

PMP20551 REV A Bill of Materials

IPCBI 1 DefXedS1 Ary Primed Circuit Board House CG 1 1200F RRM2195C2A121A01D MR48a CAP CLEMA 120 F1 10V ++ 5% COCSNPD 0005 6005 C2 C6 2 7.0 PR04F RRM2197C1A01D MR48a CAP CLEMA 120 F1 10V ++ 5% COCSNPD 0005 6005 C3 C6 2.70.0F RRM2197C1A71A01D MR48a CAP CLEMA 120 F1 10V ++ 5% COCSNPD 0005 6005 C12 1 0.10F CRM21677C14225KA71 MR48a CAP CLEMA 210 F1 10V ++ 5% COCSNPD 0005 6005 C13 1 2.20F CRM218771225KA72 MR48a CAP CLEMA 229 F1 00V ++ 5% COCSNPD 0005 6005 C14 1 0.20F CRM218772225KA72 MR48a CAP CLEMA 022 F1 00V ++ 10% XTR 0005 6005 C14 1 0.20F CRM110F1 F1 00V ++ 10W ++ 10W ++ 70% XTR 0005 6005 C14 1 0.24F CRM110F1 F1 00V ++ 10W XTR 0005 6005 C14 1 0.24F CRM110F1 F1 00V ++ 10W XTR 0005 6005 C14 1	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1 4 120pF GRM216SCA121A01D Mulan CAP_CERM120P_110V_4-5%_COLONPO.0605 0605 C4, C5, C5, C7 4 22uF GRM22ER71E228KE15L Mulkain CAP_CERM12P_22V_4-10%_XRR_1210 1210 C4, C5, C5, C7 4 27uF GRM22ER71E228KE15L Mulkain CAP_CERM14P_128V_4-10%_XRR_1210 1210 C1 4 27uF GRM22ER71E228KE15L Mulkain CAP_CERM14P_128V_4-10%_XRR_1210 1210 C1 4 27uF GRM21ER71E228K73L Mulkain CAP_CERM14P_180V_4-5%_S05AND,0005 0805 C13 1 22uF GRM21MR72224KAC3L Mulkain CAP_CERM14P_180V_4-10%_XRR_0005 0805 C14 1 0.22uF GRM180K71422AAU31D Mulkain CAP_CERM14P_180V_4-10%_XRR_003 0603 C15 1 0.04T/C GRM188671122/SM12D Mulkain CAP_CERM14P_28V_4-10%_X-10%_XRR_003 0603 C16 1 0.22uF GRM18871123/SM12D Mulkain CAP_CERM14P_28V_4-10%_X-10%_XRR_003 0603 C15 0.40V MR88871123/SM110	!PCB1	1		PMP20551	Any	Printed Circuit Board	
C2 1 470uF APSC100ELL471MM05S Chemi-Can CAP, Auminum Pyrin, 470uF, 151, v4, 2010, 0101 m, TH DBM.Bmm C4, C5, G, C1 3 4.7uF GRMASERT/E220KE164 MkRas CAP, CERM, 22 uF, 22 v, v4, 10%, X7R, 1210 1210 C1 1 470uF GRMASERT/E220KE164 MkRas CAP, CERM, 470 uF, 00%, V4, 10%, X7R, 1210 1210 C1 1 670uF GRMASERT/E220KE164 MkRas CAP, CERM, 470 uF, 00%, X7R, 1000 6865 C1 0.1uF GRMASERT/A210HACACL MkRas CAP, CERM, 021 uF, 100 v, v4 · 10%, X7R, 1003 6865 C14 10.2uF GRMASERT/A222KE40C4 MkRas CAP, CERM, 021 uF, 10V, v4 · 10%, X7R, 0003 6003 C16 10.0uF GRMISBRT/CAT3KA01D MkRas CAP, CERM, 10P, 50V, v4 · 0%, X7R, 0003 6003 C18 1 UE GRMISBRT/E224KA88D MkRas CAP, CERM, 10P, 50V, v4 · 0%, X7R, 0003 6003 C18 1 GRMISBRT/E224KA88D MkRas CAP, CERM, 10P, 50V, v4 · 0%, X7R, 0003 6003 C18 1 0.2uF GRMISBRT/A100C/W01D <td>C1</td> <td>1</td> <td>120pF</td> <td>GRM2165C2A121JA01D</td> <td>MuRata</td> <td>CAP, CERM, 120 pF, 100 V, +/- 5%, C0G/NP0, 0805</td> <td>0805</td>	C1	1	120pF	GRM2165C2A121JA01D	MuRata	CAP, CERM, 120 pF, 100 V, +/- 5%, C0G/NP0, 0805	0805
CALCS, CG, CG 4 220.F GRM32ER71E2204E151 MuRan CAP, CERM, 2.7, JE, SV, 4-10%, X7R, 1210 1210 CG, O, CIO 3 47.0pF GRM32ER71E2204E151 MuRan CAP, CERM, 4.7 JF, BO, V4.75%, COGNNPD, G805 G805 C12 1 1 470pF GRM32ER71E2204E174010 MuRan CAP, CERM, 4.7 JF, BO, V4.75%, COGNNPD, G805 G805 C13 1 2.2uF GRM31ER72424FAC33 MuRan CAP, CERM, 2.0 JF, 2.5 V, 4-10%, X7R, G805 G805 C14 1 2.2uF GRM31ER72424FAC33 MuRan CAP, CERM, 2.0 JF, 30V, 4-10%, X7R, G805 G803 C14 1 2.2uF GRM31ER72424FAC30 MuRan CAP, CERM, 1.02 JF, 50V, 4-10%, X7R, G805 G803 C17 1 100pF GRM31ER7244FA120 MuRan CAP, CERM, 1.02 JF, 55V, 4-10%, X7R, 1003 G803 C19 1 0.2uF GRM31ER7244FA120 MuRan CAP, CERM, 1.02 JF, 55V, 4-10%, X7R, 1003 G903 C20 1 1000pF GRM31ER734102KV011 MuRan CAP, CERM, 1007, 4-10%, X7R, 1003 G903	C2	1	470uF	APSG160ELL471MH08S	Chemi-Con	CAP, Aluminum Polymer, 470 μF, 16 V, +/- 20%, 0.016 ohm, TH	D8xL8mm
CB, CD, C10 3 4.7uF GRM32ER71K475KE14L MuRata CAP, CERM, A7 JF, B0, V, +1 (%, X7R, 1210 1210 C11 14.0pF GRM21B72A104KAC4L MuRata CAP, CERM, A7 JF, B0, V, +5 %5, CGANF0, 8065 0865 C12 1 0.1uF GRM21B772A104KAC4L MuRata CAP, CERM, 0.2 JF, 50V, v+ 70%, X7R, 0805 0865 C13 1.2uF GRM21B772A104KAC4L MuRata CAP, CERM, 0.2 JF, 10V, v+ 10%, X7R, 0805 0805 C14 1.0u2Lpf GRM21B772A104KAC4L MuRata CAP, CERM, 0.2 JF, 10V, v+ 10%, X7R, 0805 0805 C15 1 0.1u4Lpf GRM1887172234KAC5L MuRata CAP, CERM, 0.1u7, v-10%, X7R, 0803 0603 C16 1 0.20P GRM1885714234KAC5L MuRata CAP, CERM, 100, v-10%, X7R, 0603 0603 C16 1 0.22P GRM188571234KAR5B MuRata CAP, CERM, 100, V-5%, X7R, 0603 0603 C20 1 0.22P GRM1885712234KA8D MuRata CAP, CERM, 100, V-5%, X7R, 1066 1206 C20 1 0.22VF EMM1885711234KA8D	C4, C5, C6, C7	4	22uF	GRM32ER71E226KE15L	MuRata	CAP, CERM, 22 μF, 25 V, +/- 10%, X7R, 1210	1210
