

Assembly Bill of Materials

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Project Name:	SMPS for Automotive Infotainment System
Project File:	TIDA-00744.PrjPcb
Base ID:	TIDA-00744
Schematic Rev:	E1
Assembly Variant:	None
Build Quantity:	100
Generated:	12/15/2015 7:38:34 PM

Item	Designator	Description	RoHS	Manufacturer	PartNumber	Quantity	Required	Supplier 1	Supplier Part Number 1	Supplier 2	Supplier Part Number 2	Alternate Manufacturer	Alternate PartNumber
1	IPC81	Printed Circuit Board	O	Any	TIDA-00744	1	100						
2	C1, C2, C8	CAP, CERM, 3.3uF, 50V, +/-10%, X7R, 1210	Y	MuRata	GRM32DR71H335KA88L	3	300	Digi-Key	490-3386-1-ND	Farnell, Mouser	1404196, 1404196, 81-GRM32DR71H335KA88	-,-, [NoValue]	-,-, [NoValue]
3	C3, C5, C6, C7	CAP, AL, 330 uF, 35 V, +/- 20%, 0.06 ohm, SMD	Y	Panasonic	EEE-FP1V331AP	4	400	Digi-Key	PCE4445CT-ND	Mouser	667-EEE-FP1V331AP		
4	C4	CAP, CERM, 0.047 uF, 50 V, +/- 5%, X7R, 0805	Y	AVX	0805C473JAT2A	1	100	Digi-Key	478-3771-1-ND	Mouser	581-0805C473J		
5	C9, C10	CAP, CERM, 10 uF, 35 V, +/- 20%, X7R, 1210	Y	Taiyo Yuden	GMK325AB7106MM-T	2	200	Digi-Key	587-2779-1-ND	Mouser	963-GMK325AB7106MM-T		
6	C11	CAP, CERM, 100 pF, 50 V, +/- 1%, COG/NP0, 0603	Y	AVX	06035A101FAT2A	1	100	Digi-Key	478-6202-1-ND	Mouser	581-06035A101F		
7	C12	CAP, CERM, 0.47 uF, 16 V, +/- 10%, X7R, 0805	Y	AVX	0805Y474KAT2A	1	100	Digi-Key	478-1403-1-ND	Mouser	581-080516C474K		
8	C13	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0603	Y	Taiyo Yuden	UMK107AB7105KA-T	1	100	Digi-Key	587-3247-1-ND	Mouser	963-UMK107AB7105KA-T		
9	C14	CAP, CERM, 2200pF, 16V, +/-10%, X7R, 0603	Y	MuRata	GRM188R71C222KA01D	1	100	Digi-Key	GRM188R71C222KA01D-ND				
10	C15	CAP, CERM, 100pF, 50V, +/-5%, COG/NP0, 0603	Y	MuRata	GRM1885C1H101JA01D	1	100	Digi-Key	490-1427-1-ND				
11	C16	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	Y	Kemet	C0603X103K5RACTU	1	100	Digi-Key	399-5346-1-ND	Mouser	80-C0603X103K5R		
12	C17, C18, C20, C21, C24, C25	CAP CER 2.2UF 100V 10% X7R 1206	RoHS Compliant	Samsung Electro-Mechanics America, Inc	CL31B225KCHSNN	6	600	Digi-Key	1276-3138-1-ND				
13	C19	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	Y	MuRata	GRM188R71H104KA93D	1	100	Digi-Key	490-1519-1-ND	Mouser	81-GRM39X104K50D		
14	C22, C23	CAP, CERM, 2.2 uF, 10 V, +/- 20%, X5R, 0603	Y	Kemet	C0603C225M8PACTU	2	200	Digi-Key	399-4912-1-ND	Mouser	80-C0603C225M8P		
