



45 W PD LD5523M1 & LD8926AA1& LD6612QM

By : Jason Liao

Date : 2021/01/13

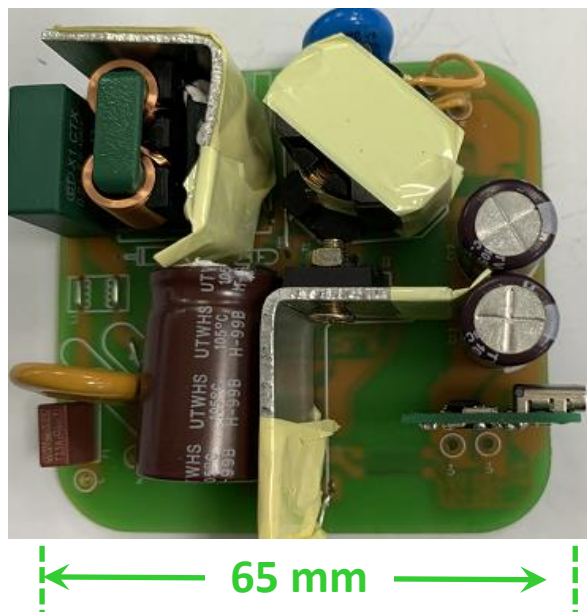
- 1. Specification**
- 2. Outline**
- 3. Schematic**
- 4. PCB Layout**
- 5. Bill of Materials**
- 6. Transformer Design**
- 7. Efficiency**
- 8. No Load Power Consumption**
- 9. Line / Load / Cross Regulation**
- 10. Over Current Protection**
- 11. Over Voltage Protection**
- 12. Ripple & Noise Voltage**
- 13. Dynamic Load**
- 14. Turn-on Delay Time**
- 15. Rise Time & Overshoot**
- 16. Supply Voltage of IC**
- 17. Stress on Switching Parts**
- 18. Flux Density of Transformer**
- 19. EMI**

1. Specification

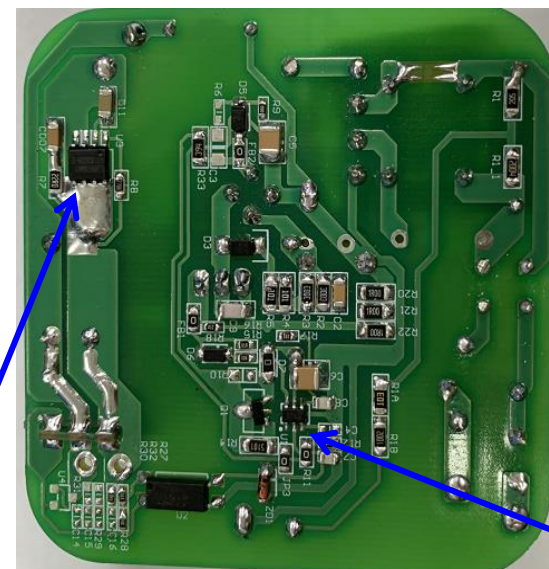
Item	specification	Test Result
Efficiency	CoC Tier 2	Pass
Standby Power (mW)	< 75	Pass
Output Voltage Accuracy (%)	< ± 10	Pass
Over Current Protection (%)	< 130	Pass
Over Voltage Protection (V)	< 125	Pass
Ripple & Noise Voltage (mV)	< 300	Pass
Dynamic Load (%)	< ± 10	Pass
Turn-on Delay Time (S)	< 3	Pass
Rise Time (mS)	< 5	Pass
Overshoot (%)	< 10	Pass
EMI	Conduction Under 6 dB	Pass