C11 1 470pF GRM2165C2A471.MO1D MuRtan CAP, CERM. 01 pf. 100 V, +/ 5%, COGNP0, 0005 0005 C12 1 0.12pF GRM21677A104KACAL MuRtan CAP, CERM. 01 pf. 100 V, +/ 10%, X7R, 0005 0005 C13 1 0.22uF GRM2167712224KAC3L MuRtan CAP, CERM. 0.22 pf. 70 V, +/ 10%, X7R, 0005 0005 C14 1 0.22uF GRM2167712224KAC3L MuRtan CAP, CERM. 0.22 pf. 70 V, +/ 10%, X7R, 0005 0003 C15 1 0.047uF GRM108771627424KAC3L MuRtan CAP, CERM. 0.220 pf. 50 V, +/ 10%, X7R, 0003 0003 C16 1 100 GRM1087716274420 MuRtan CAP, CERM. 0.220 pf. 50 V, +/ 10%, X7R, 0003 0003 C19 10.20pF GRM1087716274424KABD MuRtan CAP, CERM. 0.220 pf. 50 V, +/ 10%, X7R, 0003 0003 C20 1 1000pF GRM10877141024KM01L MuRtan CAP, CERM. 0.22 pf. 50 V, +/ 10%, X7R, 0003 0003 C21 1.25V GRM10877141024KM01L MuRtan CAP, CERM. 0.22 pf. 50 V, +/ 10%, X7R, 0003 0003 C21 1.0	C8, C9, C10	3	4.7uF	GRM32ER71K475KE14L	MuRata	CAP, CERM, 4.7 μF, 80 V, +/- 10%, X7R, 1210	1210
C12 1 0.1uF GRM21BR72A104RAC4L MuRain CAP CERM. 0.1 µr, 100 V, 4-108, X7R, 0805 0805 C13 1 2.2uF GRM21RF72A204RAC5L MuRain CAP CERM. 0.2 µr, 100 V, 4-109, X7R, 0805 0805 C14 1 0.22uF GRM21RF72A224RAC5L MuRain CAP CERM. 0.02 µr, 10 V, 4-109, X7R, 0803 0803 C15 1 0.040 µr GRM1185C1H2224D01D MuRain CAP CERM. 0.02 µr, 10 V, 4-109, X7R, 0603 0603 C16 1 1200 µr GRM1185C1H2224D01D MuRain CAP CERM. 100 µr, 20 V, 4-109, X7R, 0603 0603 C17 100 µr GRM1185C1H224D01D MuRain CAP CERM. 110 µr, 20 V, 4-109, X7R, 0603 0603 C18 1 100 µr GRM1185C1H224D01D MuRain CAP CERM. 100 µr, 10 X7R, 0703 0603 C17 101 µr GRM1185C1H224D01D MuRain CAP CERM. 100 µr, 10 X7R, 0703 0206 C18 1 100 µr BR1840 CAP CERM. 100 µr, 10 X7R, 1060 0206 C19 1 100 µr BR1840 CAP CERM. 100 µr, 10 X7R, 1000	C11	1	470pF	GRM2165C2A471JA01D	MuRata	CAP, CERM, 470 pF, 100 V, +/- 5%, C0G/NP0, 0805	0805
C13 1 2.2.0F GRM21BR71E22SA73. MuRata CAP, CERN, 2.2, <i>P</i> , 25, V, <i>s</i> -10%, X7R, 0805 0805 C14 1 0.22.0F GRM1188R71C4732A3KA01D MuRata CAP, CERN, 0.22, <i>P</i> , 100, V, <i>s</i> -10%, X7R, 0803 0603 C15 1 0.047'uF GRM188R71C473KA01D MuRata CAP, CERN, 0.047', <i>P</i> , 16 V, <i>s</i> -10%, X7R, 0803 0603 C16 1.000F GRM188C11410.JA01D MuRata CAP, CERN, 100, <i>P</i> , 50 V, <i>s</i> -5%, CGNP0, 0603 0603 C18 1 100F GRM188R71E06KA12D MuRata CAP, CERN, 100, <i>P</i> , 50 V, <i>s</i> -7%, K7R, 0603 0603 C19 1 022.0F GRM188R71E06KA12D MuRata CAP, CERN, 1000, <i>Y</i> , <i>s</i> -10%, X7R, 0603 0603 C20 1 024.0F GRM188R71E05KA12D MuRata CAP, CERN, 1000, <i>Y</i> , <i>s</i> -10%, X7R, 0603 0603 C21 1 125V IN4148V-74 Dodes Dodes, Untalast, 1000, <i>Y</i> , <i>s</i> -10%, X7R, 1000 SO 123 SO 123 C21 1 120V IN478V-74 Dodes, Scholing, 100, 14, 150, 150, 24, 56 SO 123 SO 123	C12	1	0.1uF	GRM21BR72A104KAC4L	MuRata	CAP, CERM, 0.1 μF, 100 V, +/- 10%, X7R, 0805	0805
C14 1 0.22µF GFM21AR72A224AC5L MuRata CAP, CERM, 0.22µF, 100, V, + 10%, XTR, 0603 0603 C15 1 0.04µF GFM1887C1473XA01D MuRata CAP, CERM, 0.22µF, 16, V, + 10%, XTR, 0603 0603 C16 1 2200pF GFM1887C1473XA01D MuRata CAP, CERM, 0.22µF, 16, V, + 15%, COGNPO, 0603 0603 C17 1 100pF GFM1887C14273XA01D MuRata CAP, CERM, 0.22µF, 50, V, + 15%, XTR, 0603 0603 C19 1 0.22µF GFM1887T16224XA8D MuRata CAP, CERM, 1000 PF, 1000, V, +10%, XTR, 1000 1206 C20 1 1000pF GFM18187T16224XA8D ON Semiconductor Diode, Schettik, 00, V, 15A, AEC-010, DPAK DDPAK D2 1 12V IN144W-7-F Diodes inc. Diode, Schettik, 10V, 0, 15A, ASO-123 SOD-123 D4 1 100V MBRS110013G ON Semiconductor Diode, Schettik, 10V, 0, 2A, SOD-23 SOD-232 D4 1 100V MBRS110013G ON Semiconductor Diode, Schettik, 10V, 0, 15A, SOD-120 1210 T2 </td <td>C13</td> <td>1</td> <td>2.2uF</td> <td>GRM21BR71E225KA73L</td> <td>MuRata</td> <td>CAP, CERM, 2.2 μF, 25 V, +/- 10%, X7R, 0805</td> <td>0805</td>	C13	1	2.2uF	GRM21BR71E225KA73L	MuRata	CAP, CERM, 2.2 μF, 25 V, +/- 10%, X7R, 0805	0805
C15 1 0.047uF GRM188714C138A01D MuRata CAP, CERM, 2047 µF, 16V, +/ 10%, XTR, 6603 0603 C16 1 220pG GRM1885C1H101JA01D MuRata CAP, CERM, 100 µF, 50V, +/ 5%, CGSNP0, 0603 0603 C17 1 100pF GRM1885C1H101JA01D MuRata CAP, CERM, 100 µF, 50V, +/ 5%, CGSNP0, 0603 0603 C18 1 UF GRM188711E12X12D MuRata CAP, CERM, 100 µF, 50V, +/ 5%, CGSNP0, 0603 0603 C20 1 0.020µF GRM188711E12X1V01L MuRata CAP, CERM, 100 µF, 100 W, X7R, 0603 0603 D21 1 1.25V Marka MW 7.F Diode Inc. Diode, Jurata MW, 100 N, 16A, SOC123 SDD-123 D31 1 30V Marka MW 7.F Diode Inc. Diode, Jurata MW, 10V, 1.6A, SOC123 SDD-123 D31 1 100V MARS101076G ON Semiconductor Diode, Sontthy, 10V, 1.6A, SOC323 SDD-123 D31 1.50V Marka MW 7.F Diode Inc. Diode Inc. Diode Inc. Diode Inc. Diode Inc. Diode Inc. Diode Inc. </td <td>C14</td> <td>1</td> <td>0.22uF</td> <td>GRM21AR72A224KAC5L</td> <td>MuRata</td> <td>CAP, CERM, 0.22 μF, 100 V, +/- 10%, X7R, 0805</td> <td>0805</td>	C14	1	0.22uF	GRM21AR72A224KAC5L	MuRata	CAP, CERM, 0.22 μF, 100 V, +/- 10%, X7R, 0805	0805
