

*Demo Board Test Report for*  
*LD5523EM GL*

*--- 45W (20V, 2.25A) Adapter*

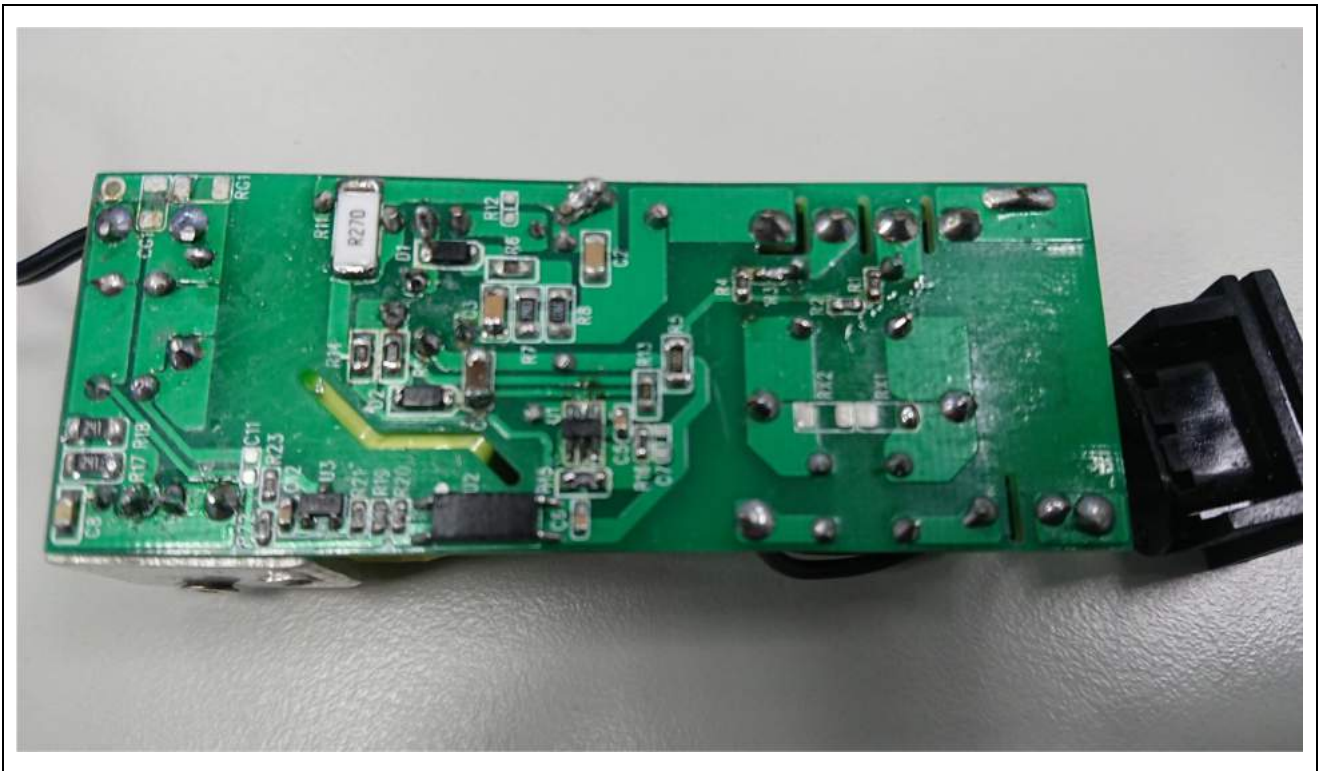
<b>Tested by</b>	<b>Reviewed by</b>	<b>Approved by</b>
John Liu	Chris Pai	Albert Huang

<b>Total pages</b>	<b>Revision</b>	<b>Date</b>
29	03	2017/11/24

TOP VIEW



BOTTOM VIEW



Size 30mm(L) x 80mm(W) x 1.6mm(H)

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## I. Design Check List

NO. (項目)	TEST ITEM (測試項目)	SPEC (規格)	PAGE (頁)	RESULT (結果)
1	Power Saving	<75mW	6	PASS
2	Efficiency	CoC Tier2	6	PASS
3	Over Current Protection	<3.03A	7	PASS
4	Over Voltage Protection	<25V	7	PASS
5	Turn On Delay Time	<3S	10	PASS
6	Hold-Up Time	>10mS	11	PASS
7	Over Shoot	<5%	12	PASS
8	Rise Time	<30mS	13	PASS
9	Output Ripple and Noise	<1%	14	PASS
10	Output Dynamic Response	<5%	16	PASS
11	MOSFET Stress Voltage	<95%	17	PASS
12	Output Diode Stress Voltage	<90%	18	PASS

## II. EXECUTIVE SUMMARY

Test Equipment	
Equipment	Equipment Model No.
Electrical Load	Chroma 63030
Power Meter	WT210
AC power source	Chroma 61602
Scope	TDS 3014C

All test conditions is based on ambient temperature 25°C

### 1. Input Voltage & Frequency

The unit shall be capable of operating as a universal AC input power supply accepting AC inputs. The power supply shall operate between the following voltages (from 90V to 264V). The supply will be designed to operate for a Table 1.

	Minimum	Normal	Maximum
Input Voltage	90Vac	110Vac	264Vac
Frequency	60HZ	60HZ	63HZ

Table 1

### 2. Output Load

The line and load regulation for each of the outputs are shown in Table. 2.

Parameter	Output Voltage			Output Current	
	Minimum	Typical	Maximum	Minimum	Maximum
+20V	19V	20V	21V	0A	2.25A

Table 2

### 3. Green Mode Power Consumption

Test input power with no load.

**Test Condition:**

Input: 90Vac(60Hz)/115Vac(60Hz)/230Vac(50Hz)/264Vac(50Hz)

Output: +20V

Burn-In 20mintues

Vin(V <sub>AC</sub> )	Pout(W)	Pin(mW)	Spec.(mW)
90	No Load	34	75
115	No Load	43	
230	No Load	53	
264	No Load	65	

Table 3

### 4. Efficiency Test

According to Energy Star, We chose input voltage value including 115Vac/230Vac and 10%、25%、50%、75%、100% load current, Then Calculate the efficiency and average efficiency.

**Test Condition:**

Input: 115Vac(60Hz)/230Vac(50Hz)

Output: 10%、25%、50%、75%、100% of Max Load

Burn-In 30mintues

20AWG wire (1500mm) output voltage test data and results are as follows

AC Input	Output Load	Pin (W)	Pout (W)	Vout (V)	Iout (A)	Efficiency (%)	Avg. Eff. (%)	Spec. (%)
115VAC	100%	49.45	44.06	19.594	2.251	89.100	89.851%	88.85%
	75%	36.73	33.01	19.662	1.680	89.872		
	50%	24.56	22.18	19.712	1.125	90.235		
	25%	12.45	11.23	19.776	0.568	90.200		
	10%	4.97	4.45	19.818	0.225	89.357	89.357%	78.85%
230VAC	100%	49.01	44.06	19.592	2.248	90.089	90.262%	88.85%
	75%	36.46	33.01	19.652	1.680	90.537		
	50%	24.62	22.17	19.712	1.125	90.004		
	25%	12.42	11.23	19.770	0.570	90.418		
	10%	5.048	4.450	19.812	0.225	89.144	89.144%	78.85%

Table 4

### 5. Over Current Protection

The supply shall be designed with appropriate output over current protection. This protection shall be activated in the event of a short or long-term condition during which one or more of the output current load increases such that the primary current exceeds a predetermined limit. The primary shall limit the total power without inflicting any damage to any internal supply components and shall be reversible pending removal of the cause of the condition and without any user intervention.

**Test Condition:**

Input: 90Vac(60Hz)/115Vac(60Hz)/230Vac(50Hz)/264Vac(50Hz)

Vin (V <sub>AC</sub> )	Current Limit Value (A)	Spec (A)
90	2.72	<3.03A
115	2.97	
230	2.91	
264	2.74	

Table 5

### 6. Over Voltage Protection

The supply shall be designed with appropriate output over voltage protection. This protection shall be activated in the event of a short or long-term condition during which one or more of the output open loop circuit happened. It shall limit the power supply without inflicting any damage to any internal supply components.

