

Filename: BOM-TIDA-00748(001).xls  
 Variant: 001  
 Generated: 12/9/2015 1:47:27 PM  
 SVN path: \$URL::  
 SVN rev: \$Rev:: \$

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**60W Synchronous LED Driver**

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
PCB	1		Printed Circuit Board		TIDA-00784	Any		
C1	1	150pF	CAP, CERM, 150 pF, 100 V, +/- 5%, COG/NP0, 0805	0805	08051A151JAT2A	AVX		
C2, C3, C4, C10	4	3.3uF	CAP, CERM, 3.3uF, 50V, +/-10%, X7R, 1210	1210	GRM32DR71H335KA88L	MuRata	-, -, -, [NoValue]	-, -, -, [NoValue]
C5X	1	330uF	CAP, OS-CON, 330 uF, 25 V, +/- 20%, 0.014 ohm, F12, SMD, 2-Leads, Body 10.5x10.5mm, Height 12.7mm SMD	F12, SMD, 2-Leads, Body 10.5x10.5mm, Height 12.7mm	25SVPF330M	Sanyo		
C6, C7, C8, C9	4	330uF	CAP, AL, 330 uF, 35 V, +/- 20%, 0.06 ohm, SMD	10 x 10	EEE-FP1V331AP	Panasonic		
C11, C13, C14	3	10uF	CAP, CERM, 10 uF, 35 V, +/- 20%, X7R, 1210	1210	GMK325AB7106MM-T	Taiyo Yuden		
C12	1	1uF	CAP, CERM, 1uF, 100V, +/-10%, X7R, 1210	1210	GRM32CR72A105KA35L	MuRata		
C15	1	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0805	0805	08053C104KAT2A	AVX		
C16, C18, C20	3	100pF	CAP, CERM, 100pF, 50V, +/-5%, COG/NP0, 0603	0603	GRM1885C1H101JA01D	MuRata	-	-
C17	1	4.7uF	CAP, CERM, 4.7uF, 16V, +/-10%, X7R, 0805	0805	GRM21BR71C475KA73L	MuRata	-	-
C19, C21	2	0.47uF	CAP, CERM, 0.47uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E474KA12D	MuRata	-	-
C22	1	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603	06033C104KAT2A	AVX		
C23	1	470pF	CAP, CERM, 470 pF, 100 V, +/- 5%, X7R, 0603	0603	06031C471JAT2A	AVX		
C24	1	0.22uF	CAP, CERM, 0.22 uF, 50 V, +/- 10%, X7R, 0805	0805	C0805C224K5RACTU	Kemet		
C25	1	0.22uF	CAP, CERM, 0.22 uF, 25 V, +/- 10%, X7R, 0805	0805	08053C224KAT2A	AVX		
C26	1	4.7uF	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X7R, 0805	0805	885012207025	Würth Elektronik		
D1	1	0.77V	Diode, Schottky, 100V, 1A, PowerDI123	PowerDI123	DFLS1100-7	Diodes Inc.		
FID4, FID5, FID6	3		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		
H1, H2, H3, H4	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply		
H5, H6, H7, H8	4		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone		
J1, J2, J3, J4, J6	5		Standard Banana Jack, Uninsulated, 5.5mm	Keystone_575-4	575-4	Keystone		
J5	1	1x3	Header, 100mil, 3x1, Gold, TH	PBC03SAAN	PBC03SAAN	Sullins Connector Solutions		
L1	1	10uH	Inductor, Drum Core, Ferrite, 10uH, 21A, 0.0034 ohm, SMD	22.5x12x20mm	74435581000	Würth Elektronik eiSos		
LBL1	1		Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650"H x 0.200"W	THT-14-423-10	Brady		
Q1, Q2	2	40V	MOSFET, N-CH, 40V, 22A, SON 5x6mm	SON 5x6mm	CSD18501Q5A	Texas Instruments		None
Q100	1	40 V	Transistor, NPN, 40 V, 0.2 A, SOT-23	SOT-23	MMBT3904	Fairchild Semiconductor		
R1	1	4.7	RES, 4.7 ohm, 5%, 1W, 2010	2010	CRM2010-JW-4R7ELF	Bourns		
R2	1	0.003	RES, 0.003, 1%, 4 W, 3015 WIDE	3015 WIDE	KRL7638-C-R003-F-T1	Susumu Co Ltd		
R3, R4	2	100	RES, 100 ohm, 1%, 0.1W, 0603	0603	CRCW0603100RFKEA	Vishay-Dale	Equivalent	Any
R5, R6, R7, R8, R12, R15	6	0	RES, 0 ohm, 5%, 0.1W, 0603	0603	ERJ-3GEY0R00V	Panasonic	-	-
R9	1	32.4k	RES, 32.4 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD0732K4L	Yageo America		
R10	1	2.2	RES, 2.2 ohm, 5%, 0.125W, 0805	0805	CRCW08052R20JNEA	Vishay-Dale		
R11	1	124k	RES, 124 k, 1%, 0.1 W, 0603	0603	CRCW0603124KFKEA	Vishay-Dale		
R13	1	9.20k	RES, 9.20 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD079K2L	Yageo America		
R14	1	64.2k	RES, 64.2 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD0764K2L	Yageo America		
R16	1	50.5k	RES, 50.5 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD0750K5L	Yageo America		
R17, R18, R21	3	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R19	1	48.7	RES, 48.7 ohm, 1%, 0.125W, 0805	0805	CRCW080548R7FKEA	Vishay-Dale		
R20	1	0.016	RES, 0.016, 1%, 1 W, 2512	2512	ERJ-M1WSF16MU	Panasonic		
R101	1	348k	RES, 348 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD07348KL	Yageo America		
R102	1	10.0k	RES, 10.0 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD0710KL	Yageo America		
TP1, TP3, TP10	3	Red	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint	5010	Keystone		
TP2, TP7, TP8	3	White	Test Point, Multipurpose, White, TH	White Multipurpose Testpoint	5012	Keystone		
TP4, TP5, TP9	3	Black	Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint	5011	Keystone		
TP6	1	Yellow	Test Point, Compact, Yellow, TH	Yellow Compact Testpoint	5009	Keystone		
U1	1		Wide Input Synchronous Boost Controller with Multiple Phase Capability	PWP0020A	LM5122-Q1	Texas Instruments	-	-
U2	1		Voltage Output, High or Low Side Measurement, Bi-Directional Zero-Drift Series Current-Shunt Monitor, DCK0006A	DCK0006A	INA199A1DCKR	Texas Instruments	INA199A1DCKT	Texas Instruments
FID1, FID2, FID3	0		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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