C16 1 200pF GRM188SC1H22JA01D MuRata CAP, CERN, 200 pF, 50 V, +5%, COSNP0, 0603 0603 C17 1 10pF GRM188C1H101JA01D MuRata CAP, CERN, 10p F, 50 V, +5%, COSNP0, 0603 0603 C18 1 1 UF GRM1887TE120KA32D MuRata CAP, CERN, 10p F, 50 V, +5%, XR, 0603 0603 C20 1 1000pF GRM1887TE120KA382D MuRata CAP, CERN, 100 V, +4 10%, XR, 1060 1003 C20 1 1000pF GRM1887TE120KA382D MuRata CAP, CERN, 100 V, +4 10%, XR, 1060 1004 D1 060v MBRS0H60CTT4G ON Semiconductor Diode, Schottiy, 100 V, 1-5, ASCD-123 SOD-123 D2 1 1.25V 1N4148W-7-F Diodes Inc. Diode, Schottiy, 20 V, 0-2, ASCD-23 SOD-233 D4 1 100V BRT547-F Diodes Inc. Diode, Schottiy, 20 V, 0-2, ASCD-23 SOT-23 Q1 1 150V BSC360NH5AS 3G Infinion Technologies MOSTEFT, N-CH, 150 V, 30, APC-2000 Grade 0, 1210 1210 R1, R22 3.35K CRCW1205380/04REA H <td>C15</td> <td>1</td> <td>0.047uF</td> <td>GRM188R71C473KA01D</td> <td>MuRata</td> <td>CAP, CERM, 0.047 μF, 16 V, +/- 10%, X7R, 0603</td> <td>0603</td>	C15	1	0.047uF	GRM188R71C473KA01D	MuRata	CAP, CERM, 0.047 μF, 16 V, +/- 10%, X7R, 0603	0603
C17 1 100pF GRM188CC11101JA01D MuRata CAP, CERM, 100 pF, 50 V, -4-5%, CG0,NPD, 0603 0603 C18 1 1/C GRM1887TE105XA12D MuRata CAP, CERM, 102 pF, 25 V, -4-10%, XTR, 0603 0603 C19 1 0.22uF GRM1887TE105XA102WV01 MuRata CAP, CERM, 102 pF, 25 V, -4+10%, XTR, 0603 0603 C20 10.00pF GRM18807H005XV01 MuRata CAP, CERM, 102 pF, 100%, XTR, 0603 0603 D1 60V MBR830H60CT14G ON Semiconductor Diode, Schottky, 60V, 15 A, AEC-Q101, DDPAK DDPAK D2 1 1.25V 1N1444W7-F Diodes Inc. Diode, Schottky, 10V, 1A, ASD SNB D4 1 100V MRST1013G ON Semiconductor Diode, Schottky, 30V, 0.2 A, SOL-23 SOL-23 D4 510V BAT545-F Diodes Inc. Diode, Schottky, 30V, 0.2 A, SOL-32 SOL-32 D1 150V BAT545-F Diodes Inc. Diode, Schottky, 30V, 0.2 A, SOL-32 SOL-33 D1 1.75K/STAS00V1263WCNLRAH Vishay-Dale RES, 34, 5%, 0.12 W, 0.603	C16	1	2200pF	GRM1885C1H222JA01D	MuRata	CAP, CERM, 2200 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C18 1 1UF GRM1887R12105KA12D MuRata CAP, CERM, 022 µ, 52, v, +10%, X7R, 0603 0603 C19 1 0.22µ GRM1887R1224XA8D MuRata CAP, CERM, 022 µ, 52, v, +10%, X7R, 0603 0603 C20 1 1000pF GRM318773A102KW01L MuRata CAP, CERM, 1000 pF, 1000 V, +10%, X7R, 1206 1206 D1 160V MBR8301402CTW01L MuRata CAP, CERM, 1000 pF, 1000 V, +10%, X7R, 1206 1206 D2 1 125V IN14148W-7F Diodes inc. Diode, Schottky, 30V, 02 A, 50D-323 SDD-323 D4 1 100V MBR5110013G ON Semiconductor Diode, Schottky, 30V, 02 A, 50D-33 SDT-23 D6 1 30W BAT645-7F Diodes inc. Diode, Schottky, 30V, 02 A, 50D-33 SDT-23 D1 150V BSC360N15NS3 G Infineon Technologies MDSFT, MCH, 150V, 33 A, FG-TDSON-8 R2143 R1, R22 2 330 CRCW100090KNLAA Vishay-Dale RES, 33, 5%, 02 2W, 1206 1206 R2, R19, R20 1 47 CRCW1000090KNLAA Vishay	C17	1	100pF	GRM1885C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C19 1 0.22uF GRM1887A102XW01L MuRata CAP, CERM, 0.22 µF, 25 V, 4+ 10%, X7R, 060 3 0603 C20 1 1000pF GRM1887A102XW01L MuRata CAP, CERM, 0.00 µF, 1000, X7R, 1060 1206 D1 1 60V MBR830H60CTT4G ON Semiconductor Diode, Schottly, 30 V, 15 A, AEC-010, DDPAK DDPAK D2 1 12SV 141449W-7-F Diodes Inc. Diode, Schottly, 30 V, 0.2 A, SOD-323 SOD-423 D3 1 30V BAT545-F-F Diodes Inc. Diode, Schottly, 100 V, 1.4 X, SMB SMB D6 1 10V MBR5100730 ON Semiconductor Diode, Schottly, 30 V, 0.2 A, SOT-33 SOT-23 D1 1 150V BSZ300H5NS3 G Infineor Technologies MOSFET, N-CH, 150 V, 33 A, PG-TDSON-8 PG-TDSON-8 R1, R22 2 3.30 CRCW120370FKEAHP Vishay-Dale RES, 33, 5%, 0.12 W, 0603 0603 R2, R19, R2 3 39K CRCW120396NLNEA Vishay-Dale RES, 47, %, 0.1 W, 0603 0603 R2, R19, R2 1	C18	1	1uF	GRM188R71E105KA12D	MuRata	CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 0603	0603
C20 1 1000pF GRM318R73A102KW01L MuRata CAP, CERM, 1000 pF, 1000 V, 4-10%, XTR, 1206 1206 D1 1 60V MRRS0460CT14G ON Semiconductor Diode, Schotty, 80 V, 15A, AEC-Q10, DDPAK DDPAK D2 1 125V 1N4148W-7F Diodes Inc. Diode, Schotty, 10V, 15A, SOD-123 SOD-123 D4 1 100V MRS110073G ON Semiconductor Diode, Schotty, 10V, 1A, SMB SMB D6 1.30V BATS457-F Diodes Inc. Diode, Schotty, 30V, 02, 4X, SOT-33 SOT-23 G1 1.50V BSC360N15NS3 G Infineon Technologies MOSFET, N-CH, 150V, 33A, AEC-C2020 Grade 0, 1210 1210 R2, R19, R20 3.30K CRCW02039RHEAW Wishay-Dale RES, 39, 5%, 0.25 W, 0265 0805 R3 1 3.3 CRCW02039RHEAW Wishay-Dale RES, 47, 5%, 0.1 W, 0603 0603 R4 1 47 CRCW060390RHEAW Wishay-Dale RES, 47, 5%, 0.1 W, 0603 0603 R5 1.6 8.6 CRCW060390RHEAW Wishay-Dale RES, 174, 1%, 0.1 W, 0603 0603 <tr< td=""><td>C19</td><td>1</td><td>0.22uF</td><td>GRM188R71E224KA88D</td><td>MuRata</td><td>CAP, CERM, 0.22 μF, 25 V, +/- 10%, X7R, 0603</td><td>0603</td></tr<>	C19	1	0.22uF	GRM188R71E224KA88D	MuRata	CAP, CERM, 0.22 μF, 25 V, +/- 10%, X7R, 0603	0603
D1 60V MBRB30HB0CTT4G ON Semiconductor Diode, Schottky, 60 V, 15 A, AEC-Q101, DDPAK DDPAK D2 1 125V IN1414W-7-F Diodes Inc. Diode, Untrast, 100V, 15A, SOD-123 SOD-323 SOD-323 D3 1 30V BAT54HT1G ON Semiconductor Diode, Schottky, 30 V, 02 A, SOD-323 SOD-323 D6 1 30V BAT545-7F Diodes Inc. Diode, Schottky, 30 V, 12 A, SOT-23 SOT-23 C1 1 SOV BAT545-7F Diodes Inc. Diode, Schottky, 30 V, 12 A, SOT-23 SOT-23 R1, R22 2 3.30 CRCW1203820FKEAHP Vishay-Dale RES, 30, 1%, 0.75 W, AEC-Q200 Grade 0, 1210 1210 R2, R19, R20 3 39K CRCW1208380CNEA Vishay-Dale RES, 33, 5%, 0.125 W, 0605 0805 R4 1 47 CRCW000038KFAEA Vishay-Dale RES, 47, 5%, 0.1 W, 0603 0603 R6, R15, R17 3 10.7K CRCW0000310KFFKEA Vishay-Dale RES, 174, 1%, 0.1 W, 0603 0603 R7 1 O <t< td=""><td>C20</td><td>1</td><td>1000pF</td><td>GRM31BR73A102KW01L</td><td>MuRata</td><td>CAP, CERM, 1000 pF, 1000 V, +/- 10%, X7R, 1206</td><td>1206</td></t<>	C20	1	1000pF	GRM31BR73A102KW01L	MuRata	CAP, CERM, 1000 pF, 1000 V, +/- 10%, X7R, 1206	1206