15	C26	CAP, CERM, 0.47uF, 100V, +/-10%, X7R, 0805	Y	MuRata	GRM21BR72A474KA73L	1	100	Digi-Key	490-3326-1-ND	Mouser	81-GRM21BR72A474KA73		
16	C27, C28, C33, C34, C35, C36, C37, C38	CAP, AL, 82uF, 16V, +/-20%, 0.03 ohm, SMD	Y	Nippon Chemi-Con	APXH160AR8A820MH70G	8	800	Digi-Key	565-3146-1-ND	Mouser	661-PXH16V820M		
17	C29, C30, C31, C41	CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 0603	Y	MuRata	GRM188R72A104KA35D	4	400	Digi-Key	490-3285-1-ND	Mouser	81-GRM188R72A104KA35		
18	C32, C42	CAP, CERM, 1000pF, 100V, +/-5%, COG/NP0, 0805	Y	TDK	C2012C0G2A102J	2	200	Digi-Key	445-2320-1-ND	Farnell	1669354		
19	C39, C40	CAP, CERM, 47uF, 16V, +/-15%, X5R, 1206	Y	TDK	C3216X5R1C476M160AB	2	200	Digi-Key	445-6003-1-ND				
20	C43, C44	CAP, CERM, 33 pF, 100 V, +/- 5%, COG/NP0, 0603	Y	AVX	06031A330JAT2A	2	200	Digi-Key	478-1143-1-ND	Mouser	581-06031A330J		
21	C45	CAP, CERM, 22 pF, 50 V, +/- 5%, COG/NP0, 0603	Y	Kemet	C0603C220J5GACTU	1	100	Digi-Key	399-1053-1-ND	Mouser	80-C0603C220J5G		
22	C46, C49	CAP, CERM, 0.22 uF, 25 V, +/- 10%, X7R, 0603	Y	MuRata	GRM188R71E224KA88D	2	200	Digi-Key	490-3290-1-ND	Mouser	81-GRM188R71E224KA88		
23	C47, C48, C51, C52	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0603, CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603, CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603, CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	Y	MuRata	GRM188R71H103KA01D	4	400	Digi-Key	490-1512-1-ND	Mouser	81-GRM39X103K50D		
24	C50	CAP, CERM, 47 pF, 50 V, +/- 5%, COG/NP0, 0603	Y	Kemet	C0603C470J5GACTU	1	100	Digi-Key	399-1056-1-ND	Mouser	80-C0603C470J5G		
25	C53	CAP, AL, 47 uF, 50 V, +/- 20%, 0.3 ohm, SMD	Y	Panasonic	EEE-FC1H470P	1	100	Digi-Key	PCE4020CT-ND	Mouser	667-EEE-FC1H470P		
26	C54, C55	CAP, CERM, 1uF, 100V, +/-20%, X7R, 1206	Y	TDK	C3216X7R2A105M160AA	2	200	Digi-Key	445-4468-1-ND	Mouser	810-C3216X7R2A105M		
27	C56	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 1210	Y	MuRata	GRM32NR72A104KA01A	1	100	Digi-Key	490-1853-1-ND	Mouser	81-GRM422X104K100L		
28	C57, C58	CAP, CERM, 4.7 uF, 100 V, +/- 10%, X7S, 1210	Y	TDK	C3225X7S2A475K200AB	2	200	Digi-Key	445-6042-1-ND	Mouser	810-C3225X7S2A475K		
29	C59	CAP, CERM, 10 uF, 50 V, +/- 20%, X7R, 1210	Y	TDK	C3225X7R1H106M250AC	1	100	Digi-Key	445-14933-1-ND	Mouser	810-C3225X7R1H106MAC		
30	C60, C61	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, 0805	Y	TDK	C2012X7R2A472K	2	200	Digi-Key	445-1341-1-ND	Farnell	1844621		