**Test Condition:**

Input: 90Vac(60Hz)/115Vac(60Hz)/230Vac(50Hz)/264Vac(50Hz)

Output: +20V/0A 、 +20V/2.25A

Vin(V <sub>AC</sub> )	Voltage Limit Value(V)		Spec(V)
	No Load	Full Load	
90	23.7	23.1	<25V
115	23.7	23.1	
230	23.7	23.1	
264	23.7	23.3	

Table 6

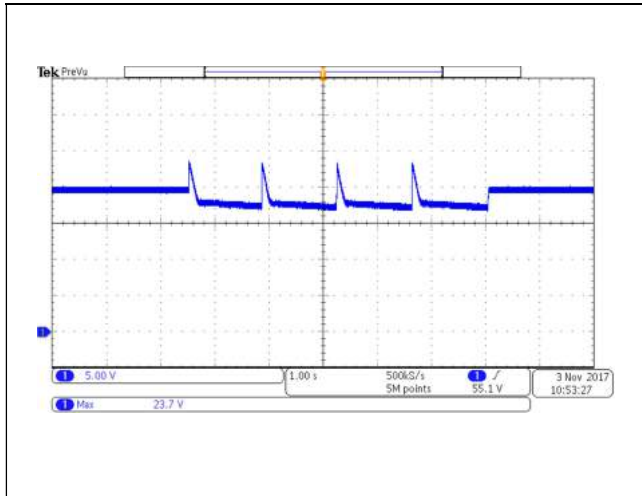


Figure 1 The waveform of over voltage Protection (90Vac no load)

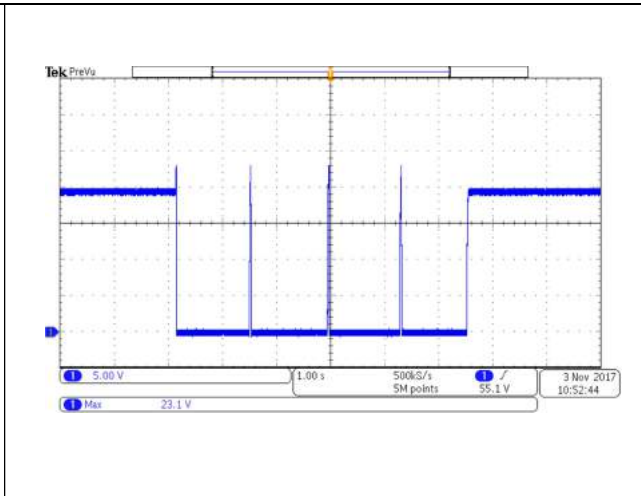


Figure 2 The waveform of over voltage Protection (90Vac full load)

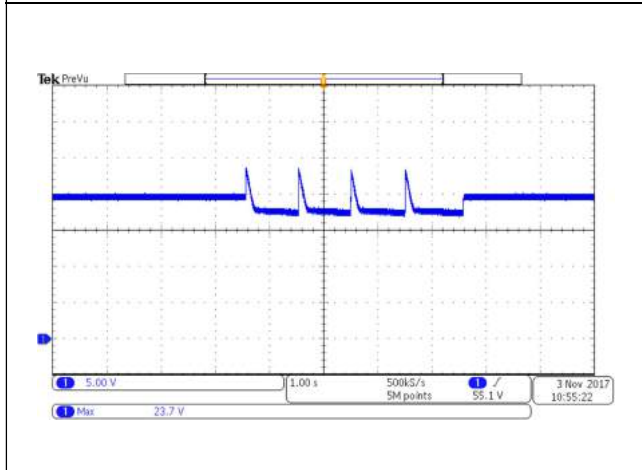


Figure 3 The waveform of over voltage Protection (115Vac no load)

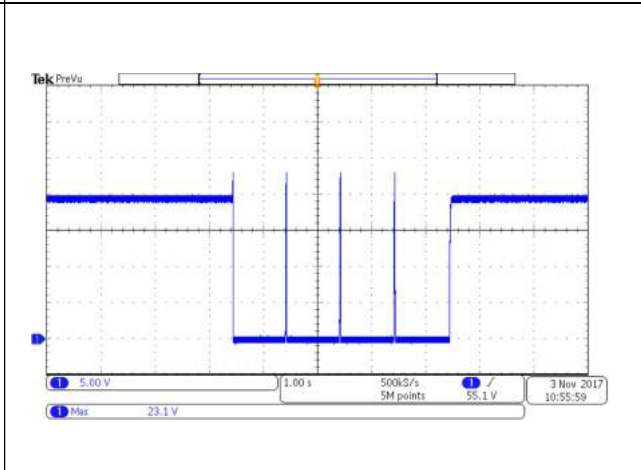


Figure 4 The waveform of over voltage Protection (115Vac full load)



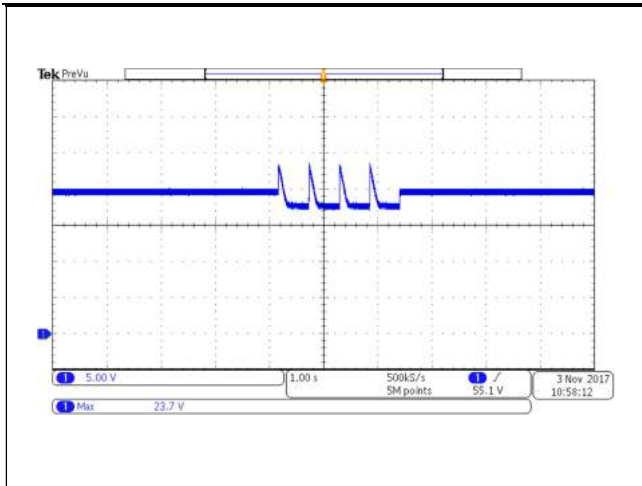


Figure 5 The waveform of over voltage Protection (230Vac no load)

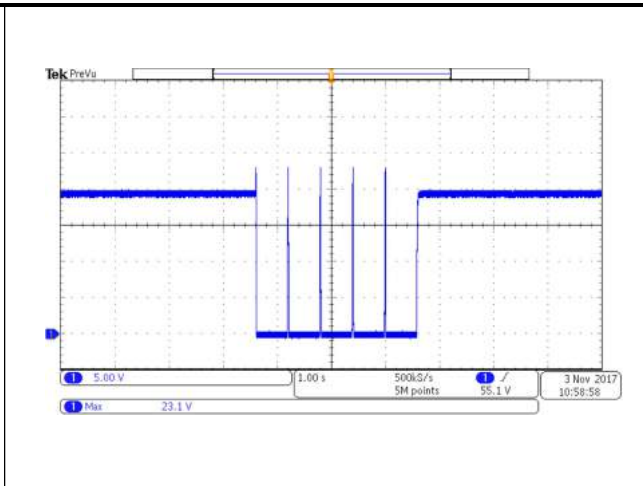


Figure 6 The waveform of over voltage Protection (230Vac full load)

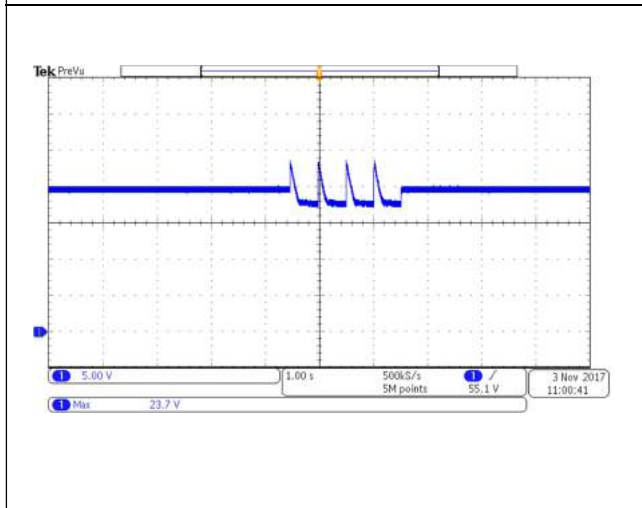


Figure 7 The waveform of over voltage Protection (264Vac no load)

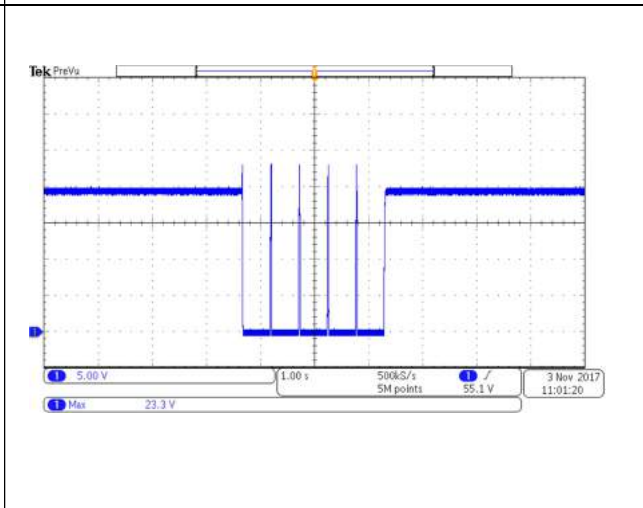


Figure 8 The waveform of over voltage Protection (264Vac full load)

### 7. Turn On Delay Time

Turn on delay time is measured as the delay between input voltage being applied at 0° phase angle and when the outputs arrive within 10% of their operating value.