D2 1 1.25V 1N1448W-7-F Diodes Inc. Diode, Utrafast, 100V, 0.15A, SOD-123 SDD-123 D3 1 30V BAT8HT1G ON Semiconductor Diode, Schutty, 30V, 0.2 A, SOD-323 SOD-323 D4 1 100V MBRS110073G ON Semiconductor Diode, Schutty, 100V, 1.4, SMB SMB D6 1 30V BAT545-7-F Diodes Inc. Diode, Schutty, 100V, 1.4, SMB SOT-23 SOT-23 Q1 1 150V BSC360NTSNS3 G Infineon Technologies MOSFET, N-CH, 150V, 33 A, PG-TDSON-8 PG-TDSON-8 R1, R22 2 330 CRCW12033OFKEAHP Vishay-Dale RES, 33, 5%, 0.125 W, 0805 0805 R3 1 3.3 CRCW060347RDINEA Vishay-Dale RES, 47, 5%, 0.1 W, 0603 0603 R5 1 69.8k CRCW060347RDINEA Vishay-Dale RES, 10, 1, %, 0603 0603 R6 1 174k CRCW060310KFKEA Vishay-Dale RES, 10, k, 1%, 0, 1W, 0603 0603 R7 1 0 CRCW0603310KFKEA	D1	1	60V	MBRB30H60CTT4G	ON Semiconductor	Diode, Schottky, 60 V, 15 A, AEC-Q101, DDPAK	DDPAK
D3 1 30V BAT54HT1G ON Semiconductor Diode, Schottky, 30 V, 0.2.4, SOD-323 SOD-323 D6 1 30V BAT545-7-F Diodes Inc. Diode, Schottky, 30 V, 0.2.4, SOT-23 SOT-23 D6 1 150V BSC360N15NS3 G Infineon Technologies MOSFET, NCH, 150 V, 33.4, PC-DTSON-8 PG-TDSON-8 R1, R22 2 3.30 CRCW120139X0FKEAHP Vishay-Dale RES, 3.30, 1%, 0.75 W, AEC-0200 Grade 0, 1210 1210 R2, R19, R20 3 39K CRCW100539X0JNEA Vishay-Dale RES, 3.30, 1%, 0.75 W, AEC-0200 Grade 0, 1210 1006 R3 1 3.3 CRCW060347R0JNEA Vishay-Dale RES, 47, 5%, 0.12 W, 0603 0603 R4 1 47 CRCW060330K7FKEA Vishay-Dale RES, 10, 7, 1%, 0.1 W, 0603 0603 R5 1 69.84 KC, 104, 0503 0603 0603 R6 R1 174K CRCW0603310K7FKEA Vishay-Dale RES, 174, 1%, 0.1 W, 0603 0603 R7 1 0 CRCW060300K7FKEA Vishay-Dale	D2	1	1.25V	1N4148W-7-F	Diodes Inc.	Diode, Ultrafast, 100V, 0.15A, SOD-123	SOD-123
D4 1 100V MBRS1100T3G ON Semiconductor Diode, Schottky, 100 V, 1A, SMB SMB D6 1 30V BAT545-7-F Diodes inc. Diode, Schottky, 30V, 0.2 A, SOT-23 SOT-23 G1 1 150V BSC360N15NS3 G Infineon Technologies MOSFET, N-CH, 150V, 33 A, PG-TDSON-8 PG-TDSON-8 R1, R22 2 330 CRCW120363R50.NEA Vishay-Dale RES, 3.0, 1%, 0.75W, AEC-Q300 Grade 0, 1210 1210 R2, R19, R20 3 39k CRCW120639K0.NEA Vishay-Dale RES, 3.0, 1%, 0.75W, AEC-Q300 Grade 0, 1210 1206 R3 1 3.3 CRCW0603047R0.NEA Vishay-Dale RES, 1.07 k, 1%, 0.15W, 0603 0603 R6 16.84 K, CRCW060307KFKEA Vishay-Dale RES, 10.7 k, 1%, 0.1 W, 0603 0603 R7 1 0 CRCW060300020EA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R8 1 174k CRCW060301K0FKEA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R10 1 523k CRCW060301K0FKEA <	D3	1	30V	BAT54HT1G	ON Semiconductor	Diode, Schottky, 30 V, 0.2 A, SOD-323	SOD-323
D6 1 30V BAT545-7-F Diodes inc. Diode, Schutty, 30 V, 0.2 A, SOT-23 SOT-23 G1 1 150V BSC360N15NS3 G Infineon Technologies MOSET, N.C.H. 150V, 33 A, PG-TDSON-8 PG-TDSON-8 R1, R22 2 3.30 CRCW12103R30FKEAHP Vishay-Dale RES, 33 0, 5%, 0.25 W, 1206 1206 R3 1 3.3 CRCW006035R30JNEA Vishay-Dale RES, 3.3, 5%, 0.12 W, 0405 0603 R4 1 47 CRCW006035R40KEA Vishay-Dale RES, 47, 5%, 0.1 W, 0603 0603 R5 1 66.9 & CRCW06030847KEA Vishay-Dale RES, 10, 1W, 0603 0603 R6 R15, R17 3 10.7 & CRCW0603040002DEA Vishay-Dale RES, 10, 0, 1W, 0603 0603 R7 1 0 CRCW060307K0FKEA Vishay-Dale RES, 10, 0, 1W, 0603 0603 R10 1 523k CRCW060307K0FKEA Vishay-Dale RES, 523 k, 1%, 0, 1 W, 0603 0603 R11 1 301k CRCW0603037K0FKEA Vish	D4	1	100V	MBRS1100T3G	ON Semiconductor	Diode, Schottky, 100 V, 1 A, SMB	SMB
Q1 1 150V BSC360N15NS3 G Infineon Technologies MOSFET, N-CH, 150 V, 33 A, PG-TDSON-8 PG-TDSON-8 R1, R22 2 3.30 CRCW120330FKEAH Vishay-Dale RES, 330, 1%, 0.75 W, AEC-0200 Grade 0, 1210 1210 R2, R19, R20 3 39k CRCW006053R30JNEA Vishay-Dale RES, 33, 5%, 0.25 W, 0005 0005 R3 1 3.3 CRCW006053R30JNEA Vishay-Dale RES, 47, 5%, 0.12 W, 0603 0603 R4 1 47 CRCW006039K8FKEA Vishay-Dale RES, 619, 8, 1%, 0.1 W, 0603 0603 R5 1 69,8k CRCW060307K7FKEA Vishay-Dale RES, 107, 4, 1%, 0.1 W, 0603 0603 R6, R15, R17 3 10.7k CRCW060310K7FKEA Vishay-Dale RES, 10, 4, 1%, 0.1 W, 0603 0603 R8 1 10.0k CRCW060310K0FKEA Vishay-Dale RES, 21, 4, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW060310KFKEA Vishay-Dale RES, 316, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW06003	D6	1	30V	BAT54S-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