31	C62	CAP, CERM, 2.2 uF, 50 V, +/- 10%, X5R, 0805	Y	TDK	C2012X5R1H225K125AB	1	100	Digi-Key	445-5976-1-ND	Mouser	810-C2012X5R1H225K		
32	D1	Diode, Schottky, 70 V, 0.07 A, SOT-23	Y	Diodes Inc.	BAS70-05-7-F	1	100	Digi-Key	BAS7005CT-ND	Mouser	621-BAS70-05-F		
33	D2	Diode, Schottky, 45 V, 20 A, DPAK	Y	STM	STPS15L45C-Y	1	100	Mouser	844-20W704FN				
34	D3, D4	Diode, Schottky, 60 V, 1 A, SOD-323F	Y	NXP Semiconductor	PMEG00100EJ115	2	200	Digi-Key	568-4138-1-ND	Mouser	771-PMEG00100EJ-T/R		
35	D5, D6	Diode, Schottky, 70V, 1A, SMD	Y	Diodes Inc.	B170-13-F	2	200	Digi-Key	B170-FDICT-ND	Mouser	621-B170-13-F		
36	D7	Diode, TVS, Uni, 28 V, 600 W, SMB	Y	Diodes Inc.	SMBJ28A-13-F	1	100	Digi-Key	SMBJ28A-FDICT-ND	Mouser	621-SMBJ28A-13-F		
37	D8	Diode, TVS, Uni, 14 V, 600 W, SMB	Y	Diodes Inc.	SMBJ14A-13-F	1	100	Digi-Key	SMBJ14A-FDICT-ND	Mouser	621-SMBJ14A-13-F		
38	FID1, FID2, FID3, FID4, FID5, FID6	Fiducial mark. There is nothing to buy or mount.	Y	N/A	N/A	6	600						
39	GND1, Vout1	Terminal, Turret, TH, Double	Y	Keystone	1502-2	2	200	Digi-Key	1502-2K-ND				
40	H1, H2, H3, H4	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Y	B&F Fastener Supply	NY PMS 440 0025 PH	4	400	Digi-Key	H542-ND				
41	H5, H6, H7, H8	Standoff, Hex, 0.5"L #4-40 Nylon	Y	Keystone	1902C	4	400	Digi-Key	1902CK-ND				
42	J1, J2, J3, J4, J5, J6, J7, J8	Standard Banana Jack, Uninsulated, 5.5mm	Y	Keystone	575-4	8	800	Digi-Key	575-4K-ND				
43	L1	Inductor, Shielded, Composite, 3.3 uH, 25 A, 0.0037 ohm, SMD	Y	Coilcraft	XAL1010-332MEB	1	100	Mouser	994-XAL1010-332MEB	Farnell	2289016		
44	L2	Inductor, Shielded Drum Core, Ferrite, 1.5 uH, 7.5 A, 0.01 ohm, SMD	Y	Coilcraft	MSS1260-152NLB	1	100						
45	L3	Inductor, Shielded Drum Core, Ferrite, 2.2 uH, 7 A, 0.01 ohm, SMD	Y	Coilcraft	MSS1260-222NLB	1	100						
46	L4	Inductor, Shielded Drum Core, Ferrite, 2.2 uH, 11.5 A, 0.00494 ohm, SMD	Y	Würth Elektronik	7447709002	1	100	Digi-Key	732-1237-1-ND	Mouser	710-7447709002		
47	LBL1	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	Y	Brady	THT-14-423-10	1	100	Farnell	2065596	Newark	97C5133		
48	Q1	MOSFET, P-CH, -60 V, 30 A, PowerPAK_SO-8L	Y	Vishay-Siliconix	SQJ461EP	1	100	Digi-Key	SQJ461EP-T1-GE3-ND	Mouser	78-SQJ461EP-T1-GE3	None	
49	Q3, Q8	MOSFET, N-CH, 40 V, 75 A, PowerPAK_SO-8L	Y	Vishay-Siliconix	SQJ422EP-T1-GE3	2	200	Digi-Key	SQJ422EP-T1-GE3-ND	Mouser	781-SQJ422EP-T1-GE3	None	
