

7 Bill of Materials

Table 4. HPA282B Bill of Materials

-001	-002	-003	-004	RefDes	Value	Description	SIZE	Part Number	MFR
2	2	2	2	C1, C4	10uF	Capacitor, Ceramic, 10-uF, 25-V, X5R, 20%	1206	ECJ-3YB1E106M	Panasonic
2	2	2	2	C2, C3	10uF	Capacitor, Ceramic, 10-uF, 6.3-V, X5R, 20%	0805	ECJ-2FB0J106M	Panasonic
1	1	1	1	D1	Red	Diode, LED, Red, 1.8-V, 20-mA, 20-mcd	0603	LTST-C190CKT	Liteon
1	1	1	1	D2	Green	Diode, LED, Green, 2.1-V, 20-mA, 6-mcd	0603	LTST-C190GKT	Liteon
1	1	1	1	D3	BZX84C6v2T	Diode, Zener, 6.2-V, 350-mW	SOT-23	BZX84C6V2T	Diodes
2	2	2	2	J1, J2, J3, J4*	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED1514	OST
5	5	5	5	JMP1–JMP5	PEC02SAAN	Header, 3-pin, 100mil spacing	0.100 x 3	PEC02SAAN	Sullins
2	2	2	2	JMP6, JMP7	PEC03SAAN	Header, 2-pin, 100mil spacing	0.100 inch x 2	PEC03SAAN	Sullins
0	0	0	0	R1	732	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	1	0	R10	10k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-103LF	Bourns
1	1	1	1	R11	10k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-103LF	Bourns
1	1	1	1	R14	301k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	1	1	R16	50k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-503LF	Bourns
1	1	1	1	R17	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	2	2	2	R18, R20	604	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	0	0	R2	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	0	0	R3	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	1	1	R4	49.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	2	2	2	R5, R6	1.5K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	1	0	R21	1.5K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	0	0	R22	23.7K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	0	0	R23	11K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	1	1	R7, R19	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	1	1	R8	5k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-502LF	Bourns
1	1	0	1	R9	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	3	3	3	R12, R13, R15	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	0	0	0	U1	BQ24072RGT	IC, USB- Friendly Li-Ion Battery Charger and Power-Path Management	QFN-16	BQ24072RGT	TI
0	1	0	0	U1	BQ24073RGT		QFN-16	BQ24073RGT	TI
0	0	1	0	U1	BQ24074RGT		QFN-16	BQ24074RGT	TI
0	0	0	1	U1	BQ24075RGT		QFN-16	BQ24075RGT	TI
1	1	1	1	--		PCB, 1.8 ln x 1.7 ln x 0.031 ln		HPA282	Any
7	7	7	7		929950-00	Shunts	100 mill	Black	3M

- Notes: 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.
5. * No substitutions of J1 through J4
6. Place Shunt as follows: JMP1=TRM:RES, JMP3=CE:VSS, JMP4=EN2:HI, JMP5, EN1:VSS, JMP6=pin1:pin2, JMP7=pin1:pin2
For JMP2=001/002/003=TD:HI, -004=TD:VSS:VSS,

Table 5. HPA282B Bill of Materials (Continued)

-005	-006	RefDes	Value	Description	SIZE	Part Number	MFR
2	2	C1, C4	10uF	Capacitor, Ceramic, 10-uF, 25-V, X5R, 20%	1206	ECJ-3YB1E106M	Panasonic
2	2	C2, C3	10uF	Capacitor, Ceramic, 10-uF, 6.3-V, X5R, 20%	0805	ECJ-2FB0J106M	Panasonic
1	1	D1	Red	Diode, LED, Red, 1.8-V, 20-mA, 20-mcd	0603	LTST-C190CKT	Liteon
1	1	D2	Green	Diode, LED, Green, 2.1-V, 20-mA, 6-mcd	0603	LTST-C190GKT	Liteon
1	1	D3	BZX84C6V2T	Diode, Zener, 6.2-V, 350-mW	SOT-23	BZX84C6V2T	Diodes
2	2	J1, J2, J3, J4*	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED1514	OST
5	5	JMP1– JMP5	PEC02SAAN	Header, 3-pin, 100mil spacing	0.100 x 3	PEC02SAAN	Sullins
2	2	JMP6, JMP7	PEC03SAAN	Header, 2-pin, 100mil spacing	0.100 inch x 2	PEC03SAAN	Sullins
0	0	R1	732	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	1	R10	10k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-103LF	Bourns
1	1	R11	10k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-103LF	Bourns
1	1	R14	301k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	R16	50k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-503LF	Bourns
1	1	R17	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	2	R18, R20	604	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	R2	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	R3	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	R4	49.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	2	R5, R6	1.5K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	1	R21	1.5K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	R22	23.7K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	R23	11K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	R7, R19	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	R8	5k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-502LF	Bourns
1	0	R9	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	3	R12, R13, R15	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	0	U1	BQ24230RGT	IC, USB- Friendly Lilon Battery Charger and Power-Path Management	QFN-16	BQ24230RGT	TI
0	1	U1	BQ24232RGT		QFN-16	BQ24232RGT	TI
1	1	--		PCB, 1.8 In x 1.7 In x 0.031 In		HPA282	Any
7	7		929950-00	Shunts	100 mill	Black	3M

- Notes: 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.
5. * No substitutions of J1 through J4
6. Place Shunt as follows: JMP1=TRM:RES, JMP3=CE:VSS, JMP4=EN2:HI, JMP5, EN1:VSS, JMP6=pin1:pin2, JMP7=pin1:pin2
For JMP2=001/002/003=TD:HI, -004=TD:VSS:VSS,