R1, R22 2 3.30 CRCW12103R30FKEAHP Vishay-Dale RES. 33, 1%, 0.75 W, AEC-0200 Grade 0, 1210 1210 R2, R19, R20 3 39k CRCW12103R30FKEAHP Vishay-Dale RES. 39, 5%, 0.25 W, 1206 1206 R3 1 3.3 CRCW108053R30JNEA Vishay-Dale RES. 39, 5%, 0.25 W, 1206 0805 0803 R4 1 47 CRCW060347R0JNEA Vishay-Dale RES. 39, 47, 5%, 0.1 W, 0603 0603 0603 R5 1 69.8k CRCW060310K7FKEA Vishay-Dale RES. 10, 7 k, 1%, 0.1 W, 0603 0603 R6 1 174k CRCW0603174KFKEA Vishay-Dale RES. 10, 7 k, 1%, 0.1 W, 0603 0603 R7 1 0 CRCW0603174KFKEA Vishay-Dale RES. 10, 7 k, 0.1 W, 0603 0603 R1 11.0k CRCW060310K0FKEA Vishay-Dale RES. 301 k, 1%, 0.1 W, 0603 0603 R10 1 523k CRCW060310K6FKEA Vishay-Dale RES. 47, 0 K, 0.1 W, 0603 0603 R11 1 10.0k CRCW06031K62FKEA	Q1	1	150V	BSC360N15NS3 G	Infineon Technologies	MOSFET, N-CH, 150 V, 33 A, PG-TDSON-8	PG-TDSON-8
R2, R19, R20 3 39k CRCW1120639K0JNEA Vishay-Dale RES, 33, 5%, 0.25 W, 1206 1206 R3 1 3.3 CRCW08053820JNEA Vishay-Dale RES, 33, 5%, 0.25 W, 0805 0805 R4 1 47 CRCW08038730JNEA Vishay-Dale RES, 33, 5%, 0.12 W, 0805 0603 R5 1 69.8k CRCW08033870JNEA Vishay-Dale RES, 30, 8, 7%, 0.1 W, 0603 0603 R6, R15, R17 3 10.7k CRCW080031007EKEA Vishay-Dale RES, 10, 7, 4%, 0.1 W, 0603 0603 R7 1 0 CRCW060310K0FKEA Vishay-Dale RES, 17, 4%, 0.1 W, 0603 0603 R9 1 10,0k CRCW060310K0FKEA Vishay-Dale RES, 523, k, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW060310KFKEA Vishay-Dale RES, 30, k, 1%, 0.1 W, 0603 0603 R12 1 47,0k CRCW060310KFKEA Vishay-Dale RES, 47, 0, k, 1%, 0.1 W, 0603 0603 R13 1 1.82k CRCW06031KFKEA Vishay-Dale	R1, R22	2	3.30	CRCW12103R30FKEAHP	Vishay-Dale	RES, 3.30, 1%, 0.75 W, AEC-Q200 Grade 0, 1210	1210
R3 1 3.3 CRCW08053R30JNEA Vishay-Dale RES, 3.3, 5%, 0.125 W, 0805 0805 R4 1 47 CRCW060347R0JNEA Vishay-Dale RES, 47, 5%, 0.1 W, 0603 0603 R5 1 69.8k CRCW060310K7FKEA Vishay-Dale RES, 10, 7 k, 1%, 0.1 W, 0603 0603 R6 1 0 CRCW060300020EA Vishay-Dale RES, 0.5 %, 0.1 W, 0603 0603 R7 1 0 CRCW060300002EA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R8 1 174k CRCW0603523KFKEA Vishay-Dale RES, 50, 0.1 W, 0603 0603 R10 1 523k CRCW0603523KFKEA Vishay-Dale RES, 301 k, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW0603301KFKEA Vishay-Dale RES, 470 k, 1%, 0.1 W, 0603 0603 R12 1 47.0 k CRCW06031K82FKEA Vishay-Dale RES, 470 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 4.2 k, 1%, 0.1 W, 060	R2, R19, R20	3	39k	CRCW120639K0JNEA	Vishay-Dale	RES, 39 k, 5%, 0.25 W, 1206	1206
R4 1 47 CRCW060347R0JNEA Vishay-Dale RES, 47, 5%, 0.1 W, 0603 0603 R5 1 69.8k CRCW060309K9FKEA Vishay-Dale RES, 0.7 %, 1%, 0.1 W, 0603 0603 R6, R15, R17 3 10.7k CRCW060300020EA Vishay-Dale RES, 0.5%, 0.1 W, 0603 0603 R7 1 0 CRCW060300020EA Vishay-Dale RES, 10.7 k, 1%, 0.1 W, 0603 0603 R8 1 174k CRCW0603174KFKEA Vishay-Dale RES, 17.4 k, 1%, 0.1 W, 0603 0603 R9 1 10.0k CRCW060310K0FKEA Vishay-Dale RES, 25.4 1%, 0.1 W, 0603 0603 R10 1 523k CRCW0603316KFKEA Vishay-Dale RES, 25.4 1%, 0.1 W, 0603 0603 R11 1 301k CRCW060316K2FKEA Vishay-Dale RES, 47.0 k, 1%, 0.1 W, 0603 0603 R13 1 1.82k CRCW060316K2FKEA Vishay-Dale RES, 40.9 k, 10, 0.1 W, 0603 0603 R14 1 0.02 WSL512K20200FEA Vishay-Dale RES, 1.	R3	1	3.3	CRCW08053R30JNEA	Vishay-Dale	RES, 3.3, 5%, 0.125 W, 0805	0805
R5 1 69.8k CRCW060369K8FKEA Vishay-Dale RES, 69.8 k, 1%, 0.1 W, 0603 0603 R6, R15, R17 3 10.7k CRCW060310K7FKEA Vishay-Dale RES, 0.5 k, 1%, 0.1 W, 0603 0603 R7 1 0 CRCW060300020EA Vishay-Dale RES, 0.5 k, 0.1 W, 0603 0603 R8 1 174k CRCW060310K0FKEA Vishay-Dale RES, 10.0 k, 1%, 0.1 W, 0603 0603 R10 1 623k CRCW06032301KFKEA Vishay-Dale RES, 523 k, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW0603301KFKEA Vishay-Dale RES, 47.0 k, 1%, 0.1 W, 0603 0603 R12 1 47.0k CRCW060347K0FKEA Vishay-Dale RES, 1.02 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 1.92 k, 1%, 0.1 W, 0603 0603 R14 1 1.24k CRCW06034K9FKEA Vishay-Dale RES, 1.92 k, 1%, 0.1 W, 0603 0603 R14 1 1.24k CRCW06034K9FKEA Vishay-Dale	R4	1	47	CRCW060347R0JNEA	Vishay-Dale	RES, 47, 5%, 0.1 W, 0603	0603
R6, R15, R17 3 10.7k CRCW060310X7FKEA Vishay-Dale RES, 10.7 k, 1%, 0.1 W, 0603 0603 R7 1 0 CRCW0603100ZEA Vishay-Dale RES, 1.74 k, 1%, 0.1 W, 0603 0603 R8 1 174k CRCW0603174KFKEA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R9 1 10.0k CRCW0603174KFKEA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R10 1 523k CRCW0603301KFKEA Vishay-Dale RES, 301 k, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW0603301KFKEA Vishay-Dale RES, 470 k, 1%, 0.1 W, 0603 0603 R12 1 47.0k CRCW06031K62KEA Vishay-Dale RES, 1.02 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R14 1 2.02 WSL2512R0200FEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R14 1 2.124 k, 1%, 0.1 W, 0603 0603 0603	R5	1	69.8k	CRCW060369K8FKEA	Vishay-Dale	RES, 69.8 k, 1%, 0.1 W, 0603	0603