2. Outline

Top View



Bottom View



LD8926AA
1

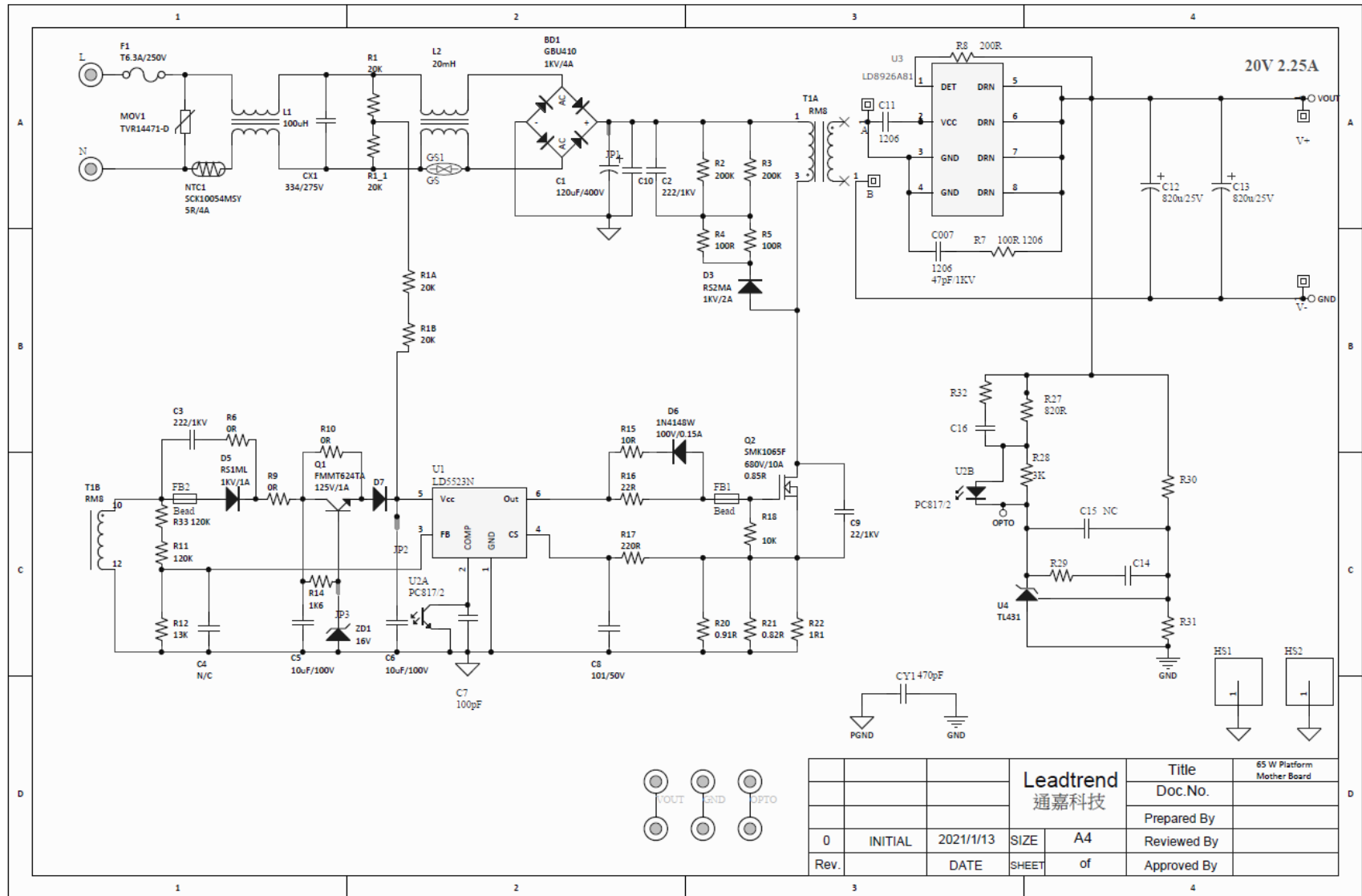
LD5523
N



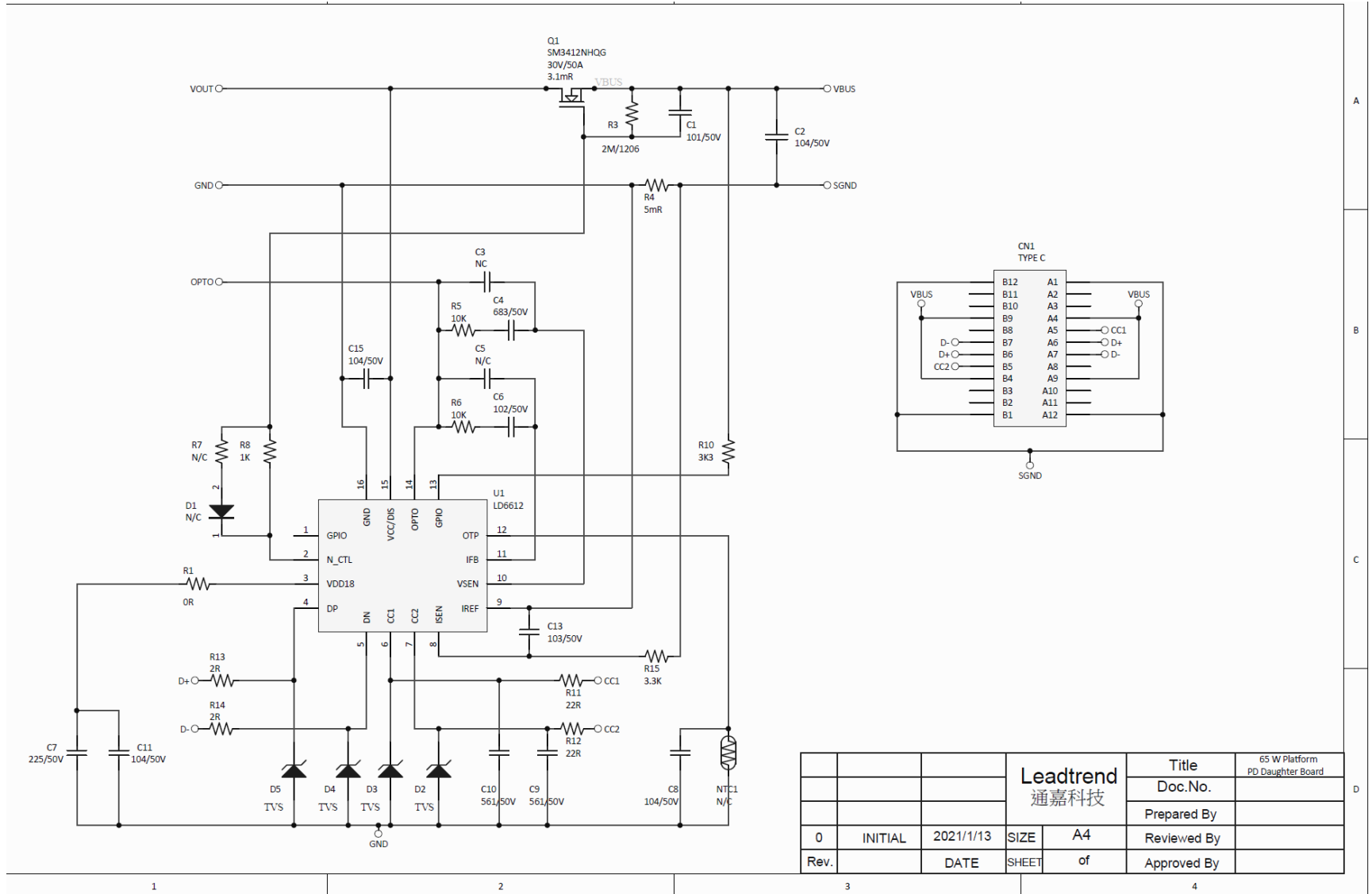
LD6620

Side View

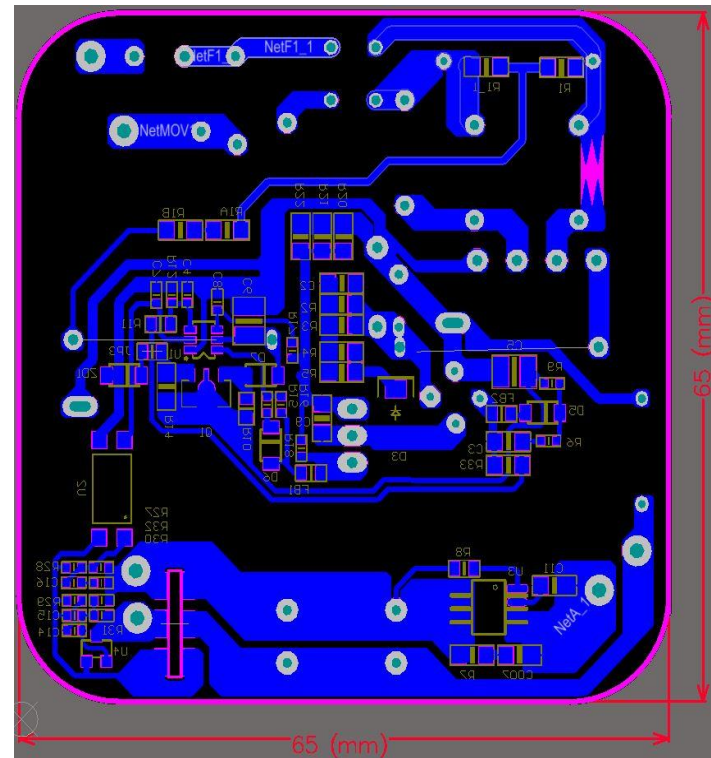
3. Schematic



3. Schematic (Cont.)



Bottom Side



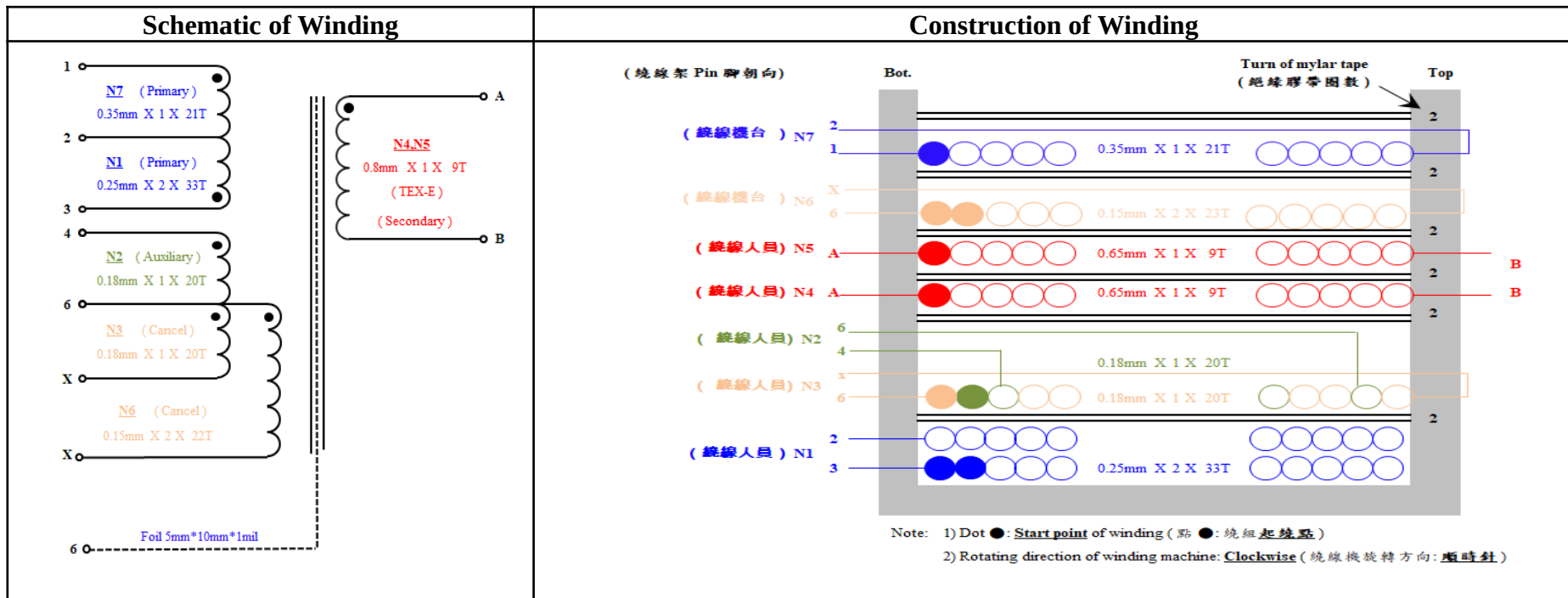
5. Bill of Materials

Location	Description	Q'ty
NTC1	JUMP	1
R1,R1_1	2 M Ω / J / 1206	2
R2,R3	300 K Ω / J / 1206	2
R4,R5	100 Ω / J / 1206	2
R1A,R1B	10 K Ω / J / 1206	2
FB1,FB2,JP3	0 Ω / J / 0805	3
R33	120 k Ω / J / 1206	1
R12	13 k Ω / F / 0603	1
R9	0 Ω / J / 0603	1
R14	5.1 k Ω / J / 1206	1
D7	0 Ω / J / 1206	1
R8	270 Ω / J / 0805	1
R15	10 Ω / J / 0603	1
R16	150 Ω / J / 0603	1
R17	220 Ω / J / 0603	1
R18	10 K Ω / J / 0603	1
R27	10 k Ω / J / 0603	1
R28	20 k Ω / J / 0603	1
R7	22 Ω / F / 1206	1
R21,R22	0.82 Ω / J / 1206	2
CX1	0.22 μ F (224) / 275V / HQX / X2	1
CY1	470 pF (471) / 250V / KX / Y1	1
C1	82 μ F / 400 V / 20 x 25 mm	1
C2,C007	1 nF (102) / 1 kV / X7R / 1206	2
C8	100 pF (101) / 50V / NPO / 0603	1
C9	47 pF (470) / 1 KV / X7R / 1206	1
C12,C13	820 μ F / 25 V / 10 x 20 mm	1
C11	2.2 μ F (225) / 50 V / X7R / 1206	1
C5	4.7 μ F (475) / 50 V / X7R / 1210	1
C6	4.7 μ F (475) / 50 V / X7R / 1210	1
C7	1 nF (102) / 50 V / X7R / 0603	1
BD1	2KBP06M / 600 V / 2 A / DIP -4	1
R20	0.91 Ω / J / 1206	1
R11	120K Ω / J / 0805	1

Location	Description	Q'ty
D3,D5	RS2MA / 1 kV / 2 A / SMA	1
D6	1N4148	1
ZD1	16V / 0.41W / SOD-123	1
Q1	MMBT2222 SOD-23	1
Q2	K13A65D / TO-220F	1
U1	LD5523M1 / SOD-23	1
U2A	EL1019 / 200 ~ 400 % / SOP-4	1
U3	LD8926AA1	1
L1	JUMP	1
L2	ESQ1515 / 10mH	1
T1	RM-8 / KP44A / 54 : 9 : 20 / 700 Mh	1
F1	2.5 A / 250V / T / 2010	1
PCB (Mother)	65 x 65 x 2 mm / FR-4 / 2 oz	1
Type C	Type C Connector	1
MOV1	14471	1
	小卡	
PCB (Daughter)	20 x 18.1 x 1 mm / FR-4 / 2 oz	1
R3	2 M Ω / J / 1206	1
R4	5 m Ω / J / 1206	1
R5,R6	10 k Ω / J / 0603	2
R11,R12	22 Ω / J / 0603	2
R13,R14	47 Ω / J / 0603	2
R8	1 k Ω / J / 0603	1
R1	0 Ω / J / 0603	1
R15	3.3 k Ω / J / 0603	1
R10	3.3 k Ω / J / 1206	1
C1	100 pF (101) / 50V / NPO / 0603	1
C2,C11,C15	0.1 uF (104) / 50V / NPO / 0603	3
C7	2.2 μ F (225) / 50 V / X7R / 0603	1
C6	1 nF (102) / 50 V / X7R / 0603	1
C3	6.8 nF (682) / 50 V / X7R / 0603	1
C4	0.047 uF (473) / 50 V / X7R / 0603	1
U1	LD6612 / QFN-16	1
C13	0.01uF (103) 50 V / X7R / 0603	1

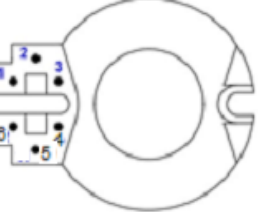
The Best Company for AC-DC and DC-DC Power Application Total Solution

6. Transformer Design

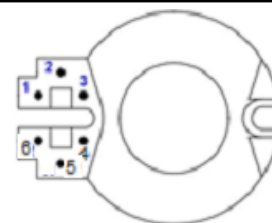


Winding No.	Pin No.		Winding Types	Number of Turns		Remarks		Bobbin Shape	Core Material	A _e (mm ²)	L _p (μH)
	Start	Finish		Winding	Tape						
N1	3	2	0.25 mm X 2	33	2	N _{P1}	Pin 朝人員順繞	RM-8	KP44A	64	700 ± 5 % @ 65 kHz / 1 V
N2	4	6	0.18 mm X 1	20	2	N _A	Pin 朝人員順繞				
N3	6	X	0.18 mm X 1			Cancel	(2 線並繞)				
N4	A	B	0.65 mm X 1	9	2	N _S	Pin 朝人員順繞				
N5	A	B	0.65 mm X 1	9	2	N _S	Pin 朝人員順繞				
N6	6	X	0.15 mm X 2	23	2	Cancel	Pin 朝機台逆繞				
N7	1	2	0.35 mm X 1	21	2	N _{P1}	Pin 朝機台逆繞				
Foil	10		5 mm X 10 mm X 1 mil	—	—	Core 底部貼銅下地 Pin 10					

Bottom View of Bobbin



Bottom View of Bobbin



7. Efficiency (Cont.)

Input Voltage	115 V _{AC} / 60 Hz	230 V _{AC} / 50 Hz
Output Current	100 %, 75 %, 50 %, 25 %, 10 % of Full Load	
Measured Point of Output Voltage	End of PCB	
Duration of Burn-in	30 Minutes	
Requirement	CoC Tier 2	

V _{IN,AC} (V / Hz)	Mode	V _{BUS,SET} (V)	V _{BUS,PCB} (V)	I _{OUT} (A)	P _{BUS,PCB} (W)	P _{IN} (W)	η (%)	η _{AV,4-Points} (%)	Requirement (%)
115 / 60	PD 3.0	5	5.3	3	15.88	17.83	89.06	88.96	> 81.84
			5.2	2.25	11.68	13.10	89.15		
			5.1	1.5	7.36	8.57	89.03		
			5.01	0.75	3.75	4.23	88.59		
			5.0	0.3	1.5	1.7	88.24	—	> 72.48
		9	9.28	3	27.78	30.94	89.80	90.3	> 87.30
			9.20	2.25	20.66	22.80	90.63		
			9.10	1.5	13.61	15.00	90.76		
			9.00	0.75	6.71	7.46	90.00		
			8.99	0.3	2.68	3.05	87.84	—	> 77.30
		15	15.3	3	45.78	50.92	89.90	90.48	> 88.85
			15.2	2.25	34.11	37.75	90.35		
			15.11	1.5	22.57	24.77	91.14		
			15.01	0.75	11.23	12.4	90.35		
			15	0.3	4.5	5.15	87.38	—	> 78.85
		20	20.19	2.25	45.31	50.5	89.72	89.84	> 88.85
			20.12	1.68	33.76	37.28	90.56		
			20.04	1.125	22.46	24.88	90.39		
			19.98	0.57	11.35	12.78	88.8		
			19.98	0.25	4.42	5.35	83.0	—	> 78.85