Table 6. HPS252B Bill of Materials

-007	RefDes	Value	Description	Size	Part Number	MFR
2	C1, C4	10uF	Capacitor, Ceramic, 10-uF, 25-V, X5R, 20%	1206	ECJ-3YB1E106M	Panasonic
2	C2, C3	10uF	Capacitor, Ceramic, 10-uF, 6.3-V, X5R, 20%	0805	ECJ-2FB0J106M	Panasonic
1	D1	Red	Diode, LED, Red, 1.8-V, 20-mA, 20-mcd	0603	LTST-C190CKT	Liteon
1	D2	Green	Diode, LED, Green, 2.1-V, 20-mA, 6-mcd	0603	LTST-C190GKT	Liteon
1	D3	BZX84C6v2T	Diode, Zener, 6.2-V, 350-mW	SOT-23	BZX84C6V2T	Diodes
2	J1, J2, J3, J4*	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED1514	OST
5	JMP1–JMP5	PEC02SAAN	Header, 3-pin, 100mil spacing	0.100 x 3	PEC02SAAN	Sullins
2	JMP6, JMP7	PEC03SAAN	Header, 2-pin, 100mil spacing	0.100 inch x 2	PEC03SAAN	Sullins
0	R1	732	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	R10	10k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-103LF	Bourns
1	R11	10k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-103LF	Bourns
1	R14	301k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R16	50k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-503LF	Bourns
1	R17	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R18, R20	604	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	R2	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	R3	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R4	49.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R5, R6	1.5K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	R21	1.5K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R22	23.7K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R23	11K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R7	100k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R19	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R8	5k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-502LF	Bourns
1	R9	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	R12, R13, R15	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	U1	BQ24075TRGT	IC, USB- Friendly Lilon Battery Charger and Power-Path Management	QFN-16	BQ24075TRGT	TI
1	--		PCB, 1.8 In x 1.7 In x 0.031 In		HPA282	Any
7		929950-00	Shunts	100 mill	Black	3M

- Notes:
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.
 5. * No substitutions of J1 through J4
 6. Place Shunt as follows: JMP1=TRM:RES, JMP3=CE:VSS, JMP4=EN2:HI, JMP5, EN1:VSS, JMP6=pin1:pin2, JMP7=pin1:pin2

Table 7. HPA502A Bill of Materials

-001	-002	RefDes	Value	Description	Size	Part Number	MFR
2	2	C1, C4	10µF	Capacitor, Ceramic, 25-V, X5R, 20%	1206	ECJ-3YB1E106M	Panasonic
2	2	C2, C3	10µF	Capacitor, Ceramic, 6.3-V, X5R, 20%	0805	ECJ-2FB0J106M	Panasonic
1	1	D1	Red	Diode, LED, Red, 1.8-V, 20-mA, 20-mcd	0603	LTST-C190CKT	Liteon
1	1	D2	Green	Diode, LED, Green, 2.1-V, 20-mA, 6-mcd	0603	LTST-C190GKT	Liteon
1	1	D3	BZX84C6v2T	Diode, Zener, 6.2-V, 350-mW	SOT-23	BZX84C6V2T	Diodes
4	4	J1-J4*	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED1514	OST
5	5	JMP1-JMP5	PEC03SAAN	Header, 3-pin, 100mil spacing	0.100 x 3	PEC03SAAN	Sullins
2	2	JMP6, JMP7	PEC02SAAN	Header, 2-pin, 100mil spacing	0.100 inch x 2	PEC03SAAN	Sullins
0	0	R1	732	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	R10	10k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25 x 0.17	3266W-1-103LF	Bourns
1	1	R11	10k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25 x 0.17	3266W-1-103LF	Bourns
1	1	R14	301k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	1	R16	50k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25 x 0.17	3266W-503	Bourns
1	1	R17	1k	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
2	2	R18, R20	604	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
0	0	R2	1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	0	R3	10k	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
1	1	R4	49.9k	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
2	2	R5, R6	1.5K	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
0	0	R21	1.5K	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
0	1	R22	2.7K	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
0	1	R23	11K	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
0	1	R7	100k	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
1	0	R7	0	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
1	1	R19	0	Resistor, Chip, 1/16-W, 1%	0603	Std	Std
1	1	R8	5k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25 x 0.17	3266W-1-502LF	Bourns
1	0	R9	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	3	R12, R13, R15	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	0	U1	BQ24079RGT	IC, USB- Friendly Li-Ion Battery Charger and Power-Path Management- Current based TS	QFN-16	BQ24079RGT	TI
0	1	U1	BQ24079TRGT	IC, USB- Friendly Li-Ion Battery Charger and Power-Path Management - Current based TS	QFN-16	BQ24079TRGT	TI
1	1	-		PCB, 1.8 In x 1.7 In x 0.031 In		HPA502	Any
7	7		929950-00	Shunts	100 mill	929950-00	3M

Notes: 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.
5. * No substitutions of J1 through J4
6. Place Shunt as follows: JMP1=TRM:RES, JMP2=TD:VSS, JMP3=CE:VSS, JMP4=EN2:HI, JMP5, EN1:VSS, JMP6=pin1:pin2, JMP7=pin1:pin2

8 References

1. *bq24072/3/4/5/9(T), 1.2A USB-Friendly Li-Ion Battery Charger and Power-Path Management IC data sheet* [SLUS810](#)
2. *bq24075T, bq24079T, 1.5A USB-Friendly Li-Ion Battery Charger and Power-Path Management IC data sheet* ([SLUS937](#))

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