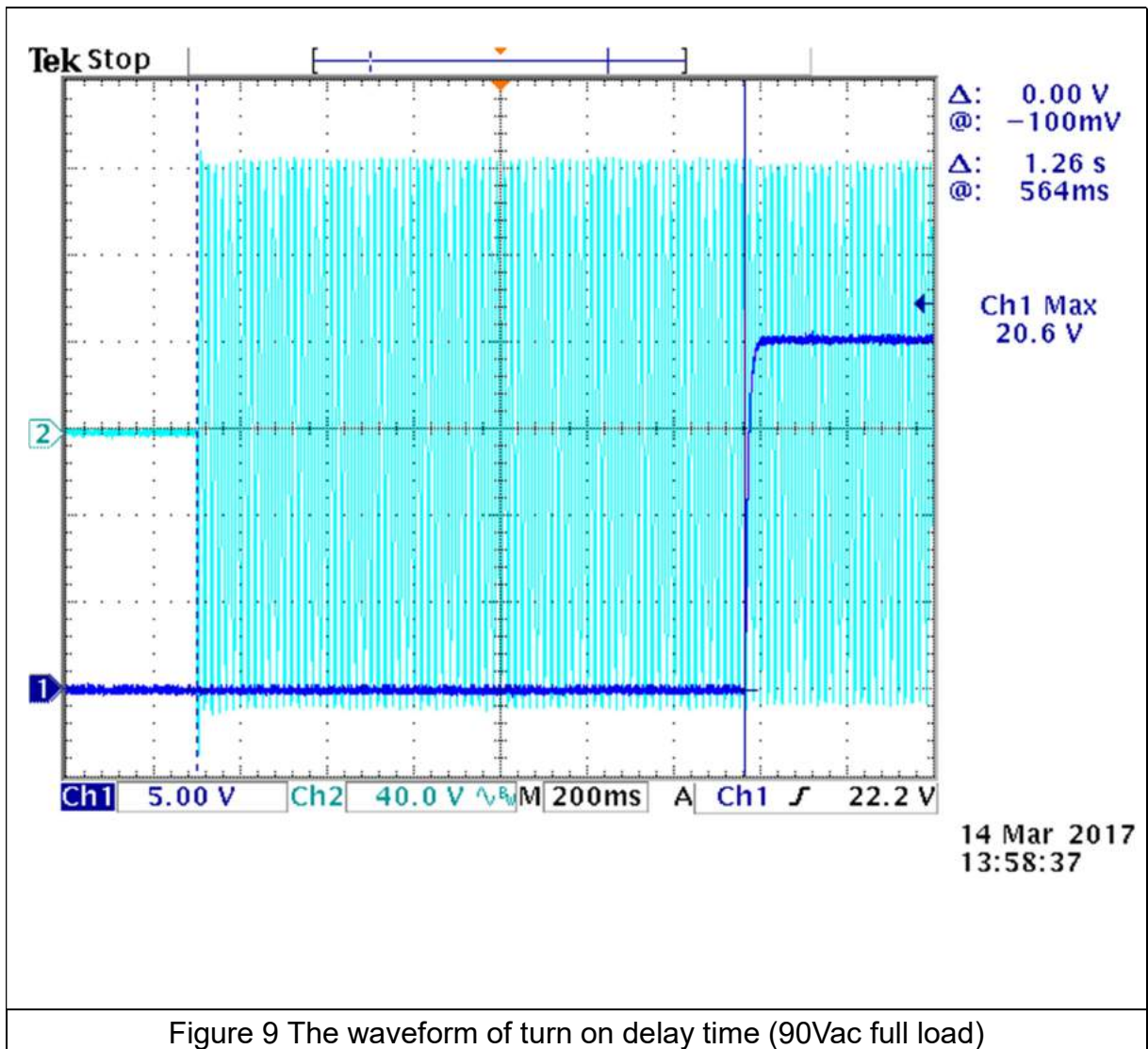
**Test Conditions:**

Input: 90Vac(60Hz)

Output: +20V/2.25A

Vin(V <sub>AC</sub> )	T <sub>turn-on delay</sub> (S)	Spec(S)
90	1.26S	<3S

Table 7



### 8. Holdup Time

Holdup time refers to the time it takes for a loss of input voltage to propagate through the power supply and affect the output voltages. Holdup time shall be measured by monitoring the output voltages and measuring the time it takes for the first affected output voltage to pass through the lower bound of the regulation threshold after input power to the converter is removed. The initial conditions of loading and input voltage are max load and minimum operational line input. The holdup time is measured by triggering an oscilloscope on the loss of input voltage while monitoring the conditions of the output voltages.

**Test Conditions:**

Input: 100Vac(60Hz)

Output: +20V/2.25A

Vin(V <sub>AC</sub> )	Holdup Time(mS)	Spec(mS)
100	12mS	>10mS

Table 8

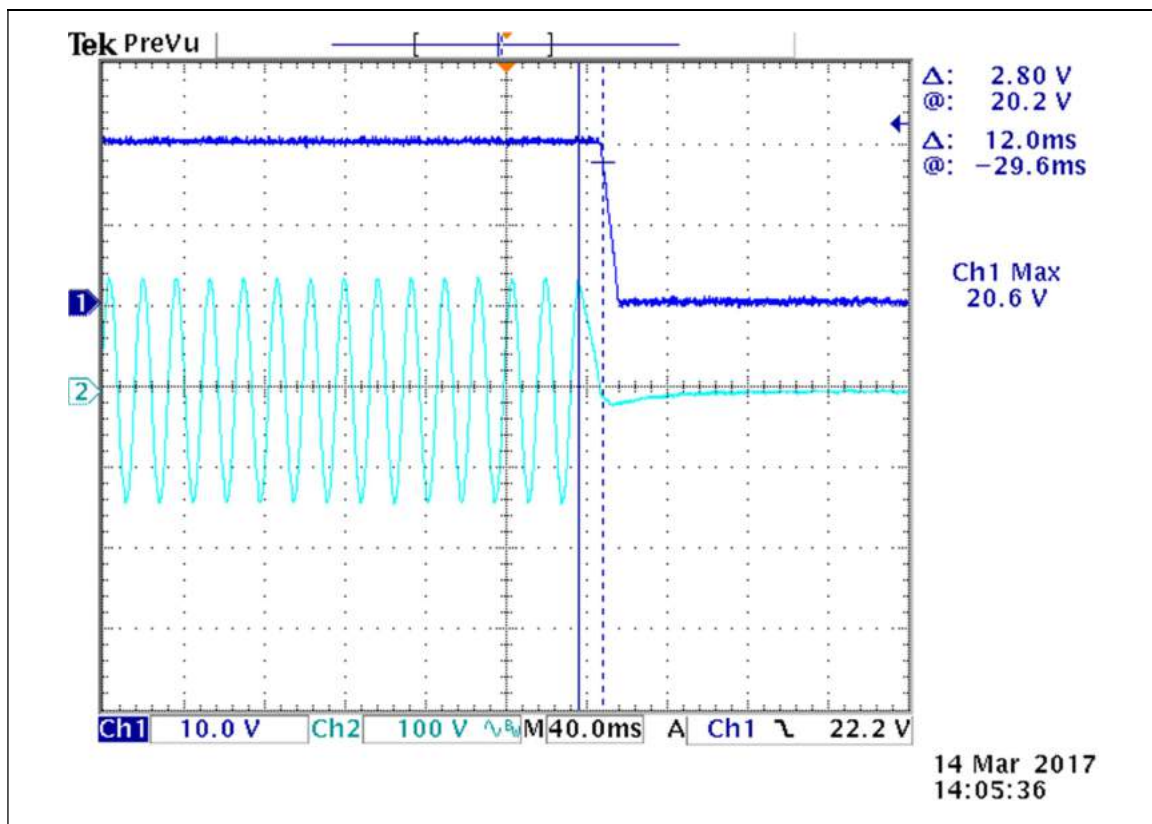


Figure 10 The waveform of hold-up time (100Vac full load)

### 9. Over Shoot

Test data and results are as follows:

#### Test Conditions:

Input: 90Vac(60Hz)/264V(50Hz)

Output: +20V/0A 、 +20V/2.25A

Vin(V <sub>AC</sub> )	Over Shoot test data		Spec.(%)
	No Load	Full Load	
90Vac	3.061%	3.093%	<5%
264Vac	3.061%	3.093%	

Table 9

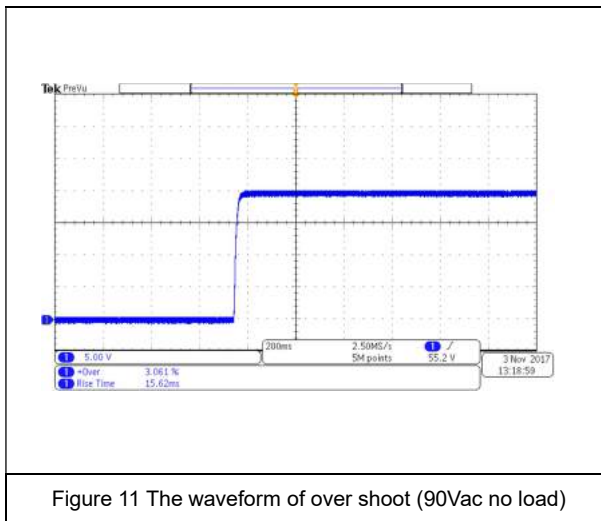


Figure 11 The waveform of over shoot (90Vac no load)

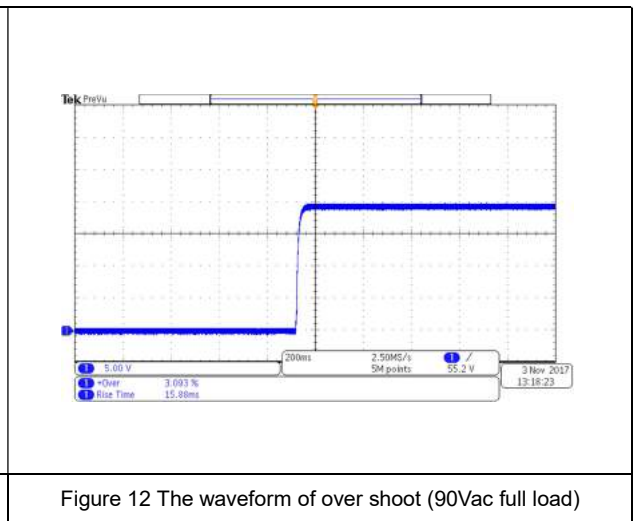


Figure 12 The waveform of over shoot (90Vac full load)

