 | Kemet | C0603C225K8PACTU | 5.08 mm | 1 |
| C8 | 0.1uF | C8 | CAP, CERM, 0.1 µF, 100 V, +/- 10%, X7R, 0805 | Kemet | C0805C104K1RACTU | USB B | 1 |
| D1, D2 | 40V | D1, D2 | Diode, Schottky, 40 V, 1 A, MicroSMP | Vishay-Siliconix | MSS1P4-M3/89A | HDR1X2 0.100" | 2 |
| D3 | Red | D3 | LED, Red, SMD | Lite-On | LTST-C190CKT | HDR1X3 0.100" | 1 |
| H1, H2, H3, H4 | | H1, H2, H3, H4 | Bumpon, Hemisphere, 0.44 X 0.20, Clear | 3M | SJ-5303 (CLEAR) | 0805 | 4 |
| J1, J2 | | J1, J2 | Terminal Block, 6A, 3.5mm | On-Shore Technology | ED555/2DS | 5" x 2" | 2 |
| J3, J6 | | J3, J6 | Header, 100mil, 3x1, Tin, TH | Sullins Connector Solutions | PEC03SAAN | 0805 | 2 |
| J4, J7 | | J4, J7 | Header, 1x1, Tin, TH | Sullins Connector Solutions | PEC01SAAN | SMD | 2 |
| J5 | | J5 | Header, 100mil, 2x1, Tin, TH | Sullins Connector Solutions | PEC02SAAN | 0805 | 1 |
| LBL1 | | LBL1 | Thermal Transfer Printable | Brady | THT-14-423-10 | 0805 | 1 |
| R1 | 3.40Meg | R1 | RES, 3.40 M, 1%, 0.1 W, 0603 | Vishay-Dale | CRCW06033M40FKEA | 2512 | 1 |
| R2 | 10.0k | R2 | RES, 10.0 k, 1%, 0.1 W, 0603 | Panasonic | ERJ-3EKF1002V | 0805 | 1 |
| R3 | 1.07Meg | R3 | RES, 1.07 M, 1%, 0.1 W, 0603 | Vishay-Dale | CRCW06031M07FKEA | 0805 | 1 |
| R4 | 50k | R4 | TRIMMER, 50k ohm, 0.5W, TH | Bourns | 3386P-1-503TLF | 4.3 mm | 1 |
| R5, R7 | 0 | R5, R7 | RES, 0, 5%, 0.1 W, 0603 | Vishay-Dale | CRCW06030000Z0EA | Test Point 0.052" | 2 |
| R6 | 0.15 | R6 | RES, 0.15, 1%, 2 W, 2512 | Stackpole Electronics Inc | CSRN2512FKR150 | Test Point 0.052" | 1 |
| R8 | 10k | R8 | RES, 10k ohm, 5%, 0.1W, 0603 | Vishay-Dale | CRCW060310K0JNEA | Test Point 0.040" | 1 |
| R9 | 390 | R9 | RES, 390 ohm, 5%, 0.1W, 0603 | Vishay-Dale | CRCW0603390RJNEA | Test Point 0.040" | 1 |
| SH-J1, SH-J2 | 1x2 | SH-J1, SH-J2 | Shunt, 100mil, Gold plated, Black | 3M | 969102-0000-DA | Test Point 0.040" | 2 |
| TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9 | SMT | TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9 | Test Point, Compact, SMT | Keystone | 5016 | 28-SOIC | 9 |

| Designator | Value | Designator | Description | Manufacturer | MFG Part Number | Size | Quantity |
|------------------|-------|--|---|-------------------|-----------------|-----------|----------|
| TP10 | | TP10 | 1mm Uninsulated Shorting Plug, 10.16mm spacing, TH | Harwin | D3082-05 | HTSSOP-16 | 1 |
| U1 | | U1 | Single Output LDO, 100 mA, Adjustable 1.2 to 18.5 V Output, 3 to 60 V Input, with Enable and Power Good, 8-pin MSOP (DGN), -40 to 125 degC, Green (RoHS & no Sb/Br) | Texas Instruments | TPS7A1601DGNR | 8-SOIC | 1 |
| U2 | | U2 | LinCMOS Timer, D0008A | Texas Instruments | TLC555CD | 28-SSOP | 1 |
| U3 | | U3 | H-Bridge PWM Motor Driver with Fault Reporting, DDA0008H | Texas Instruments | DRV8872DDAR | SMD | 1 |
| FID1, FID2, FID3 | | FID1, FID2, FID3 | Fiducial mark. There is nothing to buy or mount. | N/A | N/A | | 0 |
| R10 | 200k | R10 | TRIMMER, 200k ohm, 0.5W, TH | Bourns | 3386P-1-204TLF | | 0 |
| | | | | | | | 48 |
| Approved | | Notes | | | | | |
| | | <ol style="list-style-type: none"> 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. | | | | | |

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