7. Efficiency (Cont.)

$V_{IN,AC}$ (V / Hz)	Mode	$V_{BUS,SET}$ (V)	$V_{BUS,PCB}$ (V)	I_{OUT} (A)	$P_{BUS,PCB}$ (W)	P_{IN} (W)	η (%)	$\eta_{AV,4-Points}$ (%)	Requirement (%)
230 / 60	PD 3.0	5	5.30	3	15.87	18.00	88.16	87.11	> 81.84
			5.20	2.25	11.67	13.30	87.74		
			5.11	1.5	7.64	8.75	87.37		
			5.01	0.75	3.75	4.40	85.17		
			5.00	0.3	1.49	1.8	82.78		
		9	9.29	3	27.80	30.79	90.28	89.42	> 87.30
			9.20	2.25	20.64	22.95	89.96		
			9.10	1.5	13.61	15.16	89.80		
			9.00	0.75	6.71	7.66	87.65		
			8.99	0.3	2.68	3.2	83.72		
		15	15.22	3	45.60	51.0	89.41	90.22	> 88.85
			15.2	2.25	34.05	37.40	91.04		
			15.1	1.5	22.62	24.86	90.99		
			15.01	0.75	11.23	12.55	89.46		
			15.00	0.3	4.47	5.35	83.55		
		20	20.20	2.25	45.37	49.75	91.19	89.92	> 88.85
			20.10	1.68	33.73	37.18	90.71		
			20.03	1.125	22.45	24.95	89.99		
			19.98	0.57	11.35	12.93	87.77		
			19.98	0.25	4.42	5.60	78.85		
								—	> 72.48

8. No Load Power Consumption

Input Voltage	115 V _{AC} / 60 Hz	230 V _{AC} / 50 Hz
Output Current	5V / 0 A	
Requirement	CoC Tier 2	

V_{IN,AC} (V / Hz)	P_{IN} (mW)	Requirement (mW)
115 / 60	32	< 75
230 / 50	59	

9. Line / Load / Cross Regulation

Input Voltage		90 V _{AC} / 47 Hz		264 V _{AC} / 63 Hz	
Output Current		5V:0A/3A ， 9V: 0A/3A ， 15V: 0A/3A ， 20V: 0A/2.25A			
Measured Point of Output Voltage		End of Cable			
Requirement		< ± 10 % of V _{BUS,SET}			
Mode	V _{BUS,SET} (V)	V _{IN,AC} (V / Hz)	V _{BUS,PCB} (V)		Requirement (V)
			0 A	3 A / (2.25A only 20)	
PD	5	90 / 47	5.01	5.30	4.5 ~ 5.5
		264 / 63	5.01	5.30	
	9	90 / 47	8.99	9.29	8.1 ~ 9.9
		264 / 63	8.98	9.29	
	15	90 / 47	14.99	15.29	13.5~15.5
		264 / 63	15.00	15.29	
	20	90 / 47	19.97	20.18	18~22
		264 / 63	19.98	20.18	

10. Over Current Protection

Input Voltage		90 V _{AC} / 47 Hz	264 V _{AC} / 63 Hz
Requirement	Protection Mode	Auto Recovery	
	OCP Trigger Point	< 130 % of Full Load	

Mode	V _{BUS,SET} (V)	V _{IN,AC} (V / Hz)	I _{OUT,OCP} (A)	Requirement	
				Protection Mode	OCP Trigger Point (A)
PD 3.0	5	90 / 47	3.31	Auto Recovery	< 3.6
		264 / 63	3.27	Auto Recovery	
	9	90 / 47	3.34	Auto Recovery	< 3.6
		264 / 63	3.35	Auto Recovery	
	15	90 / 47	3.32	Auto Recovery	< 3.6
		264 / 63	3.31	Auto Recovery	
	20	90 / 47	2.52	Auto Recovery	<2.7
		264 / 63	2.52	Auto Recovery	

11. Over Voltage Protection

Input Voltage	90 V _{AC} / 47 Hz	264 V _{AC} / 63 Hz
Output Current	5V:0A/3A , 9V: 0A/3A , 15V: 0A/3A , 20V: 0A/2.25A	
Measured Point of Output Voltage	End of Cable	
Requirement	Defined by Different Output Voltage	

Mode	V _{BUS,SET} (V)	V _{IN,AC} (V / Hz)	V _{BUS,OVP} (V)		Requirement (V)
			No Load	Full Load	
PD	5	90 / 47	6.16	5.52	< 6.25
		264 / 63	6.16	5.52	
	9	90 / 47	11.0	10.4	< 11.25
		264 / 63	10.8	10.0	
	15	90 / 47	17.4	17.0	<18.75
		264 / 63	18.2	17.0	
	20	90 / 47	23.0	22.8	< 25.0
		264 / 63	23.6	22.8	

12. Ripple & Noise Voltage

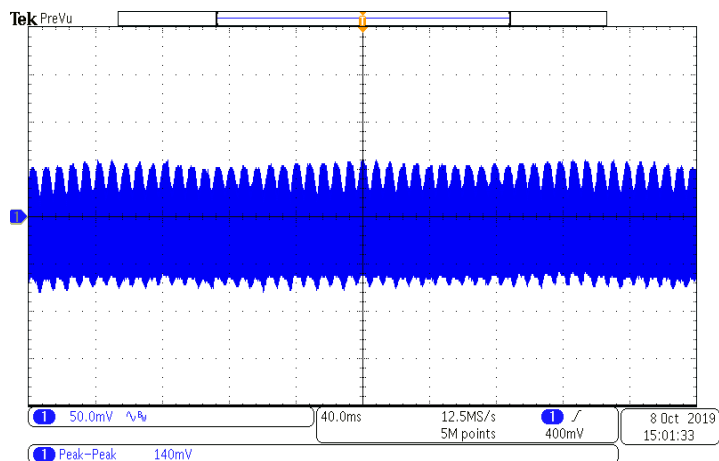
Input Voltage	90 V _{AC} / 47 Hz	264 V _{AC} / 63 Hz
Output Current	5V:0A/3A , 9V: 0A/3A , 15V: 0A/3A , 20V: 0A/2.25A	
Measured Point of Output Voltage	End of Cable	
Bandwidth	20 MHz (with 10 μ F E-cap & 0.1 μ F MLCC)	
Requirement	< 80 m V	

Mode	V _{BUS,SET} (V)	V _{IN,AC} (V / Hz)	V _{BUS,PK-PK} (mV)		Requirement (mV)
			0 A	3 A / (2.25A only 20)	
PD	5	90 / 47	96	140	< 200
		264 / 63	140	168	
	9	90 / 47	114	166	< 200
		264 / 63	118	174	
	15	90 / 47	104	246	< 300
		264 / 63	120	186	
	20	90 / 47	102	224	< 300
		264 / 63	130	154	

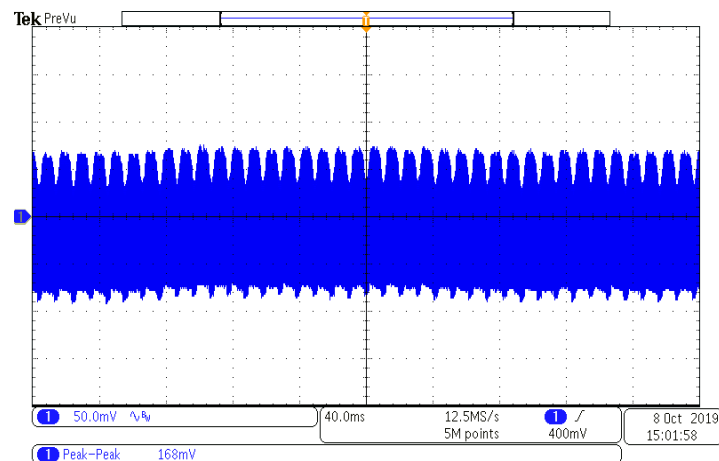
12. Ripple & Noise Voltage (Cont.)

PD 3.0 Mode:

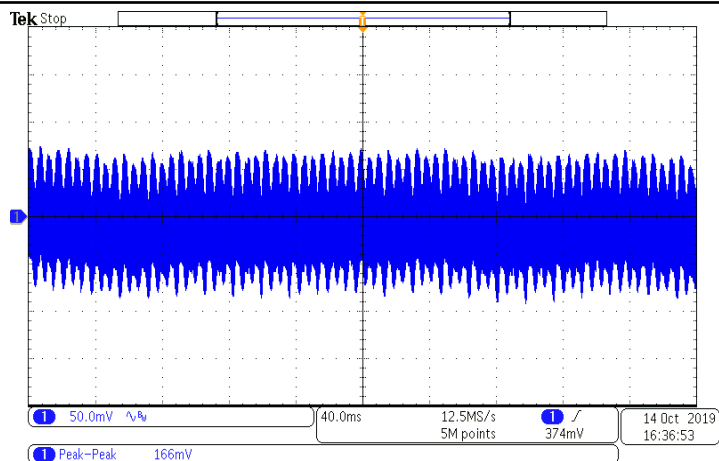
90 V_{AC} / 47 Hz / 5V / 3A



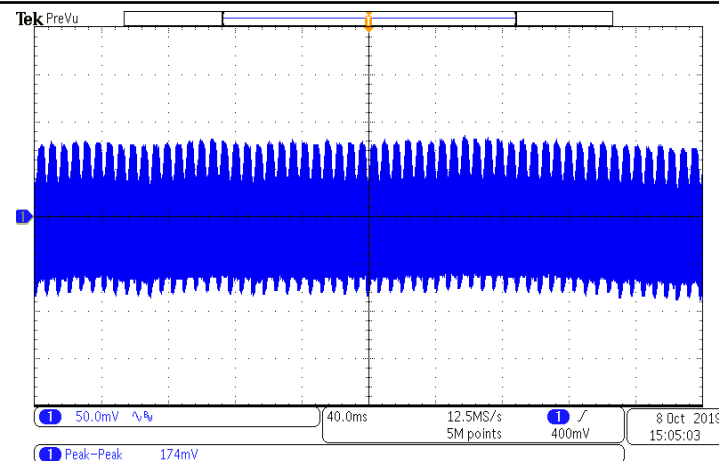
264 V_{AC} / 63 Hz / 5V / 3A



90 V_{AC} / 47 Hz / 9V / 3A



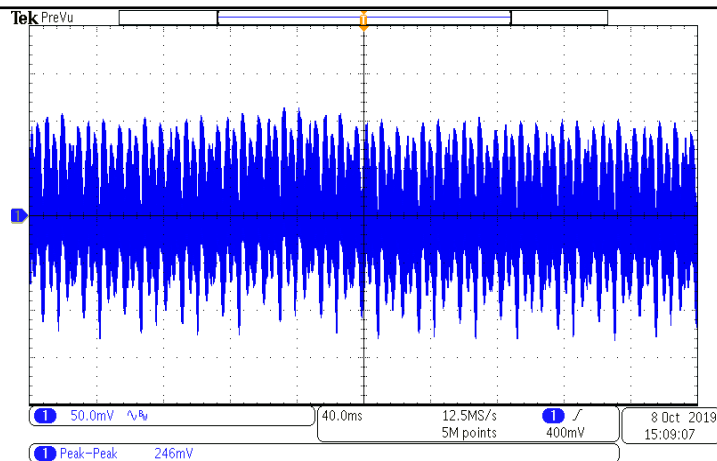
264 V_{AC} / 63 Hz / 9V / 3A



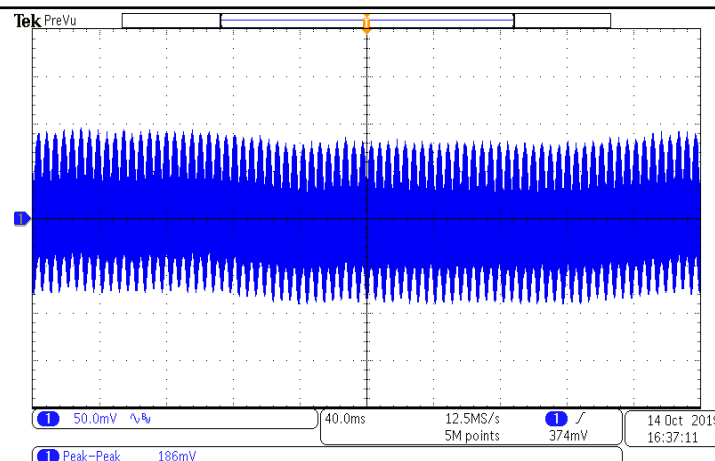
12. Ripple & Noise Voltage (Cont.)

