

Design name: TEA1936x USB PD 27W Mobile Charging Adapter.  
Board-ID: TEA1936xDB1520  
PCB no.: 0000-000-40891

Bill of materials

13-07-2017

1 - 2

Item Number	Mounted	Unique Part name	Part Reference	Description	Manufacturer	Manufacturer Part Number	Remarks	Supplier	Supplier Code	PCB Footprint
1			C1	Capacitor; 15 µF; 20 %; 400 V; ALU; TH1	SAMXON	EKM156M2GF16RR	D8mmxL16mm	NXP	Customer Delivers Component	CAPPRDV350W60D850H1700TB_ISO
2			C3	Capacitor; 10 uf; 20 %; 100 V; ALU; TH1	Rubycon	100YX110M5X11		Digi-Key	1189-2150-ND	CAPPRDV200W50D550H1250TB_ISO
3			C4	Capacitor; 820 uF; 20 %; 16 V; ALU; TH1	Illinois Capacitors	827AVG016MFBJ		Digi-Key	1572-1520-ND	CAPPRDV350W60D850H1500TB_HN_ISO
4		CAPN_TDK_100N_50V0_10T_X7R_0402_C	C5	Capacitor; 100 nF; 10 %; 50 V; X7R; 0402	TDK	C1005X7R1H104K050BB		Farnell	2354332	CAPC1005X55X62Y61C90N
5			C6	Capacitor; 4.7 µF; 10 %; 16 V; X5R; 0603	TDK	C1608X5R1C475K080AC		Farnell	2211173	CAPC1608X95X100Y95C160N
6			C7	Capacitor; 4.7 µF; 10 %; 16 V; X5R; 0603	TDK	C1608X5R1C475K080AC		Farnell	2211173	CAPC1608X95X95Y100C160N
7		CAPN_XXX_1U00_16V0_10T_X7R_0603	C10	Capacitor; 1 µF; 10 %; 16 V; X7R; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	CAPC1608X95X95Y100C160N
8		CAPN_KME_680P_630V_10T_X7R_1206	C12	Capacitor; 680 pF; 10 %; 630 V; X7R; 1206	Kemet	C1206C681KBRAC		Digi-Key	399-5583-1-ND	CAPC3216X175X180Y115C300N
9		CAPN_XXX_1N00_50V0_10T_X7R_0603	C14	Capacitor; 1 nF; 10 %; 50 V; X7R; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	CAPC1608X95X95Y100C160N
10		CAPN_TDK_470N_50V0_10T_X7R_0603	C15	Capacitor; 470 nF; 10 %; 50 V; X7R; 0603	TDK	C1608X7R1H474K		Mouser	810-C1608X7R1H474K	CAPC1608X90X95Y100C160N
11		CAPN_XXX_1N00_50V0_10T_X7R_0603	C17	Capacitor; 1 nF; 10 %; 50 V; X7R; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	CAPC1608X95X95Y100C160N
12		CAPN_XXX_22P0_50V0_5T0_C0G_0603	C19	Capacitor; 22 pF; 5 %; 50 V; C0G; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	CAPC1608X95X100Y95C160N
13			C20	Capacitor; 470 pF; 10 %; 100 V; X7R; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	CAPC1608X95X100Y95C160N
14			C22	Capacitor; 6.8 nF; 10 %; 630 V; X7R; 0805	Kemet	C0805C682KBRACU		Digi-Key	399-6739-1-ND	CAPC2013X145X115Y145C180N
15			C29	Capacitor; 15 µF; 20 %; 400 V; ALU; TH1	SAMXON	EKM156M2GF16RR	D8mmxL16mm	NXP	Customer Delivers Component	CAPPRDV350W60D850H1700TB_ISO
16			C30	Capacitor; 820 uF; 20 %; 16 V; ALU; TH1	Illinois Capacitors	827AVG016MFBJ		Digi-Key	1572-1520-ND	CAPPRDV350W60D850H1500TB_ISO