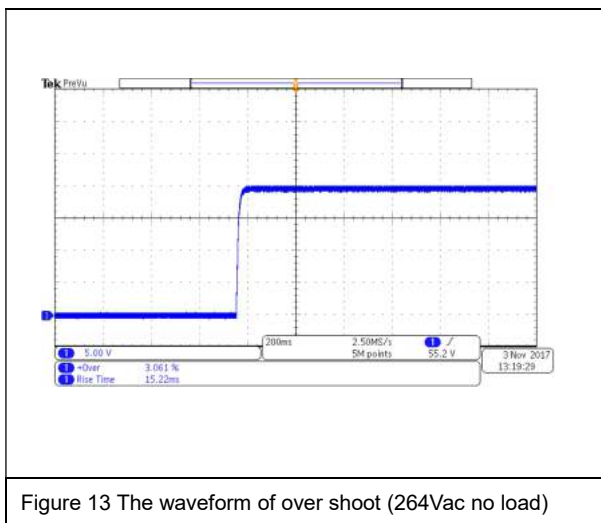


Figure 13 The waveform of over shoot (264Vac no load)

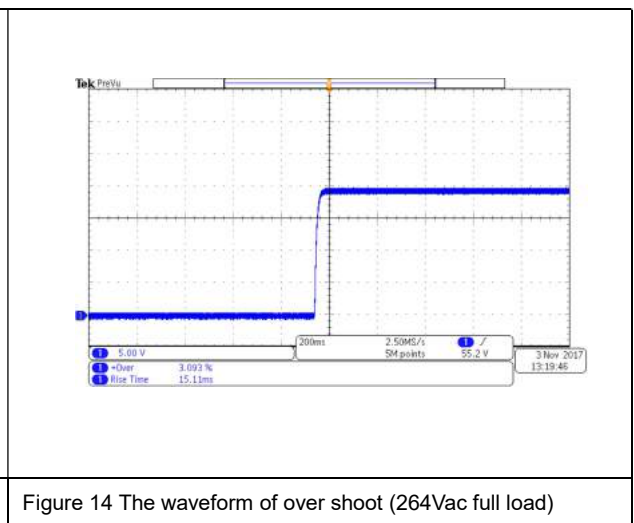


Figure 14 The waveform of over shoot (264Vac full load)

### 10 Rise time

Test data and results are as follows:

**Test Condition:**

Input: 90Vac(60Hz)/264Vac(50Hz)

Output: +20V/0A 、 +20V/2.25A

Vin(V <sub>AC</sub> )	Rise time test data		Spec.(%)
	No Load	Full Load	
90Vac	15.62mS	15.88mS	<30mS
264Vac	15.22mS	15.11mS	

Table 10

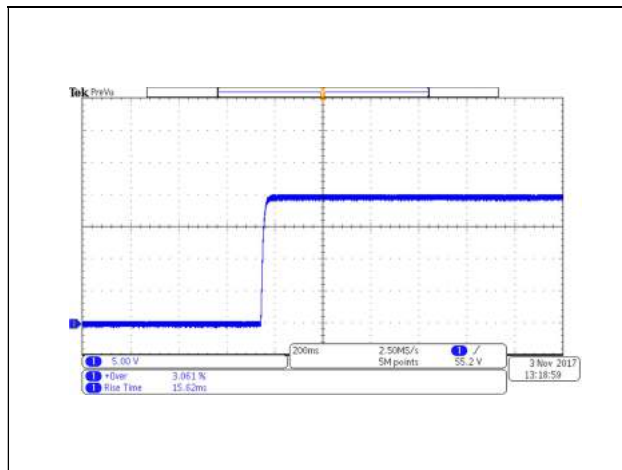


Figure 15 The waveform of rise time (90Vac no load)

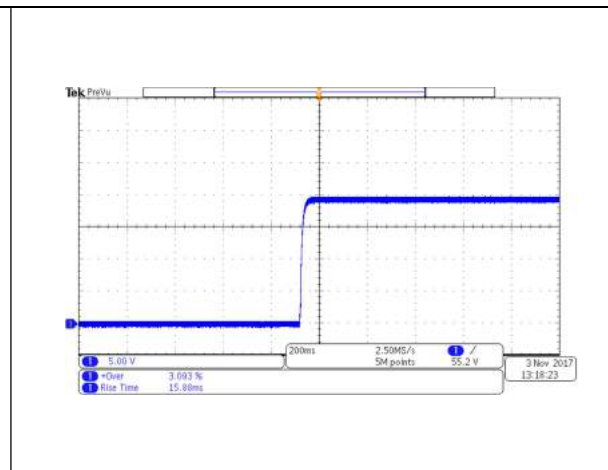


Figure 16 The waveform of rise time (90Vac full load)

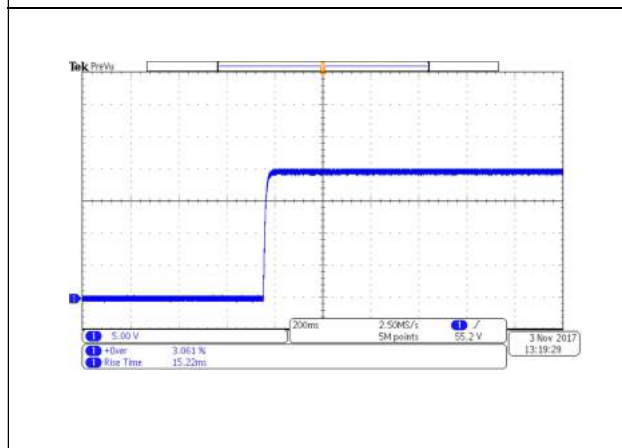


Figure 17 The waveform of rise time (263Vac no load)

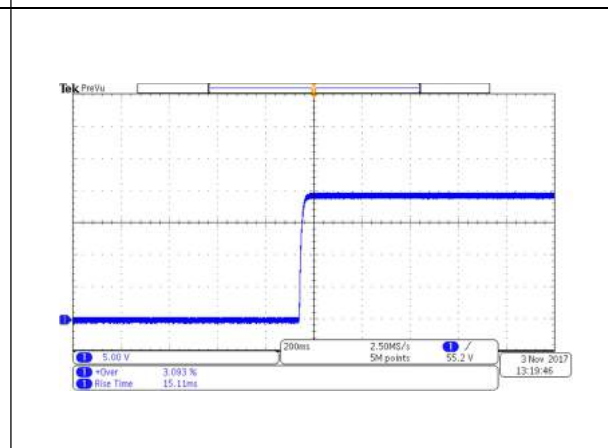


Figure 18 The waveform of rise time (264Vac no load)

### 11. Output ripple and noise

This refers to the peak-to-peak residual AC that remains on the DC power line after passing through all the filtering processes conducted within the power supply. The peak to peak output ripple and noise shall be considered to comprise of the complex envelope of the low frequency saw tooth voltage ripple and the high frequency switching noise. It shall be measured across output terminals using a single ended measurement with an oscilloscope (bandwidth limited to 20 MHz) and a high persistence display. Readings shall be made through the range of minimum to maximum load current and within 200mV.

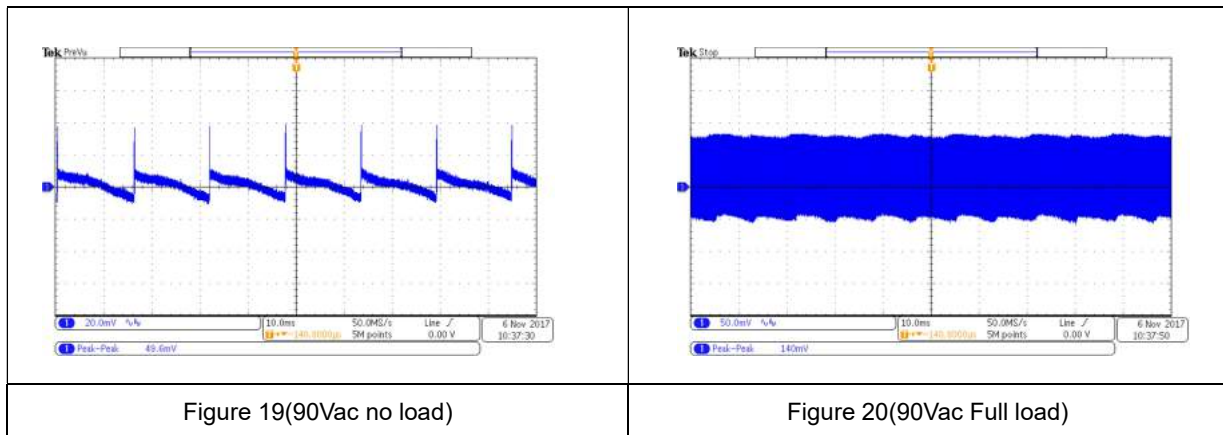
**Test Condition:**

Input: 90Vac(60Hz)/115Vac(60Hz)/230Vac(50Hz)/264Vac(50Hz)

Output: +20V/0A 、 +20V/2.25A

Vin(V <sub>AC</sub> )	Voltage Limit Value(V)		Spec(V)
	No Load	Full Load	
90	49.6mV	140mV	<200mV
115	52.0mV	136mV	
230	64.8mV	132mV	
264	67.2mV	128mV	

Table 11



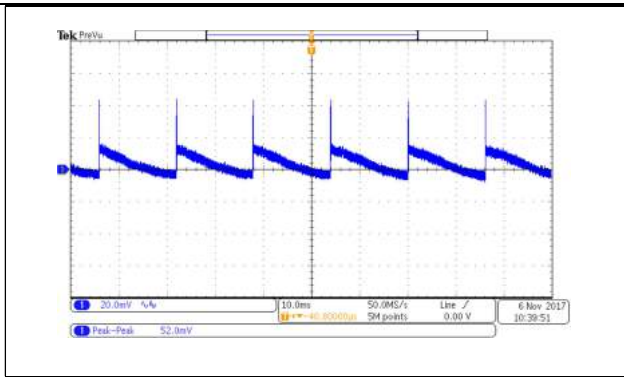


Figure 21(115Vac no load)