PD 3.0 Mode:

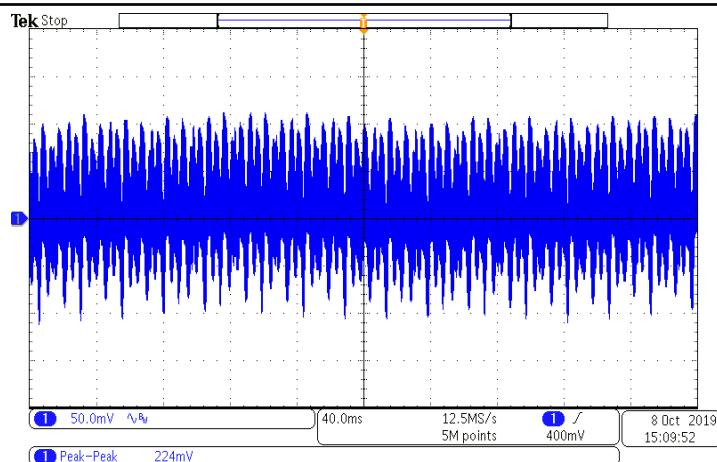
90 V_{AC} / 47 Hz / 15V / 3A



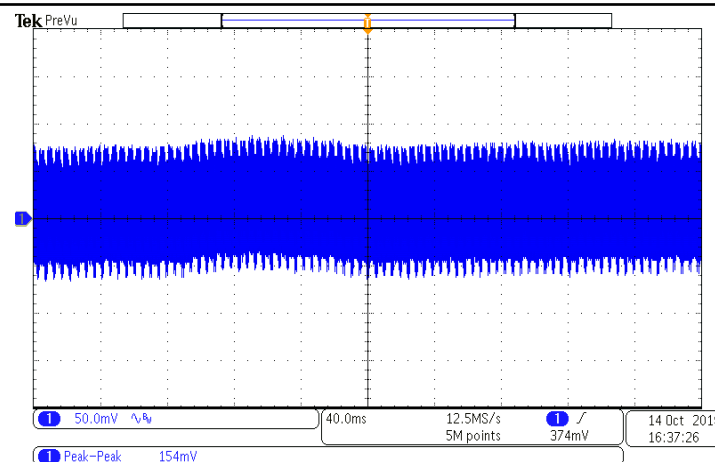
264 V_{AC} / 47 Hz / 15V / 3A



90 V_{AC} / 47 Hz / 20V / 2.25A



264 V_{AC} / 47 Hz / 20V / 2.25



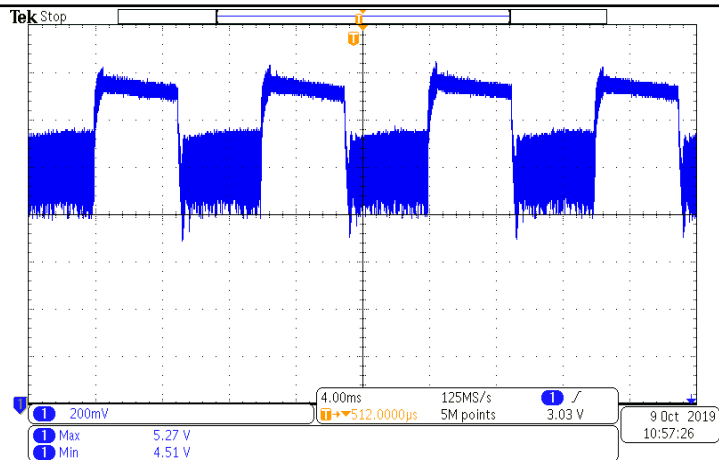
13. Dynamic

Input Voltage	90 V _{AC} / 47 Hz	264 V _{AC} / 63 Hz
Output Current	5V:0A/3A , 9V: 0A/3A , 15V: 0A/3A , 20V: 0A/2.25A	
Frequency of Load	100 Hz (5 mS High / 5 mS Low)	
Slew Rate of Load	0.1 A / μ S	
Measured Point of Output Voltage	End of PCB	
Requirement	< $\pm 10\%$ of V _{BUS,SET}	

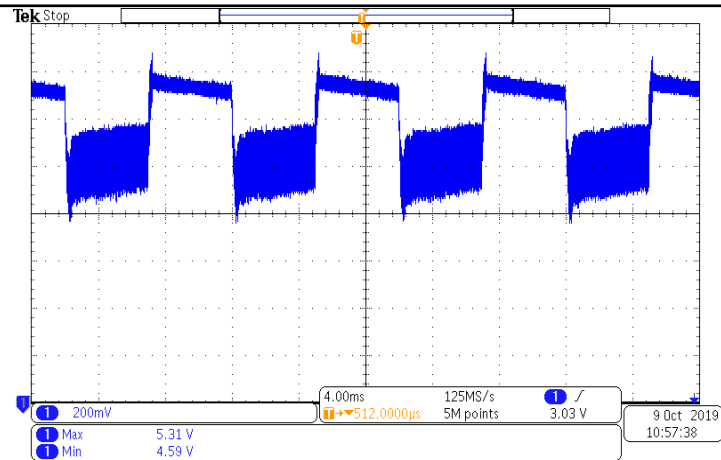
Mode	V _{BUS,SET} (V)	V _{IN,AC} (V / Hz)	V _{BUS,PCB} (V)		Requirement (V)
			Min.	Max.	
PD 3.0	5	90 / 47	4.51	5.27	4.5 ~ 5.5
		264 / 63	4.59	5.31	
	9	90 / 47	8.52	9.32	8.1 ~9.9
		264 / 63	8.60	9.34	
	15	90 / 47	14.5	15.4	14.5~16.5
		264 / 63	14.6	15.4	
	20	90 / 47	19.5	20.4	18~22
		264 / 63	19.7	20.4	