17			C33	Capacitor; 15 µF; 20 %; 400 V; ALU; TH1	SAMXON	EKM156M2GF16RR	D8mmxL16mm	NXP	Customer Delivers Component	CAPPRDV350W60D850H1700TB_ISO
18			C36	Capacitor; 10 uf; 20 %; 35 V; ALU; TH1	Nichicon	UVR1V100MDD6TP		Digi-Key	493-12804-1-ND	CAPPRDV150W45D450H1400TB_P254_ISO
19		CAPN_XXX_3N30_50V0_10T_X7R_0402	C38	Capacitor; 3.3 nF; 10 %; 50 V; X7R; 0402	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	CAPC1005X55X62Y61C90N
20			C39	Capacitor; 6.8 pF; 5 %; 50 V; C0G; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	CAPC1608X95X100Y95C160N
21			C41	Capacitor; 4.7 µF; 10 %; 16 V; X5R; 0603	TDK	C1608X5R1C475K080AC		Farnell	2211173	CAPC1608X100X100Y100C150N
22			CN1	Conn.; USB 3.1 Type-C Receptacle R/A	Amphenol	12401548E4#2A		Digi-Key	12401548E4#2ACT-ND	CONT_APA_12401548E4-2A_28PFR_ULU_ISO
23			CY1	Capacitor; 100 pF; 10 %; 250 VAC; B; THT; X1/Y2	Murata	DE2B3KY101KA2BM01F		Farnell	2494160	CAPRDV1000W60L900T800H1300TB_NXP_ISO
24			D1	Diode; TVS; Uni; 16 V; 400 W	NXP	PTVS16V51UR		Farnell	1829241	SODFL3517X110X108Y92C320N
25			D2	Diode; ESD Prot.; 30 kV; 3 A	NXP	PES15VS2UT		Farnell	8737452	SOT95P230X110-3X100Y60C230N
26			D3	Diode; 1 kV; 2A	Fairchild	S2M		Farnell	9843876	DIOM5336X265X230Y215C430N
27			D4	Diode; 300 V; 250 mA	NXP	BA5521		Farnell	8734410	SODFL1608X65X53Y42C160N
28		DIO_NXP_BAS316_SC76	D5	Diode; 100 V; 250 mA	NXP	BA5316		Farnell	8734275	SOD2513X110X50Y90C260N
29			D15	Diode; 200 V; 250 mA	NXP	BA5321		Farnell	8734283	SOD2513X110X50Y90C260N
30		DIO_TAS_S1ML_SMA	D16	Diode; 1 kV; 1 A	Taiwan Semi.	S1ML		Farnell	1559155	SODFL3618X143X122Y112C310N
31		DIO_TAS_S1ML_SMA	D18	Diode; 1 kV; 1 A	Taiwan Semi.	S1ML		Farnell	1559155	SODFL3618X143X122Y112C310N
32			D21	Diode; 1 kV; 1.5 A	Vishay	AS1PM-M3/84A		Farnell	2078106	SMP_VIS_DO-220AA_SMT_NXP
33			D22	Diode; 1 kV; 1.5 A	Vishay	AS1PM-M3/84A		Farnell	2078106	SMP_VIS_DO-220AA_SMT_NXP
34			D23	Diode; 1 kV; 1.5 A	Vishay	AS1PM-M3/84A		Farnell	2078106	SMP_VIS_DO-220AA_SMT_NXP
35			D24	Diode; 1 kV; 1.5 A	Vishay	AS1PM-M3/84A		Farnell	2078106	SMP_VIS_DO-220AA_SMT_NXP
36		FUS_MUC_MCPMP2A250V_THT_MCPMP	F1	Fuse; 250 V; 2 A; Slow Blow	Multicomp	MCPMP2A250V		Farnell	1566019	FUSADH1016W64L760D318TB_VP508_ISO
37			F82	FBEAD; 0.009 O; 6 A; 0805	Murata	BLM21PG220SH1D		Farnell	1515658	INDC2013X105X145Y115C180N
38			J1	Clip for inlet; L	unknown	unknown		NXP	Customer Delivers Component	CILP_MAINS_4X4MM_2P_ISO