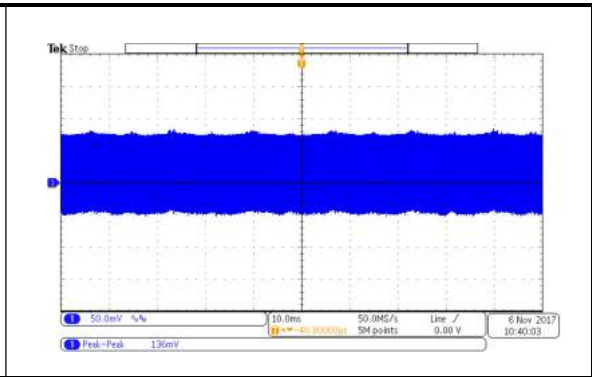


Figure 22(115Vac Full load)

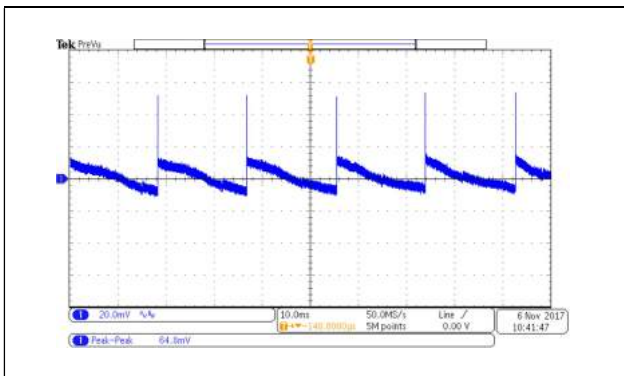


Figure 23(230Vac no load)

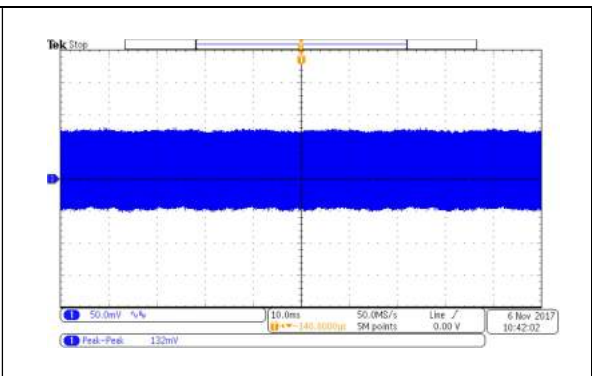


Figure 24(230Vac Full load)

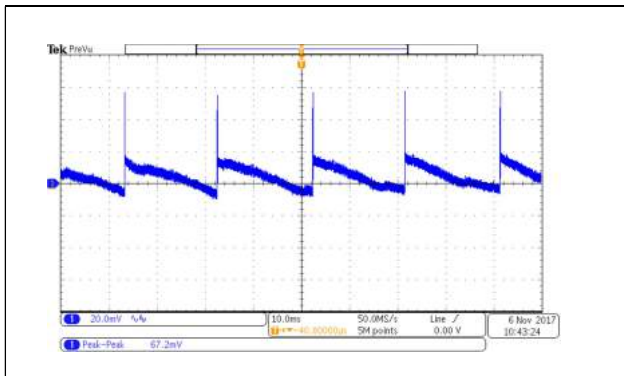


Figure 25(264Vac no load)

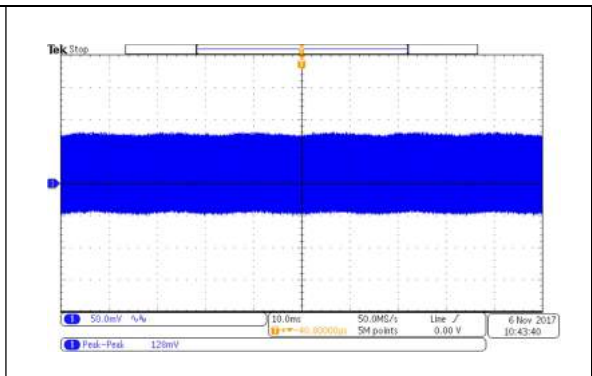


Figure 26(264Vac Full load)

## 12. Output dynamic response

The dynamic of the output response refers to the change in output voltage to a step increase in the current of 25% to 100% load shall maintain  $\pm 10\%$  of specified regulation.

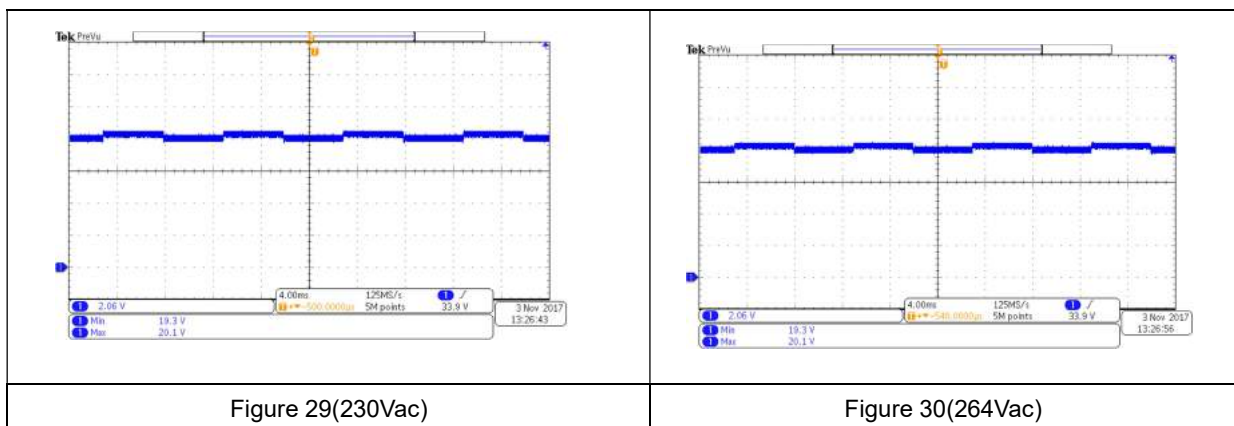
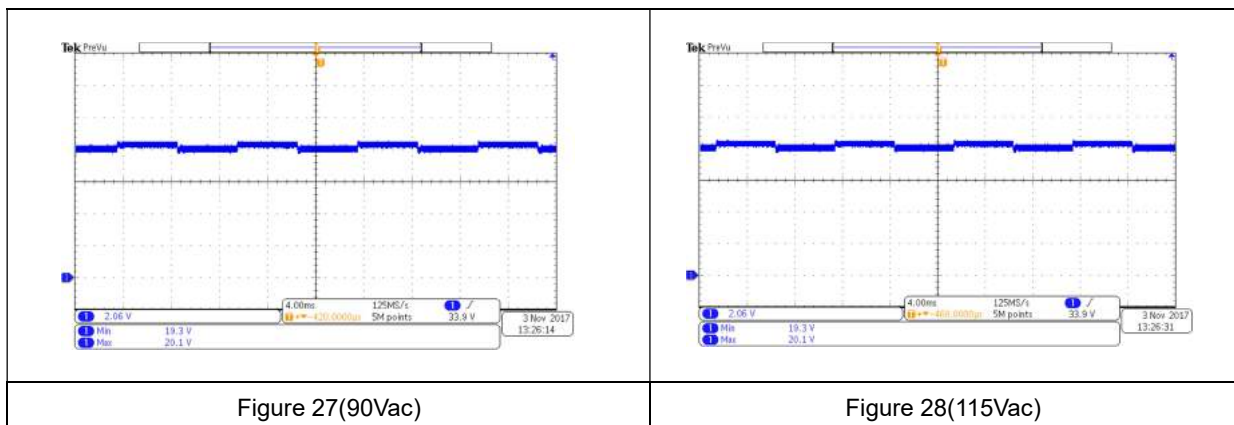
### Test Condition:

Input: 90Vac(60Hz)/115Vac(60Hz)/230Vac(50Hz)/264Vac(50Hz)

Output: +20V/0A、+20V/2.25A

Vin(V <sub>AC</sub> )	Voltage Limit Value(V)		Spec(V)
	max	min	
90	20.1	19.3	<5%
115	20.1	19.3	
230	20.1	19.3	
264	20.0	19.3	

Table 12





### 13. Voltage Stress on MOSFET

Input: 264Vac(50Hz)

(1) Output: +20V/2.25A

Vin(V <sub>AC</sub> )	Voltage Limit Value(V)	Spec(V)
	MOSFET	
Q1:Vds(Turn on)	616V	650V
Q1:Vds(Normal)	608V	650V