13. Dynamic Load (Cont.)

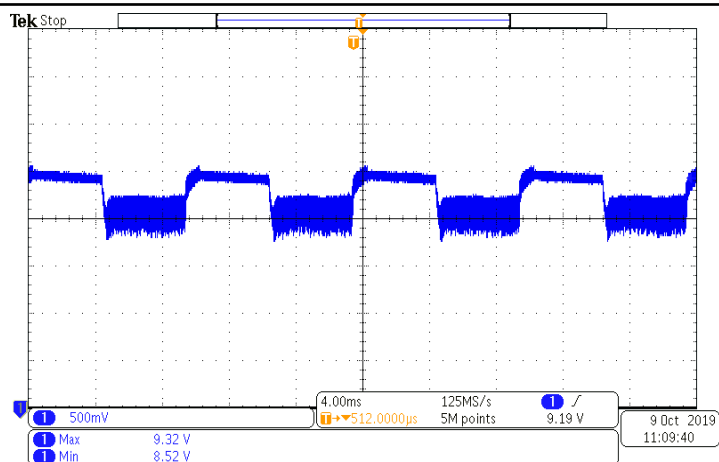
90 V_{AC} / 47 Hz / 5V



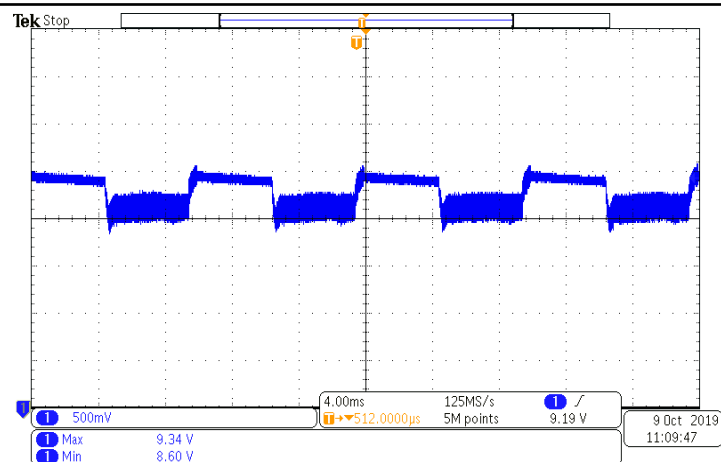
264 V_{AC} / 63 Hz / 5V



90 V_{AC} / 47 Hz / 9V

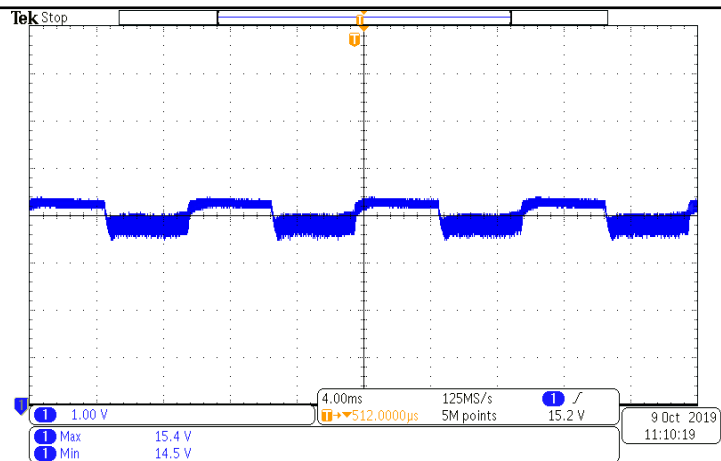


264 V_{AC} / 63 Hz / 9V

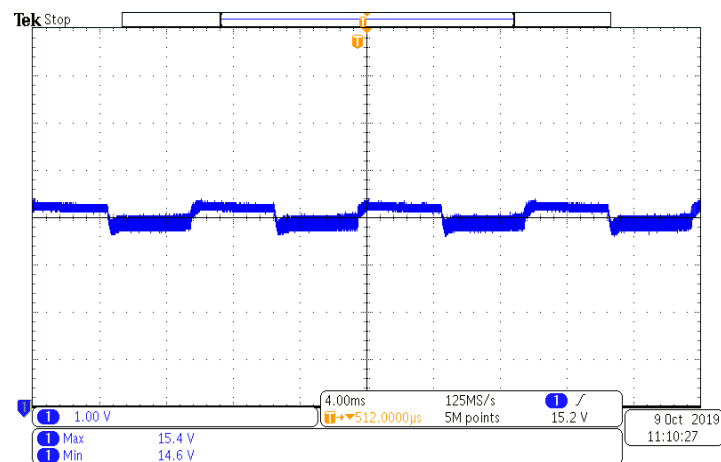


13. Dynamic Load (Cont.)

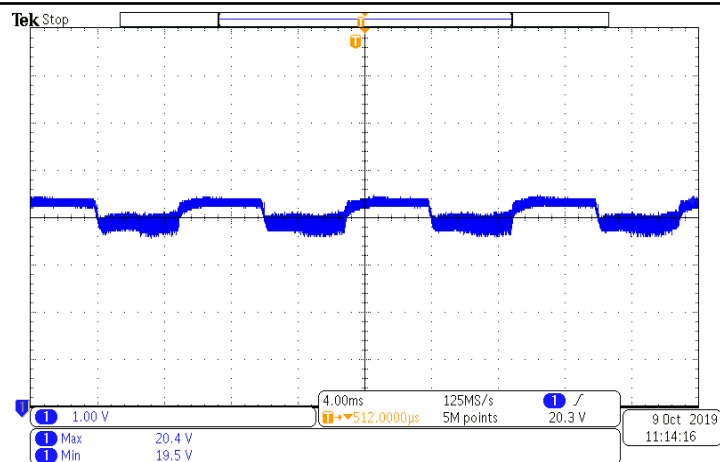
90 V_{AC} / 47 Hz / 15V



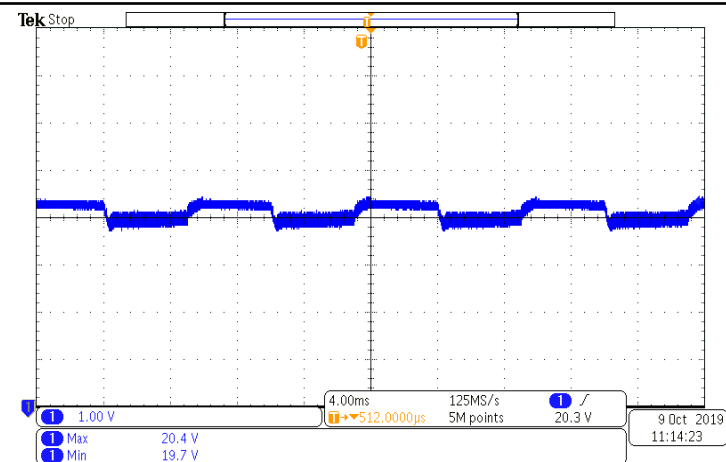
264 V_{AC} / 63 Hz / 15V



90 V_{AC} / 47 Hz / 20V



264 V_{AC} / 63 Hz / 20V



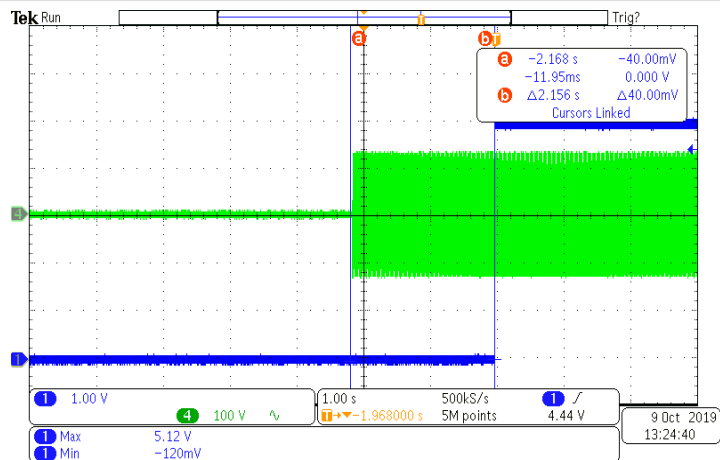
14. Turn-on Delay Time

Input Voltage	90 V _{AC} / 47 Hz
Output Current	5V : 0 A / 3A
Measured Point of Output Voltage	End of Cable
Requirement	< 3 S

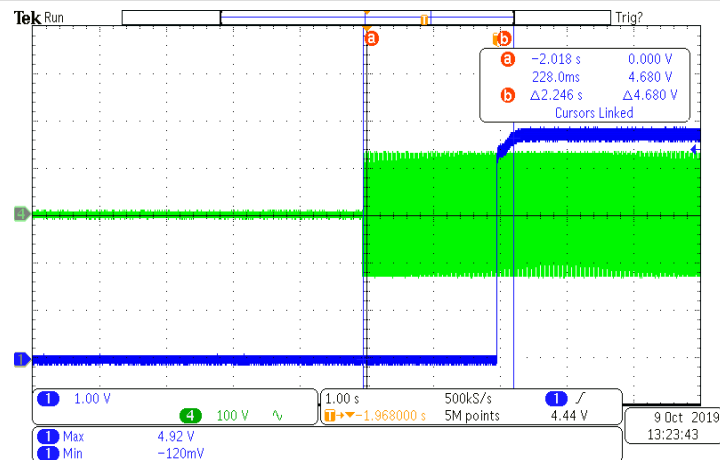
Mode	V_{BUS,SET} (V)	V_{IN,AC} (V / Hz)	T_{ON} (S)		Requirement (S)
			0 A	3 A	
PD 3.0	5	90 / 47	2.156	2.246	< 3

14. Turn-on Delay Time (Cont.)

90 V_{AC} / 47 Hz / 0A



90 V_{AC} / 60 Hz / 3A



15. Rise Time & Overshoot

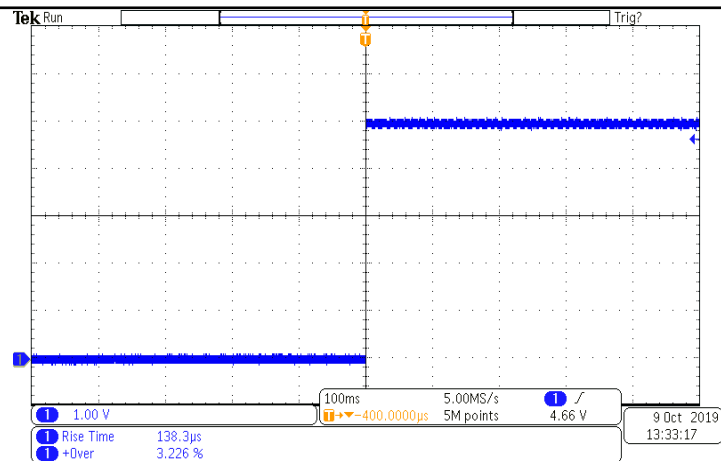
Input Voltage		90 V _{AC} / 47 Hz	264 V _{AC} / 63 Hz
Output Current		5V : 0 A	
Measured Point of Output Voltage		End of Cable	
Requirement	Rise Time	< 5 mS	
	Overshoot	< 10 %	

Mode	V _{BUS,SET} (V)	V _{IN,AC} (V / Hz)	T _{RISE} (mS)	Requirement (mS)
PD	5	90 / 47	0.138	< 5
		264 / 63	0.141	

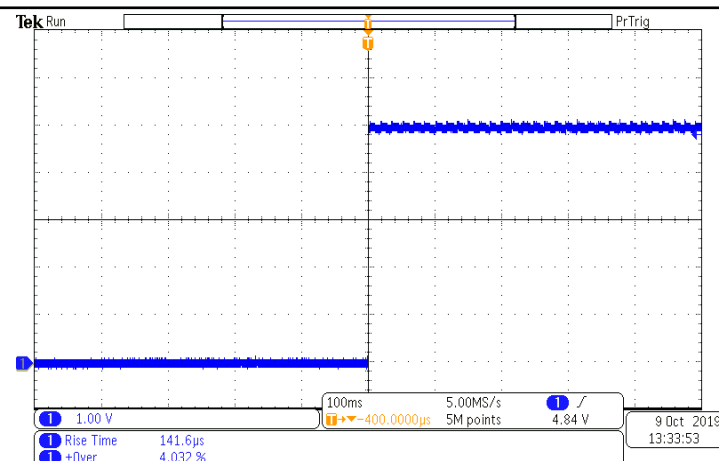
Mode	V _{BUS,SET} (V)	V _{IN,AC} (V / Hz)	Overshoot (%)	Requirement (%)
PD	5	90 / 47	3.226	< 10
		264 / 63	4.032	

15. Rise Time & Overshoot (Cont.)

90 V_{AC} / 47 Hz / 0 A



264 V_{AC} / 63 Hz / 0 A



16. Supply Voltage of IC

Input Voltage	90 V _{AC} / 47 Hz	264 V _{AC} / 63 Hz
Output Current	5V:0A/3A , 9V: 0A/3A , 15V: 0A/3A , 20V: 0A/2.25A	
Requirement	$> V_{CC_OFF} \ \& \ < V_{CC_OVP}$	

Mode	V _{BUS,SET} (V)	V _{IN,AC} (V / Hz)	V _{CC,U1} (V)				Requirement (V)
			No Load		Full Load		
			Min.	Max.	Min.	Max.	
PD	5	90 / 47	9.8	11.6	13.6	15.0	> 7
		264 / 63	9.8	11.8	14.6	15.8	
	9	90 / 47	18.2	20.4	22.4	24	
		264 / 63	18.2	20.4	22.4	24.0	
	15	90 / 47	22.6	24.0	22.6	24.2	
		264 / 63	22.6	24.0	22.6	24.2	
	20	90 / 47	22.4	24.0	22.8	24.6	< 28
		264 / 63	22.8	24.4	22.8	24.6	

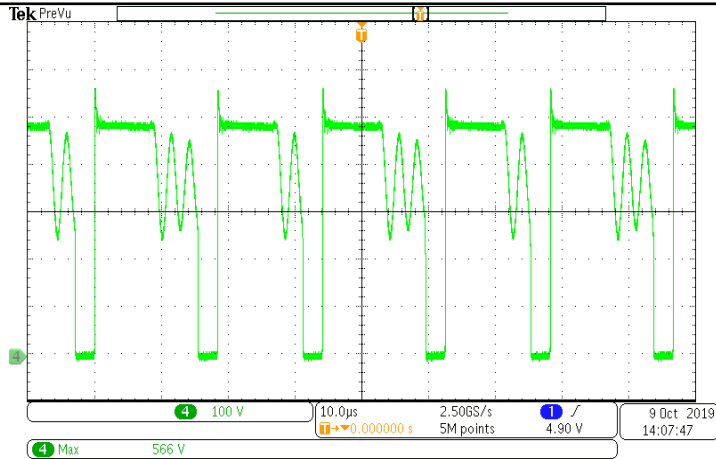
17. Stress on Switching Parts

Input Voltage	264 V _{AC} / 63 Hz
Output Current	No Load & Full Load (5 V: 3.0 A / 20 V: 2.250 A)
Requirement	Defined by Different Parts

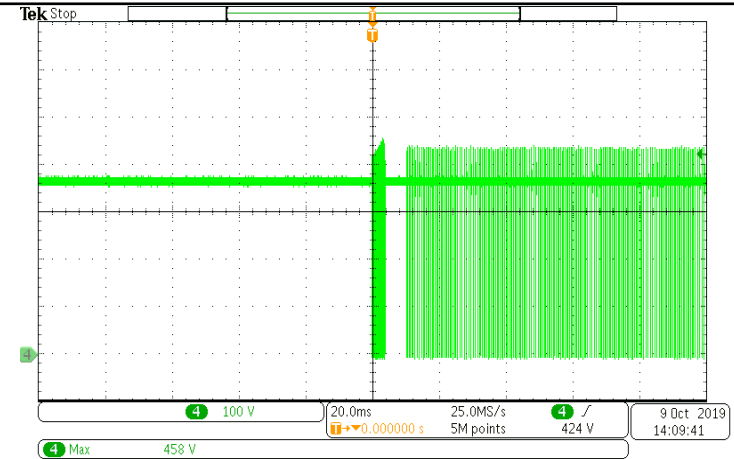
Location	Part No.	Condition	V _{BUS,SET} (V)	I _{OUT} (A)	V _{DS} (V)	Requirement (V)
Q2	K13A65D	Normal	20	2.25	566	< 617.5 (650 * 0.95)
		Turn-on	5	3.0	458	
U3	LD8926AA1	Normal	20	2.25	85.6	< 95 (100 * 0.95)
		Turn-on	5	3.0	72.8	