R7 1 0 CRCW060300020EA Vishay-Dale RES, 0, 5%, 0.1 W, 0603 0603 R8 1 174k CRCW0603174KFKEA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R9 1 10.0k CRCW0603176KFEA Vishay-Dale RES, 170 k, 1%, 0.1 W, 0603 0603 R10 1 523k CRCW0603310KFKEA Vishay-Dale RES, 523 k, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW0603310KFKEA Vishay-Dale RES, 47.0 k, 1%, 0.1 W, 0603 0603 R12 1 47.0k CRCW06031K82FKEA Vishay-Dale RES, 47.0 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 4.98 k, 1%, 0.1 W, 2612 2512 R16 1 4.99k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R18 1 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R19 1 240b Keystone Terminal, Turret, TH, Double	R6, R15, R17	3	10.7k	CRCW060310K7FKEA	Vishay-Dale	RES, 10.7 k, 1%, 0.1 W, 0603	0603
R8 1 174k CRCW0603174KFKEA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R9 1 10.0k CRCW060310K0FKEA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R10 1 523k CRCW06033523KFKEA Vishay-Dale RES, 523 k, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW06033523KFKEA Vishay-Dale RES, 523 k, 1%, 0.1 W, 0603 0603 R12 1 47.0k CRCW060337K0FKEA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R13 1 I.82k CRCW06031K82FKEA Vishay-Dale RES, 174 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R020FEA Vishay-Dale RES, 1.22 k, 1%, 0.1 W, 0603 0603 R16 1 4.99k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R18 1 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R15 1 24bu 750316708 Wurth Elektronik	R7	1	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R9 1 10.0k CRCW060310K0FKEA Vishay-Dale RES, 10.0 k, 1%, 0.1 W, 0603 0603 R10 1 523k CRCW0603323KFKEA Vishay-Dale RES, 523 k, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW0603324KFKEA Vishay-Dale RES, 301 k, 1%, 0.1 W, 0603 0603 R12 1 47.0k CRCW060347K0FKEA Vishay-Dale RES, 1.82 k, 1%, 0.1 W, 0603 0603 R13 1 1.82k CRCW06031K82FKEA Vishay-Dale RES, 1.82 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL512R0200FEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R16 1 4.99k CRCW06034K99FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R14 1 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R15 1 4.99k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R11 1 42uH 750316708 Wurth Elektronik	R8	1	174k	CRCW0603174KFKEA	Vishay-Dale	RES, 174 k, 1%, 0.1 W, 0603	0603
R10 1 523k CRCW0603523KFKEA Vishay-Dale RES, 523 k, 1%, 0.1 W, 0603 0603 R11 1 301k CRCW0603301KFKEA Vishay-Dale RES, 301 k, 1%, 0.1 W, 0603 0603 R12 1 47.0k CRCW060331K6FKEA Vishay-Dale RES, 47.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603 0603 R13 1 1.82k CRCW06031K82FKEA Vishay-Dale RES, 1.82 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 0.02, 1%, 1 W, 2512 2512 R16 1 4.99k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R11 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 T1 1 42uH 750316708 Wurth Elektronik Transformer, 42 uH, TH 26.67x26.04mm TP1, TP2, TP7, TP3, TP3 2 Red 5000 Keystone Test Point, TH, Miniature, Red Keystone5002 TP4, TP8, TP9 3 White 5002 Keystone </td <td>R9</td> <td>1</td> <td>10.0k</td> <td>CRCW060310K0FKEA</td> <td>Vishay-Dale</td> <td>RES, 10.0 k, 1%, 0.1 W, 0603</td> <td>0603</td>	R9	1	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R11 1 301k CRCW060331KEKEA Vishay-Dale RES, 301 k, 1%, 0.1 W, 0603 0603 R12 1 47.0k CRCW060347K0FKEA Vishay-Dale RES, 47.0 k, 1%, 0.1 W, 0603 0603 R13 1 1.82k CRCW06031K82FKEA Vishay-Dale RES, 17.0 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 1.92 k, 1%, 0.1 W, 0603 0603 R16 1 4.99k CRCW06031K82FKEA Vishay-Dale RES, 1.92 k, 1%, 0.1 W, 0603 0603 R18 1 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R11 1 4.99k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 R11 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 T1 1 42uH 750316708 Wurth Elektronik Transformer, 42 uH, TH H 26.67x26.04mm TP1, TP2, TP7, TP3, TP3 2 Red 5000 Keystone<	R10	1	523k	CRCW0603523KFKEA	Vishay-Dale	RES, 523 k, 1%, 0.1 W, 0603	0603
R12 1 47.0k CRCW060347K0FKEA Vishay-Dale RES, 47.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603 0603 R13 1 1.82k CRCW06031K82FKEA Vishay-Dale RES, 1.82 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 0.02, 1%, 1 W, 2512 0603 0603 R16 1 4.99k CRCW06034K99FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 0603 R18 1 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 T1 4 42uH 750316708 Wurth Elektronik Transformer, 42 uH, TH 26.67x26.04mm TP1, TP2, TP7, TP1, TP2, TP7, TP1, TP3, TP5 2 Red 5000 Keystone Test Point, TH, Miniature, Red Keystone5002 TP4, TP8, TP9 3 White 5002 Keystone Test Point, TH, Miniature, Black Keystone5002 U1 1 LM5022MME/NOPB Texas Instruments 60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-Free MUB10A	R11	1	301k	CRCW0603301KFKEA	Vishay-Dale	RES, 301 k, 1%, 0.1 W, 0603	0603