Table 13

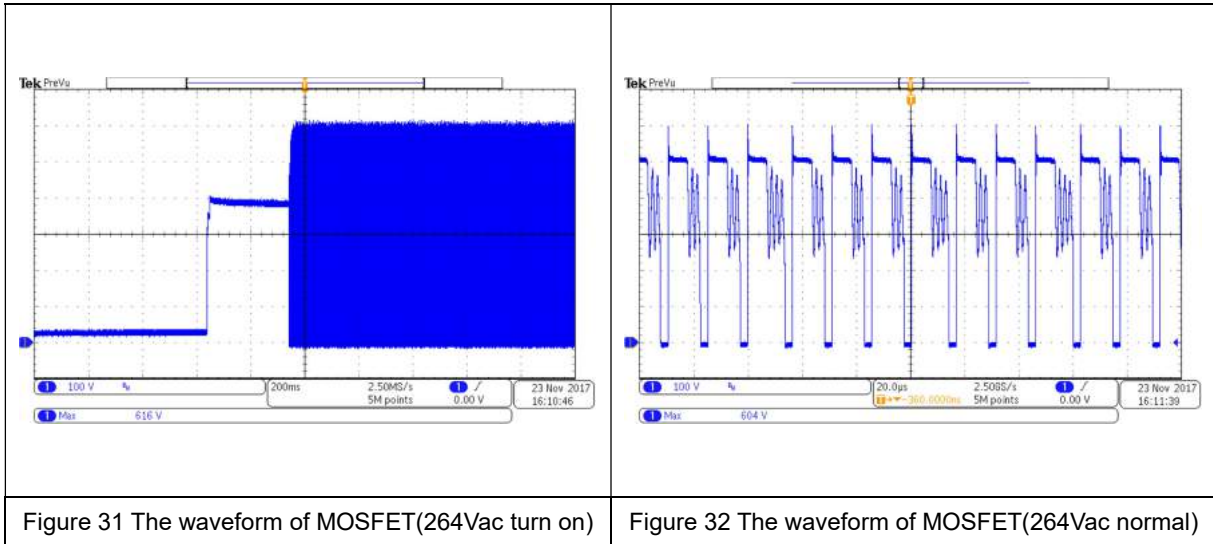


Figure 31 The waveform of MOSFET(264Vac turn on)

Figure 32 The waveform of MOSFET(264Vac normal)

### 14. Voltage Stress on Output Diode

Input: 264Vac(50Hz)

(1) Output: +20V/2.25A

Vin(V <sub>AC</sub> )	Voltage Limit Value(V)	Spec(V)
	Diode	
Vd(turn on)	82.4V	100V
Vd(Normal)	82.4V	100V

Table 14

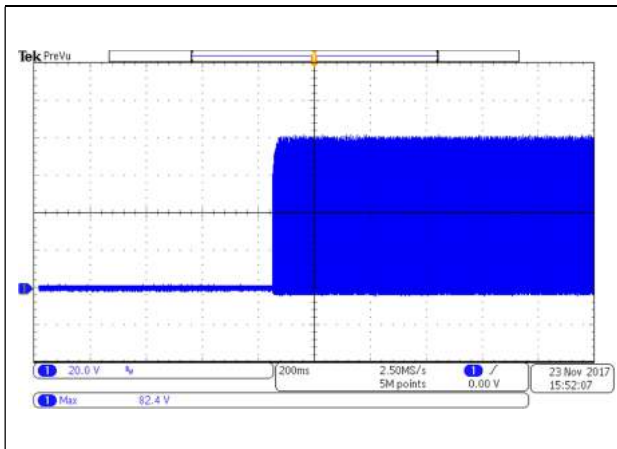


Figure 33 The waveform of Diode (264Vac turn on)

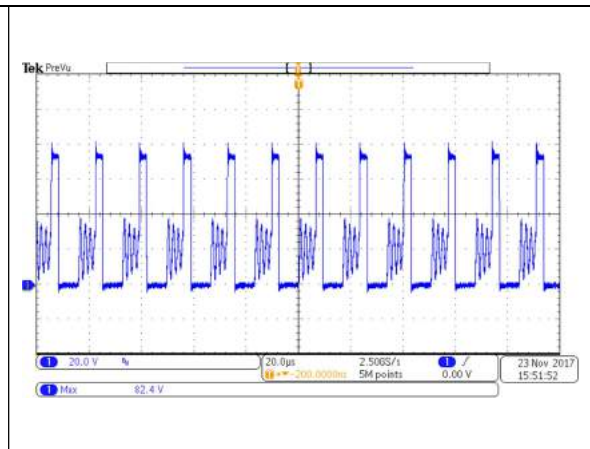
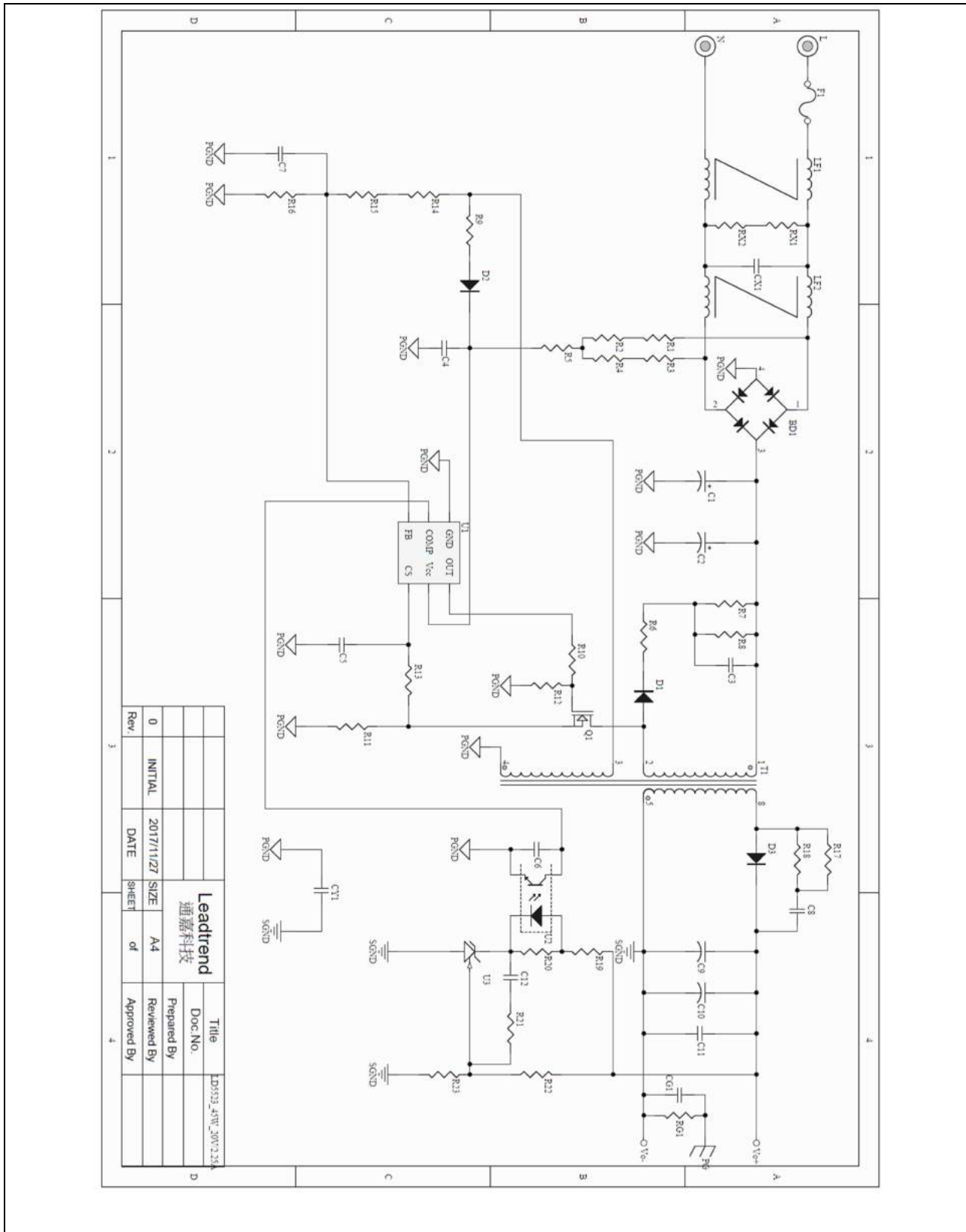


Figure 34 The waveform of Diode (264Vac normal)