39			J2	Clip for inlet; N	unknown	unknown		NXP	Customer Delivers Component	CILP_MAINS_4X4MM_2P_ISO
40			L1	Inductor CM; EE7.0; Cu=0.27mm; 18T:18T	NXP		Temporary place APS-14095-NL	NXP	Customer Delivers Component	INDICB_NXP_TEA1936NDB1440_ISO
41			L3	Inductor; 120 uH	NXP / Wurth	TEA19363DB1475 (L3) / 744772121		NXP / Digi-Key	Customer Delivers Component / 732-3774-ND	INDRDV500W70D830H1000TB_ISO
42			Q1	MOSFET-N; 700 V; 0.75 O; 6 A	Taiwan Semi.	TSM70N750CP		Mouser	821-TSM70N750CP	DPAK_TAS_TO-252
43			Q2	MOSFET-N; 60 V; 100 A; TDSO	Infineon	BSC028N06NS		Farnell	2432704	TO127P600X120-5X60Y162C372N
44			Q3	MOSFET-N; 30 V; 2.4 mO; 70 A	NXP	PSM2R4-30MLD		Farnell	2400976	TO65P330X90-5X105Y45C220N
45		RES_XXX_10R0_1T0_W063_0603	R5	Resistor; 10 O; 1 %; 63 mW; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1608X84X100Y80C170N
46			R7	Resistor; 442 kO; 1 %; 660 mW; 1206	Panasonic	ERJ08F4423V		Farnell	2327237	RESC3216X84X175Y105C300N
47			R8	Resistor; 5.1 kO; 1 %; 63 mW; 0402	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1005X50X60Y55C100N
48		RES_XXX_1K00_1T0_W063_0402	R9	Resistor; 1 kO; 1 %; 63 mW; 0402	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1005X50X60Y55C100N
49		RES_XXX_330R_1T0_W063_0402	R11	Resistor; 330 O; 1 %; 63 mW; 0402	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1005X50X60Y55C100N
50		RES_XXX_10R0_1T0_OW25_1206	R13	Resistor; 10 O; 1 %; 250 mW; 1206	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC3216X84X175Y105C300N
51			R14	Resistor; 22 O; 1 %; 100 mW; 0402	Panasonic	ERJ2RF22R0X		Farnell	2302453	RESC1005X50X60Y55C100N
52		RES_XXX_2K20_1T0_W063_0603	R15	Resistor; 2.2 kO; 1 %; 63 mW; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1608X84X100Y80C170N
53			R16	Resistor; 100 O; 1 %; 100 mW; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1608X84X100Y80C170N
54			R17	Resistor; 4.7 O; 1 %; 100 mW; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1608X84X100Y80C170N
55			R18	Resistor; 0.62 O; 1 %; 250 mW; 0805	Panasonic	ERJ56QFR62V		Farnell	2381088	RESC2013X84X145Y95C200N
56			R19	Resistor; 0.56 O; 1 %; 250 mW; 0805	Panasonic	ERJ56QFR56V		Farnell	2381087	RESC2013X84X145Y95C200N
57		RES_XXX_1K00_1T0_W063_0603	R21	Resistor; 1 kO; 1 %; 63 mW; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1608X84X100Y80C170N
58		RES_XXX_6K80_1T0_W063_0603	R22	Resistor; 6.8 kO; 1 %; 63 mW; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1608X84X100Y80C170N