R13 1 1.82k CRCW06031K82FKEA Vishay-Dale RES, 1.82 k, 1%, 0.1 W, 0603 0603 R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 0.02, 1%, 1 W, 2512 2512 R16 1 4.99k CRCW06031K92FKEA Vishay-Dale RES, 4.99 k, 1%, 0.1 W, 0603 0603 R18 1 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 T1 4 20ult 750316708 Wurth Elektronik Transformer, 42 uH, TH 26.67x26.04mm TP1, TP2, TP7, TP1 4 Double 1502-2 Keystone Terminal, Turret, TH, Double Keystone1502-2 TP3, TP5 2 Red 5000 Keystone Test Point, TH, Miniature, Red Keystone5002 TP4, TP8, TP9 3 White 5002 Keystone Test Point, TH, Miniature, Black Keystone5001 U1 1 LM5022MME/NOPB Texas Instruments 60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-Free MUB10A U2, U4 2 2 LMV431BIMFX/	R12	1	47.0k	CRCW060347K0FKEA	Vishay-Dale	RES, 47.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R14 1 0.02 WSL2512R0200FEA Vishay-Dale RES, 0.02, 1%, 1 W, 2512 2512 R16 1 4.99k CRCW06034K99FKEA Vishay-Dale RES, 4.99 k, 1%, 0.1 W, 0603 0603 R18 1 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 T1 1 42uH 750316708 Wurth Elektronik Transformer, 42 uH, TH 26.67x26.04mm TP1, TP2, TP7, TP11 4 Double 1502-2 Keystone Terminal, Turret, TH, Double Keystone1502-2 TP3, TP5 2 Red 5000 Keystone Test Point, TH, Miniature, Red Keystone5002 TP4, TP8, TP9 3 White 5002 Keystone Test Point, TH, Miniature, Black Keystone5001 U1 1 LM5022MME/NOPB Texas Instruments 60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-Free MUB10A U2, U4 2 LMV431BIMFX/NOPB Texas Instruments Low-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-Free MF03A U3 1 <	R13	1	1.82k	CRCW06031K82FKEA	Vishay-Dale	RES, 1.82 k, 1%, 0.1 W, 0603	0603
R16 1 4.99k CRCW06034K99FKEA Vishay-Dale RES, 4.99 k, 1%, 0.1 W, 0603 0603 R18 1 1.24k CRCW06031K24FKEA Vishay-Dale RES, 1.24 k, 1%, 0.1 W, 0603 0603 T1 1 42uH 750316708 Wurth Elektronik Transformer, 42 uH, TH 26.67x26.04mm TP1, TP2, TP7, TP1 4 Doule 1502-2 Keystone Terminal, Turret, TH, Double Keystone5000 TP3, TP5 2 Red 5000 Keystone Test Point, TH, Miniature, Red Keystone5000 TP4, TP8, TP9 3 White 5002 Keystone Test Point, TH, Miniature, Black Keystone5001 U1 1 LM5022MME/NOPB Texas Instruments 60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-Free MUB10A U2, U4 2 LMV431BIMFX/NOPB Texas Instruments Low-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-Free MPG3A U3 1 PS2501L-1-F3-L-A California Eastern Laboratorie Optocoupler, 5 KV, 200-400% CTR, SMT PS2501L C3 0 N/A <td>R14</td> <td>1</td> <td>0.02</td> <td>WSL2512R0200FEA</td> <td>Vishay-Dale</td> <td>RES, 0.02, 1%, 1 W, 2512</td> <td>2512</td>	R14	1	0.02	WSL2512R0200FEA	Vishay-Dale	RES, 0.02, 1%, 1 W, 2512	2512
R1811.24kCRCW06031K24FKEAVishay-DaleRES, 1.24 k, 1%, 0.1 W, 06030603T1142uH750316708Wurth ElektronikTransformer, 42 uH, TH26.67x26.04mmTP1, TP2, TP7, TP114Double1502-2KeystoneTerminal, Turret, TH, DoubleKeystone1502-2TP3, TP52Red5000KeystoneTest Point, TH, Miniature, RedKeystone5000TP4, TP8, TP93White5002KeystoneTest Point, TH, Miniature, WhiteKeystone5002TP6, TP102Black5001KeystoneTest Point, TH, Miniature, BlackKeystone5001U11LM5022MME/NOPBTexas Instruments60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-FreeMUB10AU2, U42LMV431BIMFX/NOPBTexas Instruments Pb-FreeLow-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-FreeMF03AU31PS2501L-1-F3-L-ACalifornia Eastern Laboratories Optocoupler, 5 kV, 200-400% CTR, SMTPS2501LC30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	R16	1	4.99k	CRCW06034K99FKEA	Vishay-Dale	RES, 4.99 k, 1%, 0.1 W, 0603	0603
T1142uH750316708Wurth ElektronikTransformer, 42 uH, TH26.67x26.04mmTP1, TP2, TP7, TP114Double1502-2KeystoneTerminal, Turret, TH, DoubleKeystone1502-2TP3, TP52Red5000KeystoneTest Point, TH, Miniature, RedKeystone5000TP4, TP8, TP93White5002KeystoneTest Point, TH, Miniature, WhiteKeystone5002TP6, TP102Black5001KeystoneTest Point, TH, Miniature, BlackKeystone5001U11LM5022MME/NOPBTexas Instruments60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-FreeMUB10AU2, U42LMV431BIMFX/NOPBTexas InstrumentsLow-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-FreeMF03AU31PS2501L-1-F3-L-ACalifornia Eastern LaboratorieOptocupler, 5 kV, 200-400% CTR, SMTPS2501LC30470uFAPSG160ELL471MH08SChemi-ConCAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, THD8xL8mmFID1, FID2, FID30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	R18	1	1.24k	CRCW06031K24FKEA	Vishay-Dale	RES, 1.24 k, 1%, 0.1 W, 0603	0603
TP1, TP2, TP7, TP114Double1502-2KeystoneTerminal, Turret, TH, DoubleKeystone1502-2TP3, TP52Red5000KeystoneTest Point, TH, Miniature, RedKeystone5000TP4, TP8, TP93White5002KeystoneTest Point, TH, Miniature, WhiteKeystone5002TP6, TP102Black5001KeystoneTest Point, TH, Miniature, BlackKeystone5001U11LM5022MME/NOPBTexas Instruments60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-FreeMUB10AU2, U42LMV431BIMFX/NOPBTexas InstrumentsLow-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-FreeMF03AU31PS2501L-1-F3-L-ACalifornia Eastern LaboratorieOptocoupler, 5 kV, 200-400% CTR, SMTPS2501LC30470uFAPSG160ELL471MH08SChemi-ConCAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, THD8xL8mmFID1, FID2, FID30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	T1	1	42uH	750316708	Wurth Elektronik	Transformer, 42 uH, TH	26.67x26.04mm