### III. Schematic



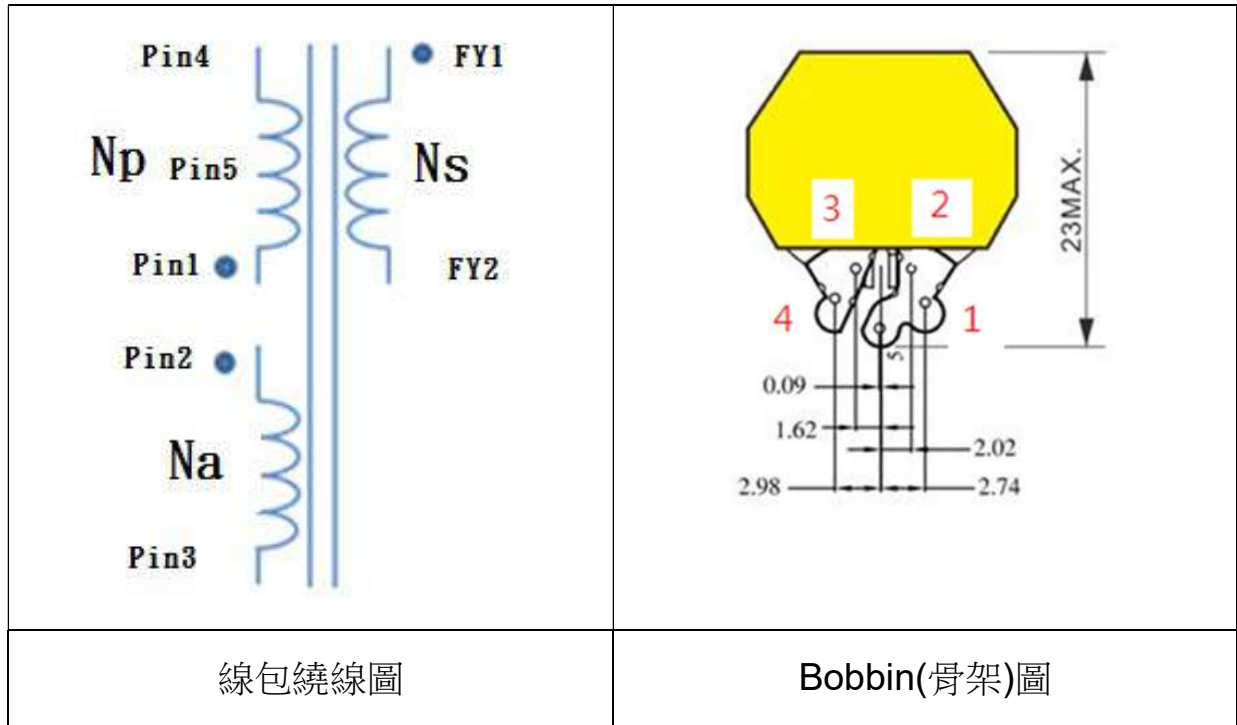
Rev.	0	INITIAL	DATE	2017/11/27	SHEET	1	of	4	Approved By	
<p style="text-align: center;"><b>Leadtrend</b> 通嘉科技</p>									Doc No.	LD5523_45W_20V2.25A
									Prepared By	
									Reviewed By	
									Approved By	

## IV. BOM

P/N	Component Value	Note	P/N	Component Value	Note
BD1	GBL406	1	R9	2.2Rohm J 0805	1
C1	68uF 400V 16x25	1	R10	10Rohm J pitch:15mm	1
C2,C7,CG1,C11	NC	0	R11	0.27Rohm J 2512	1
C2	103pF 1KV 1206	1	R12,RG1,RX1,RX2	NC	0
C3	102pF 1KV 1206	1	R13	470ohm J 0805	1
C4	4.7uF/25V 1206	1	R14,R15	68Kohm J 0805	2
C5	220pF/25V 0603	1	R16	27.4Kohm J 0603	1
C6	102pF 25V 0603	1	R17,R18	240Rohm J 1206	2
C8	470pF 250V 0805	1	R19	510Rohm J 0603	1
C9,C10	470uF 25V 8x20	2	R20	3.3Kohm J 0603	1
C12	100nF 25V 0603	1	R21	1Kohm J 0603	1
CX1	0.33uF/250V	1	R22	68.1Kohm F 0603 1%	1
CY1	2200pF/250V	1	R23	9.76Kohm F 0603 1%	1
D1,D2	FR107 1A 1KV SOD-123	2	T1	RM8	1
D3	20A/100V TO-220F	1	U1	LD5523EMGL	1
B1	Bead	1	U2	LTV817C C 4P	1
F1	T3.15A/250V	1	U3	TL431G SOT-23-3 T/R	1
HS1		1	Cable	20AWG1*5 米	1
HS2		1	PCB	30mmX80mmX1.6mm	1
J1	jump 10mm	1			
LF1	Common Choke 6Ts	1			
LF2	Common Choke 22mH	1			
Q1	10N65L TO-220F1	1			
R1,R2,R3,R4	2Mohm J 0603	4			
R5	10Kohm J 1206	1			
R6	51Rohm J 0805	1			
R7,R8	300Kohm J 1206	2			

## V. Transformer spec

Transformer : RM8, PC47  
 Inductance: 680uH @ 40KHz, 1V  
 Np:Ns:Na: 57:8:7  
 Ae: 64mm<sup>2</sup>



步驟 Step	繞線順序 Winding No	腳位 PIN	線徑*股數 Wire & Wire Copper	圈數 Turns	繞線方式 Winding Tape	膠帶層數*寬度 Tape Layer	注意事項 Note	
1	N1	1-5	Wire 0.4*1	38	密	1L*9.5mm		
2	N2	2-3	Wire 0.3*3	7	密	1L*9.5mm		
3	N3	A-B	Triple Wire 0.75*1	8	密	1L*9.5mm		
4	N4	5-4	Wire 0.4*1	19	密	1L*9.5mm		
5	N5	3-NC	Wire 0.12*1	52	密	2L*9.5mm		
6	OVER CORE-						-	
7			鐵心銅箔下 PIN3					

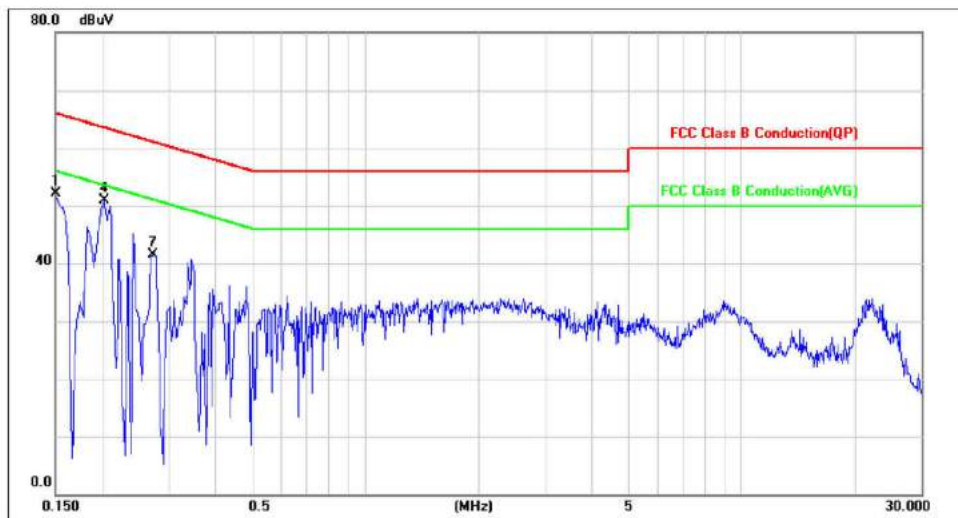
## VI. EMI

### 1.1 Conduction-(110V Line)



SGS Taiwan Ltd.-Electronics & Communication Laboratory  
 Address: No. 2, Keii 1st Rd., Guishan District, Taoyuan City.  
 Tel: +886 2 2299 3279

<b>Site:</b> : Conduction Room	<b>Date:</b> 2017/11/9	<b>Time:</b> 下午 01:22:31
<b>Limit:</b> FCC Class B Conduction(QP)	<b>Probe:</b> L1	<b>Temperature:</b> 24°C
<b>EUT:</b> Adapter	<b>Power:</b> AC 120V/60Hz	<b>Humidity:</b> 62% RH
<b>M/N:</b> 45W		<b>Air Pressure:</b> 983
<b>Mode:</b> Full system		
<b>Note:</b> AUK		



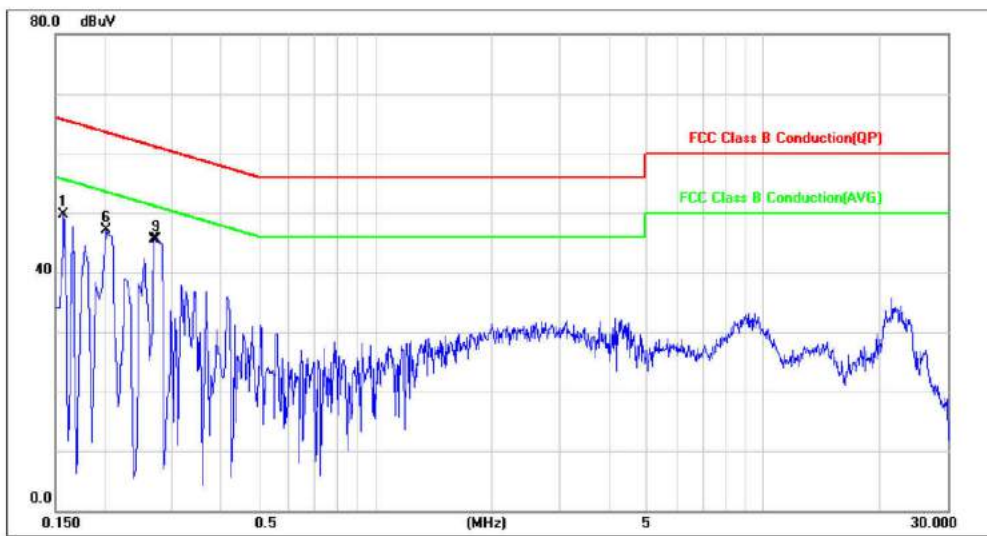
No.	Mk.	Freq. (MHz)	Reading dBuV	Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector	Comment
1		0.1500	52.14	0.04	52.18	66.00	-13.82	peak	
2		0.1500	43.60	0.04	43.64	66.00	-22.36	QP	
3		0.1500	15.20	0.04	15.24	56.00	-40.76	AVG	
4	*	0.2020	50.81	0.03	50.84	63.53	-12.69	peak	
5		0.2020	48.40	0.03	48.43	63.53	-15.10	QP	
6		0.2020	35.20	0.03	35.23	53.53	-18.30	AVG	
7		0.2740	41.56	0.03	41.59	61.00	-19.41	peak	
8		0.2740	38.40	0.03	38.43	61.00	-22.57	QP	
9		0.2740	26.80	0.03	26.83	51.00	-24.17	AVG	