Design name: TEA1936x USB PD 27W Mobile Charging Adapter.  
Board-ID: TEA1936xDB1520  
PCB no.: 0000-000-40891

Bill of materials

13-07-2017  
2 - 2

Item Number	Mounted	Unique Part name	Part Reference	Description	Manufacturer	Manufacturer Part Number	Remarks	Supplier	Supplier Code	PCB Footprint
59			R24	Resistor; 84.5 kΩ; 1 %; 660 mW; 500 V; 120€	Panasonic	ERJP08F8452V		Farnell	2312407	RESC3216X84X175Y105C300N
60		RES_XXX_110K_1T0_W063_0603	R25	Resistor; 110 kΩ; 1 %; 63 mW; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1608X84X100Y80C170N
61			R26	Resistor; NTC; 47 kΩ; 5 %; 180 mW; 3980 K	Epcos	B57321V2473J060		Farnell	1299915	RESC1608X84X100Y80C170N
62	NM	RES_XXX_1K00_1T0_W063_0603	R29	Resistor; 1 kΩ; 1 %; 63 mW; 0603	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1608X84X100Y80C170N
63			R31	Resistor; 0.006 Ω; 1 %; 1 W; 1206	TE Connectivity	TLR2B10DR006FTDG		Farnell	2332216	RESC3216X84X175Y105C300N
64		RES_VIS_1M00_1T0_W063_0402_CRCW	R39	Resistor; 1 MΩ; 1 %; 63 mW; 0402	Vishay	CRCW04021M00FKED		Farnell	1469667	RESC1005X40X62Y58C94N
65			R50	Resistor; 430 Ω; 1 %; 100 mW; 0402	Panasonic	ERJ2RKF4300X		Farnell	2302594	RESC1005X50X60Y55C100N
66			R53	Resistor; 191 kΩ; 1 %; 63 mW; 0402	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1005X50X60Y55C100N
67			R54	Resistor; 43 kΩ; 1 %; 63 mW; 0402	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1005X50X60Y55C100N
68			R55	Resistor; 150 Ω; 1 %; 100 mW; 0402	Panasonic	ERJ2RKF1500X		Farnell	2302544	RESC1005X50X60Y55C100N
69	NM		R56	Resistor; 84.5 kΩ; 1 %; 660 mW; 500 V; 120€	Panasonic	ERJP08F8452V		Farnell	2312407	RESC3216X84X175Y105C300N
70	NM	RES_VIS_1M00_1T0_W063_0402_CRCW	R59	Resistor; 1 MΩ; 1 %; 63 mW; 0402	Vishay	CRCW04021M00FKED		Farnell	1469667	RESC1005X40X62Y58C94N
71			R60	Resistor; 1.5 kΩ; 1 %; 63 mW; 0402	Any Manufacturer	Any Man. Part Number		Any Supplier	Any Supp. Code	RESC1005X50X60Y55C100N
72			R61	Resistor; 22 Ω; 1 %; 100 mW; 0402	Panasonic	ERJ2RKF22R0X		Farnell	2302453	RESC1005X50X60Y55C100N
73			R62	Resistor; 100 Ω; 1 %; 500 mW; 0805	Panasonic	ERJP6WF1000V		Farnell	2253883	RESC2013X84X145Y95C200N
74	NM	RES_VIS_1M00_1T0_W063_0402_CRCW	R63	Resistor; 1 MΩ; 1 %; 63 mW; 0402	Vishay	CRCW04021M00FKED		Farnell	1469667	RESC1005X40X62Y58C94N
75			R64	Resistor; 84.5 kΩ; 1 %; 660 mW; 500 V; 120€	Panasonic	ERJP08F8452V		Farnell	2312407	RESC3216X84X175Y105C300N
76			R69	Resistor; 10 Ω; 1 %; 100 mW; 0402	Panasonic	ERJ2RKF10R0X		Farnell	2302417	RESC1005X50X60Y55C100N
77			R70	Resistor; 10 Ω; 1 %; 100 mW; 0402	Panasonic	ERJ2RKF10R0X		Farnell	2302417	RESC1005X50X60Y55C100N
78			R71	Resistor; 0 Ω; Jumper; 100 mW; 0402	Panasonic	ERJ2GE0R00X		Farnell	2059190	RESC1005X50X60Y55C100N
79			RT1	Res.; ICL; 5 Ω; 25 %; 1 A; 6 mm	Ametherm	SL05 5R001-A		Digi-Key	570-1262-ND	VARRDV510W50P180L600T350H1050TB_ISO
80		RESNTC_VIS_NTCLE100E3104J_THT	RT2	Resistor; NTC; 100 kΩ; 5 %; 100 mW; 4190 K	Vishay	NTCLE100E3104JB0	High against transformer and insulate	Farnell	1187033	VARRRV254W60L380T300H900TB_ISO
81			T1	Transformer; RM7; 780 μH	NXP	RM7	Insulate on the bottom side	NXP	Customer Delivers Component	TRFIC_NXP_TEA1936DB147X_RM7_ISO
82			U1	USB-PD Cntr.; TEA19031	NXP	TEA19031		NXP	Customer Delivers Component	SOIC127P600X175-10X160Y60C540N
83			U2	Sync. Rec. Cntrl.; TEA1999	NXP	TEA1999		NXP	Customer Delivers Component	SOT95P275X110-6X115Y50C260N
84			U10	SMTP Cntr; TEA19361	NXP	TEA19361		NXP	Customer Delivers Component	SOIC127P600X175-10X160Y60C540N
85		OPTTRN_VIS_TCLT1008_SOP4L	U3	Optocoupler; NPN; 70 V; 50 mA	Vishay	TCLT1008		Farnell	8310742	SOIC254P1015X230-4X65Y185C940N
86	NM		X4	Header; Straight; 1x4-way; 1.27mm	Samtec	HTMS-104-01-G-S	order but not mount	Farnell	1936213	CONT_SAM_HTMS-104-01-G-S_4PMS_L_AT1_ISO