50	Q4, Q6	MOSFET, N-CH, 40 V, 58 A, PowerPAK_SO-8L	Y	Vishay-Siliconix	SQJ858AEP-T1-GE3	2	200	Digi-Key	SQJ858AEP-T1-GE3-ND	Mouser	726-BSC039N06NSATM1	None	
51	Q5, Q7	MOSFET, N-CH, 60 V, 19 A, PG-TDSON-8	Y	Infineon Technologies	BSC039N06NS	2	200	Digi-Key	BSC039N06NSCT-ND	Mouser	726-BSC039N06NSATM1	None	
52	R1	RES, 845, 0.1%, 0.1 W, 0603	Y	Yageo America	RT0603BRD07845RL	1	100						
53	R3	RES, 715 k, 1%, 0.1 W, 0603	Y	Vishay-Dale	CRCW0603715KFEA	1	100	Digi-Key	541-715KHCT-ND	Mouser	71-CRCW0603-715K-E3		

54	R4	RES, 2.21 k, 0.5%, 0.1 W, 0603	Y	Yageo America	RT0603DRE072K21L	1	100							
55	R5	RES, 45.3 k, 1%, 0.1 W, 0603	Y	Vishay-Dale	CRCW060345K3FKEA	1	100	Digi-Key	541-45.3KHCT-ND	Mouser	71-CRCW0603-45.3K-E3			
56	R6	RES, 41.2 k, 1%, 0.1 W, 0603	Y	Vishay-Dale	CRCW060341K2FKEA	1	100	Digi-Key	541-41.2KHCT-ND	Mouser	71-CRCW0603-41.2K-E3			
57	R7	RES, 100 k, 1%, 0.1 W, 0603	Y	Vishay-Dale	CRCW0603100KFKEA	1	100	Digi-Key	541-100KHCT-ND	Mouser	71-CRCW0603-100K-E3			
58	R8	RES, 0 ohm, 5%, 0.063W, 0402	Y	Vishay-Dale	CRCW04020000Z0ED	1	100	Digi-Key	541-0.0JCT-ND	Mouser	71-CRCW0402-0-E3			
59	R9	RES, 100 ohm, 5%, 0.1W, 0603	Y	Vishay-Dale	CRCW0603100RJNEA	1	100	Digi-Key	541-100GCT-ND	Mouser	71-CRCW0603J-100-E3			
60	R10	RES, 94.2 k, 0.1%, 0.1 W, 0603	Y	Yageo America	RT0603BRD0794K2L	1	100							
61	R11	RES, 3.74 k, 1%, 0.1 W, 0603	Y	Vishay-Dale	CRCW0603374FKEA	1	100	Digi-Key	541-3.74KHCT-ND	Mouser	71-CRCW0603-3.74K-E3			
62	R12	RES, 0.005, 1%, 1W, 2010	Y	Rohm	PMS50H2PFRU5L00	1	100	Digi-Key	RHM.005ASCT-ND					
63	R13	RES, 19.6 k, 0.1%, 0.1 W, 0603	Y	Yageo America	RT0603BRD0719K6L	1	100							
64	R14	RES, 135 k, 0.5%, 0.1 W, 0603	Y	Yageo America	RT0603DRE07135KL	1	100							
65	R15	RES, 0, 5%, 0.1 W, 0603	Y	Vishay-Dale	CRCW06030000Z0EA	1	100	Digi-Key	541-0.0GCT-ND	Mouser	71-CRCW0603-0-E3			
66	R16, R42	RES, 10.0 k, 1%, 0.1 W, 0603	Y	Vishay-Dale	CRCW060310K0FKEA	2	200	Digi-Key	541-10.0KHCT-ND	Mouser	71-CRCW0603-10K-E3			
67	R17, R22, R23, R28, R31	RES, 0, 5%, 0.1 W, 0603	Y	Yageo America	RC0603JR-070RL	5	500	Digi-Key	311-0.0GRCT-ND	Mouser	603-RC0603JR-070RL			
68	R18, R19	RES, 100 k, 1%, 0.125 W, 0805	Y	Vishay-Dale	CRCW0805100KFKEA	2	200	Digi-Key	541-100KCCT-ND	Mouser	71-CRCW0805-100K-E3			
69	R20, R21, R26, R27, R32, R33	RES, 10.0, 1%, 0.1 W, 0603	Y	Yageo America	RC0603FR-0710RL	6	600	Digi-Key	311-10.0HRCT-ND	Mouser	603-RC0603FR-0710RL			