17. Stress on Switching Parts (Cont.)

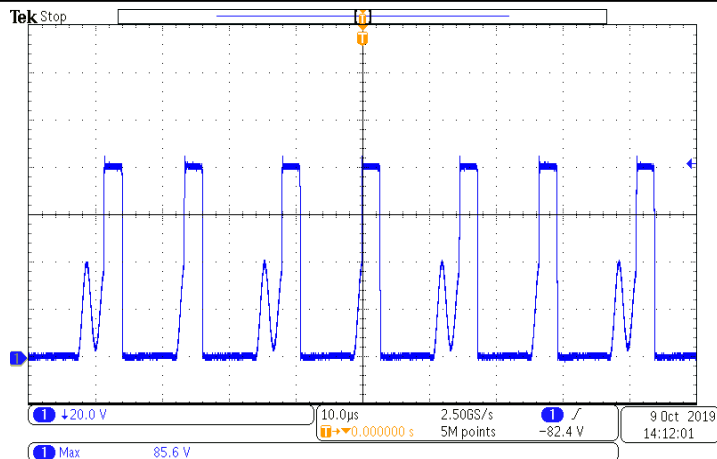
Q2_20 V / 2.25 A_Normal



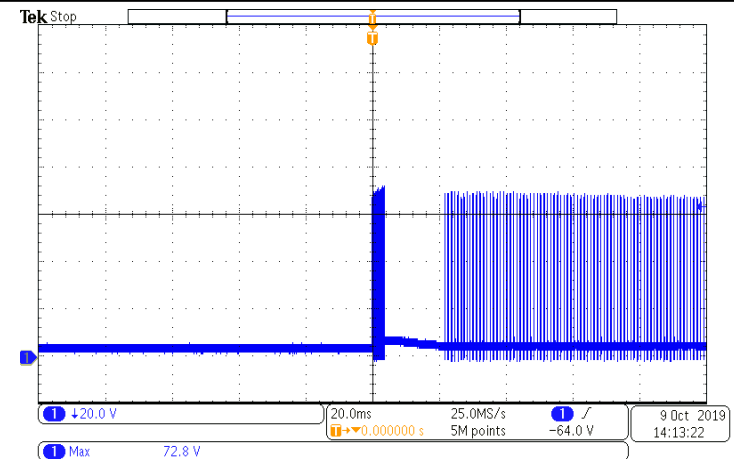
Q2_5V / 3A_Turn-on



U3_20 V / 2.25 A_Normal



U3_5V / 3A_Turn-on



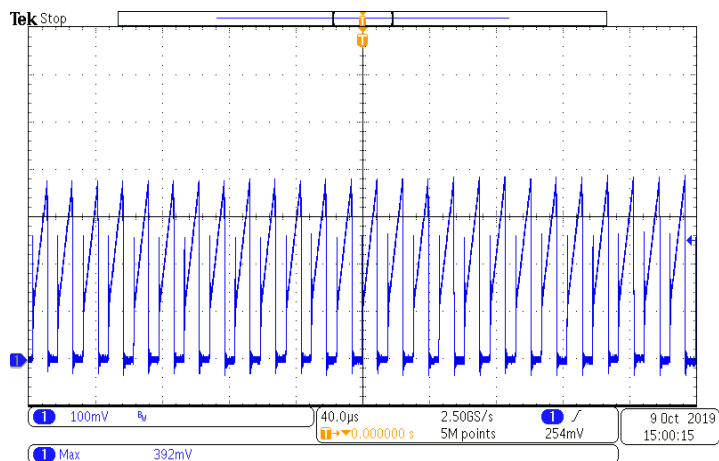
18. Flux Density of Transformer

Input Voltage	90 V _{AC} / 47 Hz	264 V _{AC} / 63 Hz
Output Current	Full Load & Maximum Power	
Requirement	90 % of Rating	

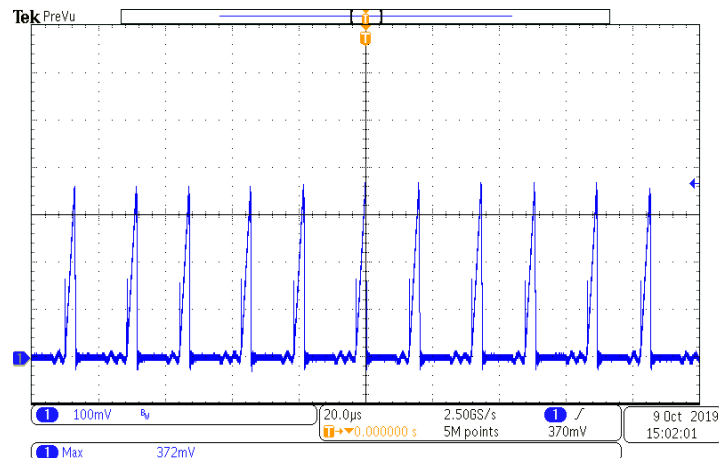
Mode	V_{BUS,SET} (V)	I_{OUT} (A)	V_{IN,AC} (V / Hz)	I_{PRI,MAX} (A)	B_{MAX} (G)	Requirement (G)
PD 3.0	20	2.25	90 / 47	1.568	3,175	< 3,780 (4,200 * 0.90)
			264 / 63	1.488	3,013	
		2.6	90 / 47	1.776	3,597	
			264 / 63	1.504	3,046	

18. Flux Density of Transformer (Cont.)

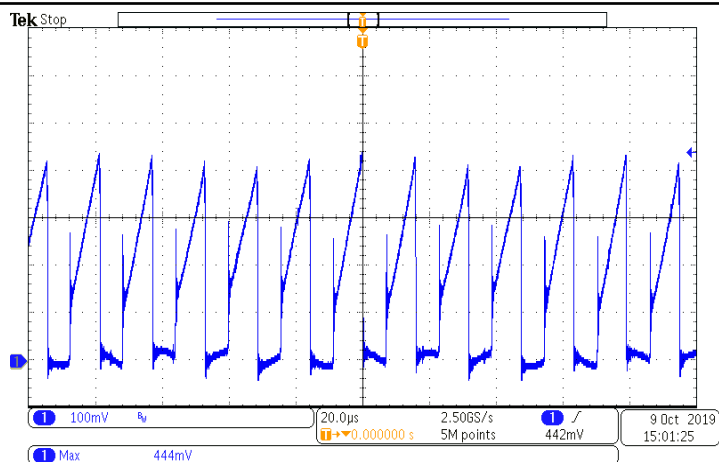
20 V / 2.25A_90 V_{AC} / 47 Hz



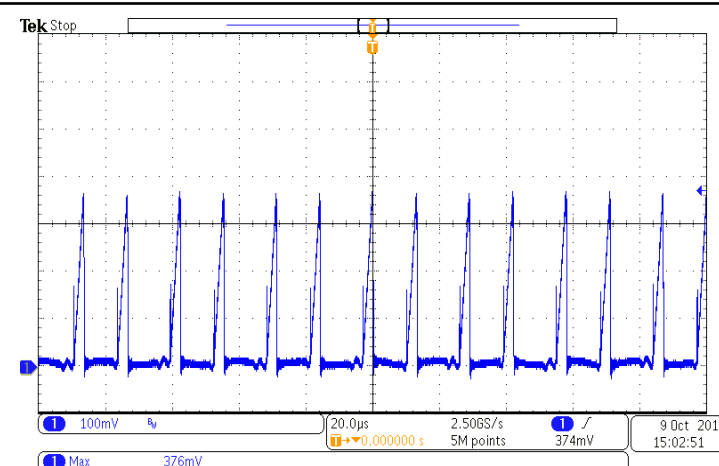
20 V / 2.25 A_264 V_{AC} / 63 Hz



20 V / 2.6 A_90 V_{AC} / 47 Hz



20 V / 2.6 A_264 V_{AC} / 63 Hz



Conduction:

PD Mode: 5 V / 3 A

110 V_{AC} / 60 Hz / Line

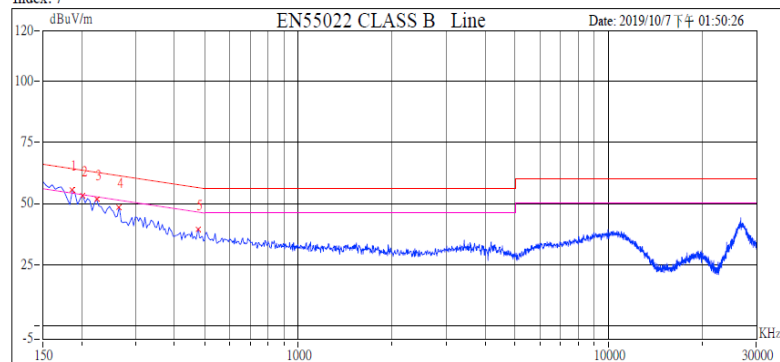


Leadtrend Technology Corp.
通嘉科技股份有限公司 Site C

Customer Name: Leadtrend
 Model Name: PD 45W
 Test Mode: 110V L

Project No.: 5V 3A
 Engineer Name: Jason

Index: 7



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	187.0741	55.45	45.93	27.97	64.94	54.94	-19.02	10.37
2	201.9038	53.44	43.76	28.54	64.52	54.52	-20.76	10.36
3	224.1483	51.66	40.95	28.79	63.88	53.88	-22.93	10.37
4	264.9299	48.71	38.61	27.62	62.72	52.72	-24.11	10.39
5	476.2525	39.86	31.75	24.28	56.68	46.68	-22.40	10.40

110 V_{AC} / 60 Hz / Neutral

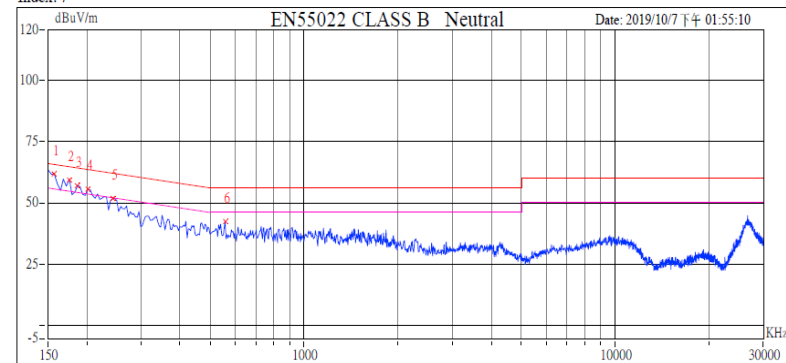


Leadtrend Technology Corp.
通嘉科技股份有限公司 Site C

Customer Name: Leadtrend
 Model Name: PD 45W
 Test Mode: 110V N

Project No.: 5V 3A
 Engineer Name: Jason

Index: 7



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	157.4148	61.72	52.39	34.83	65.79	55.79	-13.40	10.42
2	175.9519	59.50	48.82	31.40	65.26	55.26	-16.43	10.40
3	187.0741	57.17	47.02	29.10	64.94	54.94	-17.92	10.40
4	201.9038	55.60	45.45	31.36	64.52	54.52	-19.07	10.39
5	242.6854	51.66	41.03	27.81	63.35	53.35	-22.32	10.39
6	557.8156	42.36	31.20	22.88	56.00	46.00	-23.12	10.39

Conduction:

PD Mode: 5 V / 3 A

220 V_{AC} / 50 Hz / Line



Leadtrend Technology Corp.
通嘉科技股份有限公司 Site C

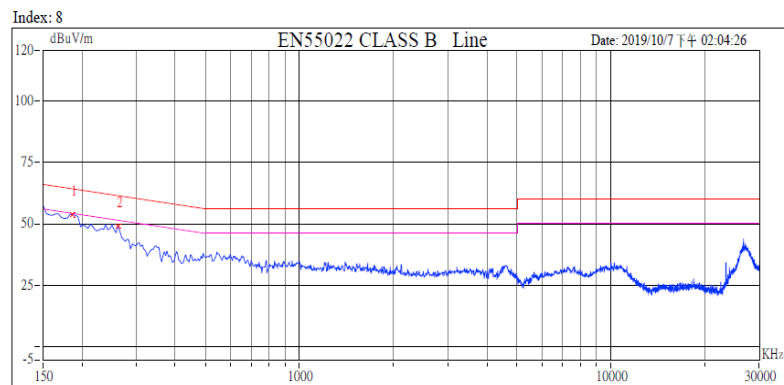
Customer Name: Leadtrend

Project No.: 5V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 220V L



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	187.0741	53.67	47.55	34.83	64.94	54.94	-17.40	10.37
2	261.2224	49.02	40.59	34.01	62.82	52.82	-18.81	10.38

220 V_{AC} / 50 Hz / Neutral



Leadtrend Technology Corp.
通嘉科技股份有限公司 Site C

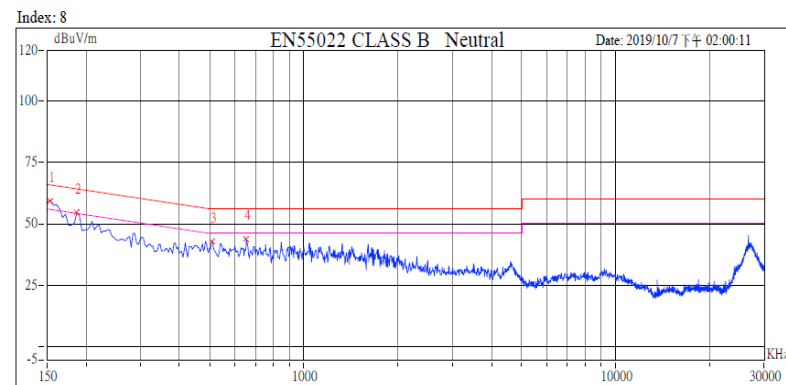
Customer Name: Leadtrend

Project No.: 5V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 220V N



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	153.7074	59.41	47.84	33.59	65.89	55.89	-18.06	10.42
2	187.0741	54.51	44.72	34.28	64.94	54.94	-20.22	10.40
3	509.6192	42.96	33.31	26.33	56.00	46.00	-19.67	10.39
4	654.2084	43.68	32.29	24.29	56.00	46.00	-21.71	10.40

Conduction:

PD Mode: 9 V / 3 A

110 V_{AC} / 60 Hz / Line



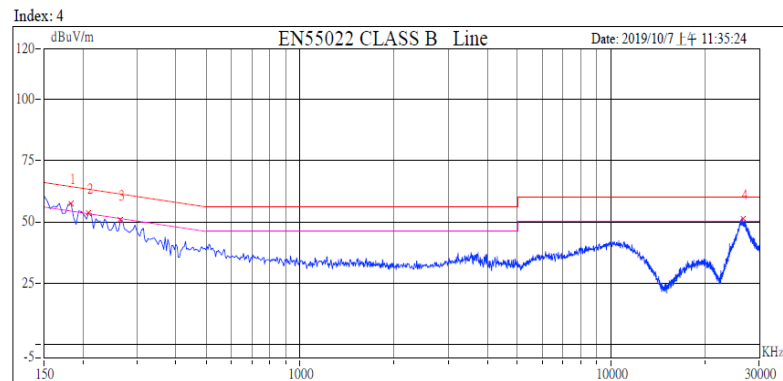
Customer Name: Leadtrend

Project No.: 9V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 110V L



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	183.3667	57.51	45.84	26.44	65.05	55.05	-19.21	10.37
2	209.3186	53.56	43.59	27.01	64.31	54.31	-20.71	10.36
3	264.9299	50.90	41.79	27.96	62.72	52.72	-20.93	10.39
4	26472.9459	51.57	44.84	37.20	60.00	50.00	-12.80	13.00

110 V_{AC} / 60 Hz / Neutral



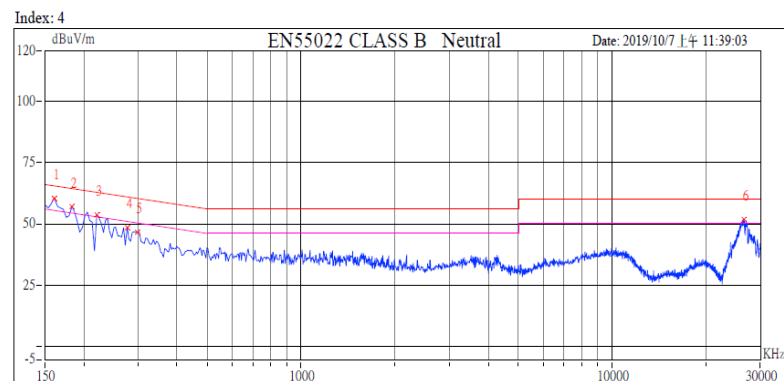
Customer Name: Leadtrend

Project No.: 9V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 110V N



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	161.1222	60.47	51.31	33.00	65.68	55.68	-14.37	10.41
2	183.3667	56.97	48.60	30.12	65.05	55.05	-16.45	10.40
3	220.4409	53.67	42.25	26.39	63.99	53.99	-21.74	10.39
4	276.0521	48.63	40.57	30.99	62.40	52.40	-21.41	10.40
5	298.2966	46.67	39.63	27.22	61.76	51.76	-22.13	10.40
6	26488.9780	51.87	45.63	38.06	60.00	50.00	-11.94	13.51

Conduction:

PD Mode: 9 V / 3 A

230 V_{AC} / 50 Hz / Line



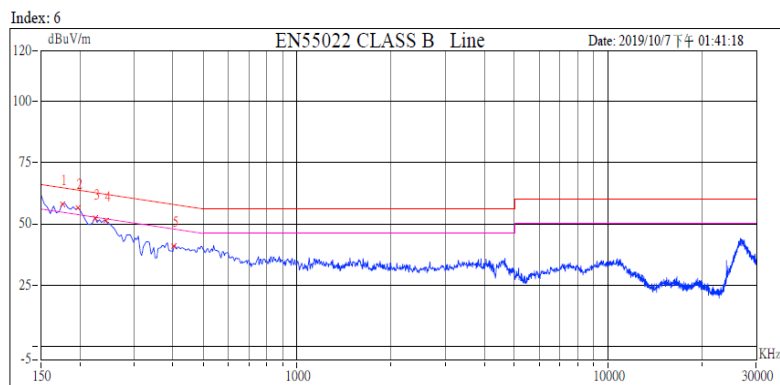
Customer Name: Leadtrend

Project No.: 9V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 220V L



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	175.9519	58.20	51.34	37.19	65.26	55.26	-13.92	10.37
2	198.1964	56.49	51.32	37.90	64.62	54.62	-13.30	10.36
3	224.1483	52.53	46.55	36.06	63.88	53.88	-17.33	10.37
4	242.6854	51.39	45.80	35.36	63.35	53.35	-17.55	10.38
5	402.1042	41.19	36.01	27.62	58.80	48.80	-21.18	10.41

230 V_{AC} / 50 Hz / Neutral



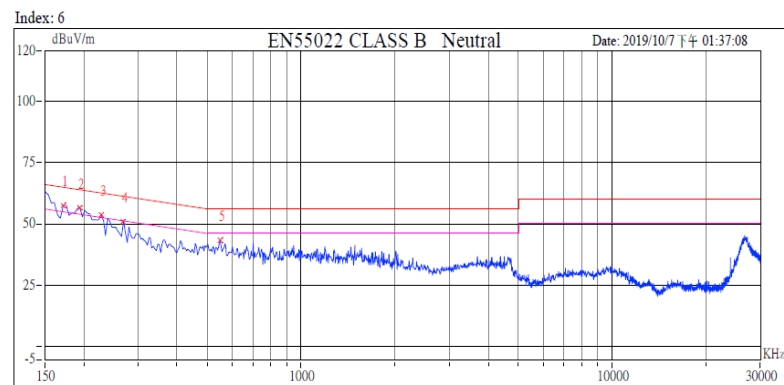
Customer Name: Leadtrend

Project No.: 9V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 220V N



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	172.2445	57.51	48.36	33.25	65.36	55.36	-17.01	10.41
2	194.4890	56.64	49.94	37.85	64.73	54.73	-14.79	10.39
3	227.8557	53.56	44.30	35.50	63.78	53.78	-18.27	10.39
4	268.6373	51.15	40.77	33.83	62.61	52.61	-18.78	10.40
5	550.4008	43.29	33.77	27.17	56.00	46.00	-18.83	10.39

Conduction:

PD Mode: 15 V / 3 A

110 V_{AC} / 60Hz / Line



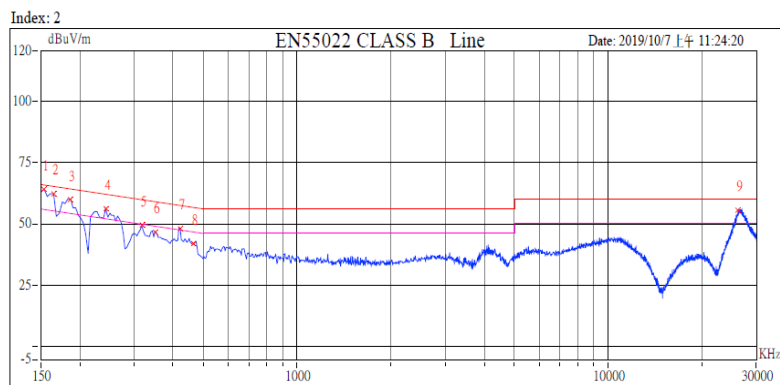
Customer Name: Leadtrend

Project No.: 15V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 110V L



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	153.7074	63.93	23.53	21.18	65.89	55.89	-34.72	10.38
2	164.8297	62.07	51.24	27.56	65.58	55.58	-14.33	10.37
3	187.0741	59.86	52.09	36.05	64.94	54.94	-12.86	10.37
4	242.6854	55.95	49.35	35.36	63.35	53.35	-14.00	10.38
5	316.8337	49.29	40.56	27.07	61.23	51.23	-20.67	10.40
6	350.2004	46.91	39.58	27.06	60.28	50.28	-20.70	10.41
7	420.6413	48.31	40.30	27.61	58.27	48.27	-17.97	10.41
8	465.1303	41.80	39.86	26.93	57.00	47.00	-17.13	10.40
9	26232.4649	55.76	49.89	44.43	60.00	50.00	-5.57	12.98

110 V_{AC} / 60Hz / Neutral



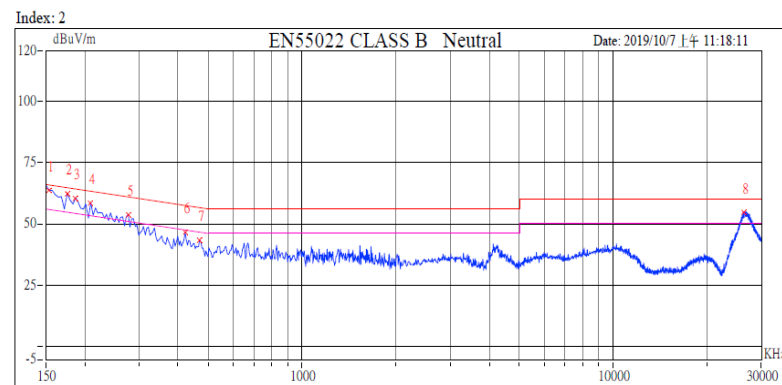
Customer Name: Leadtrend

Project No.: 15V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 110V N



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	153.7074	63.53	53.47	29.19	65.89	55.89	-12.43	10.42
2	175.9519	62.39	52.98	36.11	65.26	55.26	-12.27	10.40
3	187.0741	60.52	50.41	33.58	64.94	54.94	-14.53	10.40
4	209.3186	58.46	49.08	32.62	64.31	54.31	-15.22	10.39
5	276.0521	53.94	40.14	25.01	62.40	52.40	-22.26	10.40
6	420.6413	46.58	37.99	26.45	58.27	48.27	-20.28	10.40
7	468.8377	43.55	37.21	26.47	56.89	46.89	-19.68	10.39
8	26360.7214	54.91	49.92	44.41	60.00	50.00	-5.59	13.49

Conduction:

PD Mode: 15 V / 3 A

230 V_{AC} / 50 Hz / Line



Leadtrend Technology Corp.