TP3, TP52Red5000KeystoneTest Point, TH, Miniature, RedKeystone5000TP4, TP8, TP93White5002KeystoneTest Point, TH, Miniature, WhiteKeystone5002TP6, TP102Black5001KeystoneTest Point, TH, Miniature, BlackKeystone5001U11LM5022MME/NOPBTexas Instruments60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-FreeMUB10AU2, U42LMV431BIMFX/NOPBTexas InstrumentsLow-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-FreeMF03AU31PS2501L-1-F3-L-ACalifornia Eastern LaboratorieOptocoupler, 5 kV, 200-400% CTR, SMTPS2501LC30470uFAPSG160ELL471MH08SChemi-ConCAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, THD8xL8mmFID1, FID2, FID30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	TP1, TP2, TP7, TP11	4	Double	1502-2	Keystone	Terminal, Turret, TH, Double	Keystone1502-2
TP4, TP8, TP93White5002KeystoneTest Point, TH, Miniature, WhiteKeystone5002TP6, TP102Black5001KeystoneTest Point, TH, Miniature, BlackKeystone5001U11LM5022MME/NOPBTexas Instruments60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-FreeMUB10AU2, U42LMV431BIMFX/NOPBTexas InstrumentsLow-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, MF03AU31PS2501L-1-F3-L-ACalifornia Eastern Laboratorie Optocoupler, 5 kV, 200-400% CTR, SMTPS2501LC30470uFAPSG160ELL471MH08SChemi-ConCAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, THD8xL8mmFID1, FID2, FID30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	TP3, TP5	2	Red	5000	Kevstone	Test Point, TH, Miniature, Red	Keystone5000
TP6, TP102Black5001KeystoneTest Point, TH, Miniature, BlackKeystone5001U11LM5022MME/NOPBTexas Instruments60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-FreeMUB10AU2, U42LMV431BIMFX/NOPBTexas InstrumentsLow-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, MF03AU31PS2501L-1-F3-L-ACalifornia Eastern Laboratorie Optocoupler, 5 kV, 200-400% CTR, SMTPS2501LC30470uFAPSG160ELL471MH08SChemi-ConCAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, THD8xL8mmFID1, FID2, FID30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	TP4, TP8, TP9	3	White	5002	Keystone	Test Point, TH, Miniature, White	Keystone5002
U11LM5022MME/NOPBTexas Instruments60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-FreeMUB10AU2, U42LMV431BIMFX/NOPBTexas InstrumentsLow-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-FreeMF03AU31PS2501L-1-F3-L-ACalifornia Eastern Laboratorie Optocoupler, 5 kV, 200-400% CTR, SMTPS2501LC30470uFAPSG160ELL471MH08SChemi-ConCAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, THD8xL8mmFID1, FID2, FID30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	TP6, TP10	2	Black	5001	Keystone	Test Point, TH, Miniature, Black	Keystone5001
U2, U42LMV431BIMFX/NOPBTexas InstrumentsLow-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23, Pb-FreeMF03AU31PS2501L-1-F3-L-ACalifornia Eastern Laboratorie Optocoupler, 5 kV, 200-400% CTR, SMTPS2501LC30470uFAPSG160ELL471MH08SChemi-ConCAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, THD8xL8mmFID1, FID2, FID30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	U1	1		LM5022MME/NOPB	Texas Instruments	60V Low Side Controller for Boost and SEPIC, 10-pin MSOP, Pb-Free	MUB10A
U31PS2501L-1-F3-L-ACalifornia Eastern Laboratorie Optocoupler, 5 kV, 200-400% CTR, SMTPS2501LC30470uFAPSG160ELL471MH08SChemi-ConCAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, THD8xL8mmFID1, FID2, FID30N/AN/AFiducial mark. There is nothing to buy or mount.Fiducial	U2, U4	2		LMV431BIMFX/NOPB	Texas Instruments	Low-Voltage (1.24V) Adjustable Precision Shunt Regulators, 3-pin SOT-23,	MF03A
U3 1 PS2501L-1-F3-L-A California Eastern Laboratorie Optocoupler, 5 kV, 200-400% CTR, SMT PS2501L C3 0 470uF APSG160ELL471MH08S Chemi-Con CAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, TH D8xL8mm FID1, FID2, FID3 0 N/A N/A Fiducial mark. There is nothing to buy or mount. Fiducial						Pb-Free	
C3 0 470uF APSG160ELL471MH08S Chemi-Con CAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, TH D8xL8mm FID1, FID2, FID3 0 N/A N/A Fiducial mark. There is nothing to buy or mount. Fiducial	U3	1		PS2501L-1-F3-L-A	California Eastern Laboratories	Optocoupler, 5 kV, 200-400% CTR, SMT	PS2501L
FID1, FID2, FID3 0 N/A N/A Fiducial mark. There is nothing to buy or mount. Fiducial	C3	0	470uF	APSG160ELL471MH08S	Chemi-Con	CAP, Aluminum Polymer, 470 µF, 16 V, +/- 20%, 0.016 ohm, TH	D8xL8mm
	FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R21	0	3.30	CRCW12103R30FKEAHP	Vishay-Dale	RES, 3.30, 1%, 0.75 W, AEC-Q200 Grade 0, 1210	1210

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