70	R24, R25	RES, 0.006, 1%, 1 W, 0612	Y	Susumu Co Ltd	PRL1632-R006-F-T1	2	200	Digi-Key	PRL1632.006FCT-ND	Mouser	754-PRL1632-R006-FT1			
71	R29, R30	RES, 49.9, 1%, 0.1 W, 0603	Y	Vishay-Dale	CRCW0603499R9FKEA	2	200	Digi-Key	541-49.9HCT-ND	Mouser	71-CRCW0603-49.9-E3			
72	R34, R35	RES, 1.00, 1%, 0.5 W, 1206	Y	Stackpole Electronics Inc	CSR1206FK1R00	2	200	Digi-Key	CSR1206FK1R00CT-ND					
73	R36, R39, R43, R44	RES, 100 k, 5%, 0.1 W, 0603	Y	Vishay-Dale	CRCW0603100KJNEA	4	400	Digi-Key	541-100KGCT-ND	Mouser	71-CRCW0603J-100K-E3			
74	R37	RES, 6.49 k, 1%, 0.1 W, 0603	Y	Vishay-Dale	CRCW0603649FKEA	1	100	Digi-Key	541-6.49KHCT-ND	Mouser	71-CRCW0603-6.49K-E3			
75	R38, R40, R41	RES, 10.0 k, 1%, 0.1 W, 0603, RES, 10.0k ohm, 1%, 0.1W, 0603, RES, 10.0k ohm, 1%, 0.1W, 0603	Y	Yageo America	RC0603FR-0710KL	3	300	Digi-Key	311-10.0KHRCT-ND	Mouser	603-RC0603FR-0710KL			
76	R45	RES, 1.0 ohm, 5%, 0.25W, 1206	Y	Vishay-Dale	CRCW12061R00JNEA	1	100	Digi-Key	541-1.0ECT-ND	Mouser	71-CRCW1206J-1.0-E3			
77	S1	DIP Switch, SPST, 2Pos, Slide, SMT	Y	Copal Electronics	CVS-02TB	1	100	Digi-Key	563-1193-1-ND					
78	TP1, TP4, TP5	Test Point, Multipurpose, Red, TH	Y	Keystone	5010	3	300	Digi-Key	5010K-ND					
79	TP2, TP6, TP7, TP11, TP12	Test Point, Multipurpose, Black, TH	Y	Keystone	5011	5	500	Digi-Key	5011K-ND					
80	TP3	Test Point, Compact, Red, TH	Y	Keystone	5005	1	100	Digi-Key	5005K-ND					
81	TP8, TP9	Terminal, Turret, TH, Triple	Y	Keystone	1598-2	2	200	Digi-Key	1598-2K-ND					
82	TP10	Test Point, Multipurpose, White, TH	Y	Keystone	5012	1	100	Digi-Key	5012K-ND					
83	U1	Automotive Catalog Low-Voltage Adjustable Precision Shunt Regulator, 80 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	Y	Texas Instruments	TLVH431BQDBZRQ1	1	100	Digi-Key	TLVH431BQDBZRQ1-ND	Mouser	595-TLVH431BQDBZRQ1	Texas Instruments	Equivalent	
84	U2	High Efficiency Low-Side N-Channel Controller for Switching Regulators, 10-pin MSOP	Y	Texas Instruments	LM3481MM	1	100	Farnell	1798320					
85	U3	High-Speed CMOS Logic Decade Counter/Divider with 10 Decoded Outputs, PW0016A	Y	Texas Instruments	CD74HC4017PWR	1	100					Texas Instruments	CD74HC4017PWT	
86	U4	Wide Input Range Dual Synchronous Buck Controller, RHA0040C	Y	Texas Instruments	LM5140RHA	1	100					Texas Instruments		
87	U5		Y	Texas Instruments	LM74610	1	100							

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