通嘉科技股份有限公司 Site C

Customer Name: Leadtrend

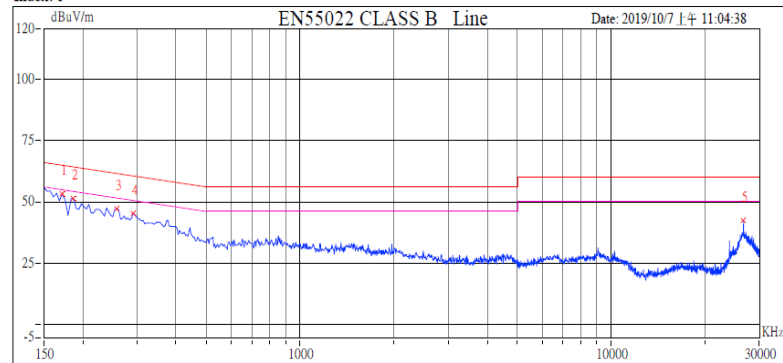
Project No.: 15V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 110V L

Index: 1



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	172.2445	53.13	44.86	30.99	65.36	55.36	-20.50	10.37
2	187.0741	51.21	44.26	30.43	64.94	54.94	-20.69	10.37
3	257.5150	47.12	39.99	31.23	62.93	52.93	-21.70	10.38
4	290.8818	45.36	39.58	32.64	61.97	51.97	-19.34	10.40
5	26633.2665	42.38	36.94	33.76	60.00	50.00	-16.24	13.02

230 V_{AC} / 50 Hz / Neutral



Leadtrend Technology Corp.

通嘉科技股份有限公司 Site C

Customer Name: Leadtrend

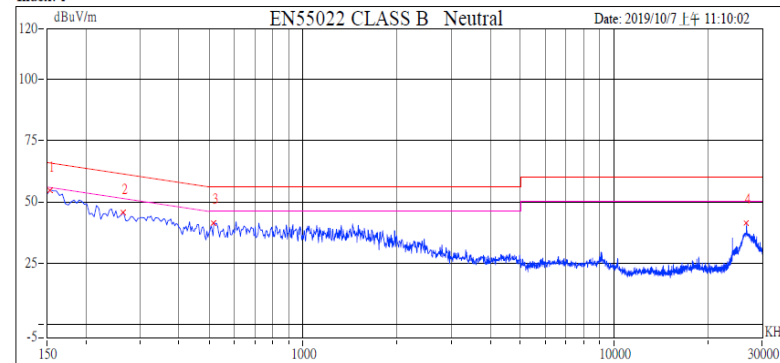
Project No.: 15V 3A

Model Name: PD 45W

Engineer Name: Jason

Test Mode: 110V N

Index: 1



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	153.7074	54.90	46.80	30.63	65.89	55.89	-19.10	10.42
2	264.9299	45.82	39.18	32.74	62.72	52.72	-19.98	10.40
3	517.0341	41.74	31.32	22.28	56.00	46.00	-23.72	10.39
4	26633.2665	41.68	38.48	35.62	60.00	50.00	-14.38	13.53

Conduction:

PD Mode: 20 V / 2.25 A

110 V_{AC} / 60 Hz / Line



Leadtrend Technology Corp.
通嘉科技股份有限公司 Site C

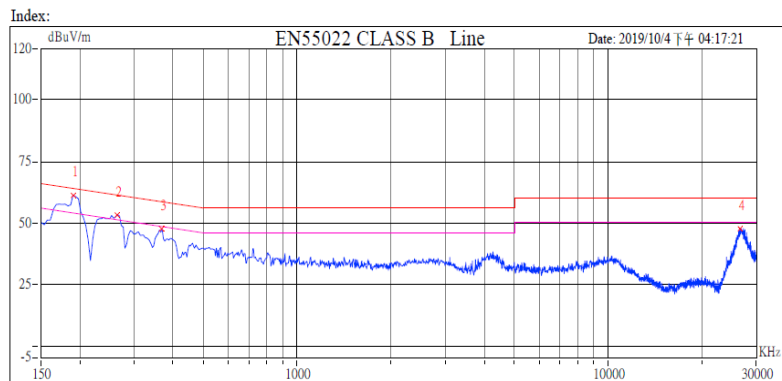
Customer Name: 45W

Project No.:

Model Name: PD 45

Engineer Name: Jason

Test Mode: 110V L



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	190.7816	61.37	51.15	35.64	64.83	54.83	-13.68	10.36
2	264.9299	53.47	46.75	32.91	62.72	52.72	-15.97	10.39
3	368.7375	47.51	39.93	28.90	59.75	49.75	-19.82	10.41
4	26633.2665	47.63	40.81	34.12	60.00	50.00	-15.88	13.02

110 V_{AC} / 60 Hz / Neutral



Leadtrend Technology Corp.
通嘉科技股份有限公司 Site C

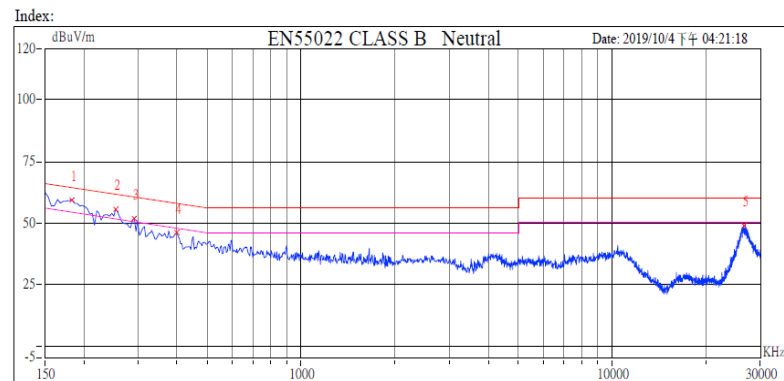
Customer Name: 45W

Project No.:

Model Name: PD 45

Engineer Name: Jason

Test Mode: 110V N



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	183.3667	59.47	55.21	39.20	65.05	55.05	-9.84	10.40
2	253.8076	55.61	48.55	33.53	63.03	53.03	-14.49	10.40
3	290.8818	51.85	42.16	29.37	61.97	51.97	-19.82	10.40
4	398.3968	46.02	41.62	28.66	58.90	48.90	-17.28	10.40
5	26505.0100	49.22	41.14	34.39	60.00	50.00	-15.61	13.51

Conduction:

PD Mode: 20 V / 2.25 A

230 V_{AC} / 50 Hz / Line



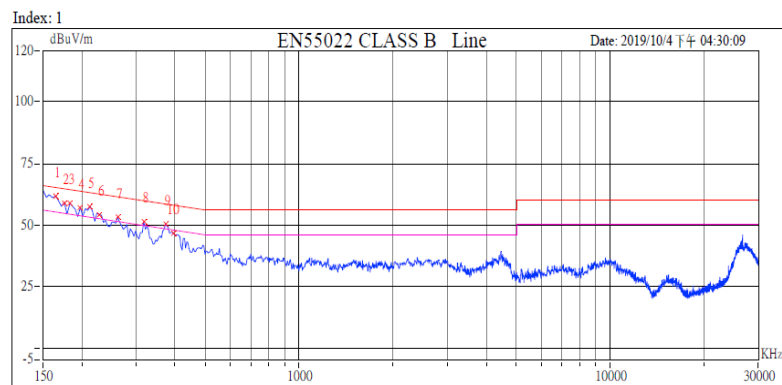
Leadtrend Technology Corp.
通嘉科技股份有限公司 Site C

Customer Name: 45W

Model Name: PD 45

Test Mode: 220V L

Project No.:
 Engineer Name: Jason



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	164.8297	61.66	57.49	43.22	65.58	55.58	-8.08	10.37
2	175.9519	58.90	51.71	37.76	65.26	55.26	-13.55	10.37
3	183.3667	58.70	51.59	37.19	65.05	55.05	-13.46	10.37
4	198.1964	56.98	49.29	34.45	64.62	54.62	-15.33	10.36
5	213.0261	57.48	46.48	34.88	64.20	54.20	-17.72	10.37
6	227.8557	54.16	48.44	40.67	63.78	53.78	-13.10	10.37
7	261.2224	53.34	48.03	40.83	62.82	52.82	-11.99	10.38
8	316.8337	51.34	43.68	36.14	61.23	51.23	-15.09	10.40
9	372.4449	50.32	46.21	38.87	59.64	49.64	-10.78	10.41
10	394.6894	46.57	43.14	28.89	59.01	49.01	-15.87	10.41

230 V_{AC} / 50 Hz / Neutral



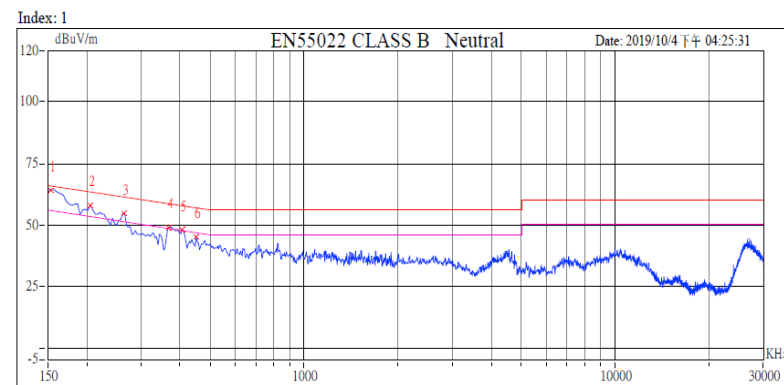
Leadtrend Technology Corp.
通嘉科技股份有限公司 Site C

Customer Name: 45W

Model Name: PD 45

Test Mode: 220V N

Project No.:
 Engineer Name: Jason



	Freq(KHz)	Peak Amptd(dBuV)	QP Amptd(dBuV)	Avg Amptd(dBuV)	QP Limit(dBuV)	Avg Limit(dBuV)	Margin(dB)	Factor(dB)
1	153.7074	64.12	58.63	43.28	65.89	55.89	-7.27	10.42
2	205.6112	58.03	49.95	35.10	64.41	54.41	-14.46	10.39
3	264.9299	54.56	48.75	41.93	62.72	52.72	-10.79	10.40
4	368.7375	49.00	46.86	37.15	59.75	49.75	-12.60	10.40
5	405.8116	48.15	44.38	30.83	58.69	48.69	-14.31	10.40
6	450.3006	45.29	37.41	27.81	57.42	47.42	-19.61	10.39

The Best Company for AC-DC Mid & High Power Application Total Solution



THANK YOU