## 1.2 Conduction-(110V Neutral)



SGS Taiwan Ltd.-Electronics & Communication Laboratory  
 Address: No. 2, Keii 1st Rd., Guishan District, Taoyuan City,  
 Tel:+886 2 2299 3279

<b>Site:</b> : Conduction Room	<b>Date:</b> 2017/11/9	<b>Time:</b> 下午 01:20:00
<b>Limit:</b> FCC Class B Conduction(QP)	<b>Probe:</b> N	<b>Temperature:</b> 24℃
<b>EUT:</b> Adapter	<b>Power:</b> AC 120V/60Hz	<b>Humidity:</b> 62% RH
<b>M/N:</b> 45W		<b>Air Pressure:</b> 983
<b>Mode:</b> Full system		
<b>Note:</b> AUK		



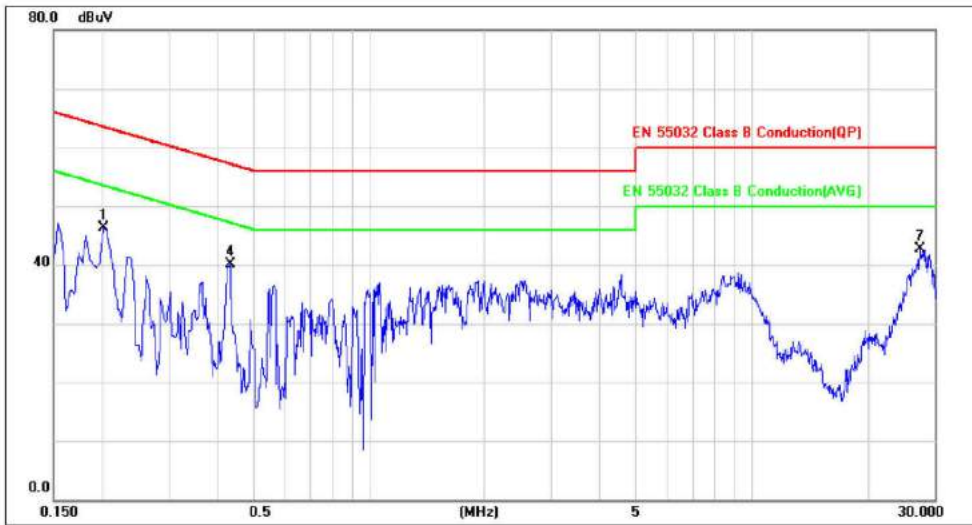
No.	Mk.	Freq. (MHz)	Reading dBuV	Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector	Comment
1		0.1580	49.67	0.12	49.79	65.57	-15.78	peak	
2		0.1580	41.60	0.12	41.72	65.57	-23.85	QP	
3		0.1580	12.70	0.12	12.82	55.57	-42.75	AVG	
4	*	0.2000	48.90	0.11	49.01	63.61	-14.60	QP	
5		0.2000	33.50	0.11	33.61	53.61	-20.00	AVG	
6		0.2020	47.05	0.11	47.16	63.53	-16.37	peak	
7		0.2680	41.70	0.11	41.81	61.18	-19.37	QP	
8		0.2680	24.20	0.11	24.31	51.18	-26.87	AVG	
9		0.2740	45.48	0.11	45.59	61.00	-15.41	peak	

### 1.3 Conduction-(230V Line)



SGS Taiwan Ltd.-Electronics & Communication Laboratory  
 Address: No. 2, Keii 1st Rd., Guishan District, Taoyuan City,  
 Tel:+886 2 2299 3279

<b>Site:</b>	<b>Conduction Room</b>	<b>Date:</b>	<b>2017/11/9</b>	<b>Time:</b>	<b>下午 01:29:19</b>
<b>Limit:</b>	<b>EN 55032 Class B Conduction(QP)</b>	<b>Probe:</b>	<b>L1</b>	<b>Temperature:</b>	<b>24°C</b>
<b>EUT:</b>	<b>Adapter</b>	<b>Power:</b>	<b>AC 230V/50Hz</b>	<b>Humidity:</b>	<b>62% RH</b>
<b>M/N:</b>	<b>45W</b>			<b>Air Pressure:</b>	<b>983</b>
<b>Mode:</b>	<b>Full system</b>				
<b>Note:</b>	<b>AUK</b>				



No.	Mk.	Freq. (MHz)	Reading dBuV	Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector	Comment
1		0.2020	46.36	0.03	46.39	63.53	-17.14	peak	
2		0.2020	44.10	0.03	44.13	63.53	-19.40	QP	
3		0.2020	35.30	0.03	35.33	53.53	-18.20	AVG	
4		0.4340	40.10	0.04	40.14	57.18	-17.04	peak	
5		0.4340	39.30	0.04	39.34	57.18	-17.84	QP	
6	*	0.4340	34.50	0.04	34.54	47.18	-12.64	AVG	
7		27.5220	41.52	1.14	42.66	60.00	-17.34	peak	
8		27.5220	34.50	1.14	35.64	60.00	-24.36	QP	
9		27.5220	25.50	1.14	26.64	50.00	-23.36	AVG	



### 1.4 Conduction-(230V Neutral)



SGS Taiwan Ltd.-Electronics & Communication Laboratory  
 Address: No. 2 Keii 1st Rd., Guishan District, Taoyuan City.  
 Tel:+886 2 2299 3279

<b>Site:</b> : Conduction Room	<b>Date:</b> 2017/11/9	<b>Time:</b> 下午 01:31:51
<b>Limit:</b> EN 55032 Class B Conduction(QP)	<b>Probe:</b> N	<b>Temperature:</b> 24°C
<b>EUT:</b> Adapter	<b>Power:</b> AC 230V/50Hz	<b>Humidity:</b> 62%RH
<b>M/N:</b> 45W		<b>Air Pressure:</b> 983
<b>Mode:</b> Full system		
<b>Note:</b> AUK		



No.	Mk.	Freq. (MHz)	Reading dBuV	Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector	Comment
1	*	0.1820	54.06	0.11	54.17	64.39	-10.22	peak	
2		0.1820	46.20	0.11	46.31	64.39	-18.08	QP	
3		0.1820	32.10	0.11	32.21	54.39	-22.18	AVG	
4		4.4260	39.39	0.28	39.67	56.00	-16.33	peak	
5		4.4260	33.40	0.28	33.68	56.00	-22.32	QP	
6		4.4260	19.80	0.28	20.08	46.00	-25.92	AVG	
7		27.9740	42.36	0.92	43.28	60.00	-16.72	peak	
8		27.9740	35.20	0.92	36.12	60.00	-23.88	QP	
9		27.9740	27.60	0.92	28.52	50.00	-21.48	AVG	

## 2.1 Radiation-(120V Vertical)



SGS Taiwan Ltd.-Electronics & Communication Laboratory  
 Address: No 134, Wu Kung Road, New Taipei Industrial Park.  
 Tel:+886 2 2299 3279

<b>Site:</b> SGS 966 Chamber A	<b>Date:</b> 2017/11/20	<b>Time:</b> 上午 11:54:29
<b>Limit:</b> EN 55032 Class B 10M Radiation	<b>Polarization:</b> Vertical	<b>Temperature:</b> 22°C
<b>EUT:</b>	<b>Power:</b> AC 120V/60Hz	<b>Humidity:</b> 58% RH
<b>M/N:</b>	<b>Distance:</b>	<b>Air Pressure:</b> 985
<b>Mode:</b>		
<b>Note:</b> 45W; 20V/2.25A LD5523		



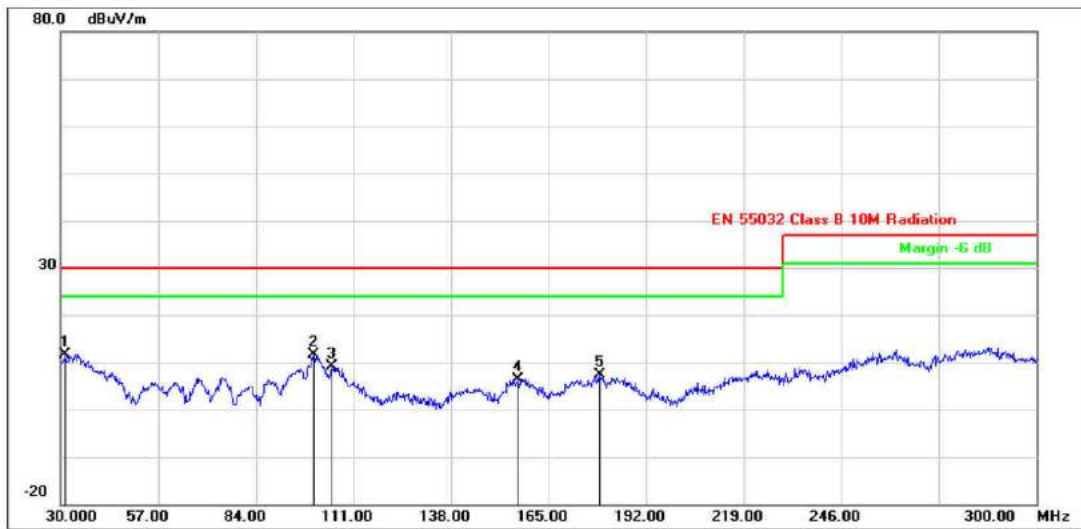
No.	Mk.	Freq. (MHz)	Reading dBuV	Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector	Comment
1		57.8100	44.75	-23.34	21.41	30.00	-8.59	peak	
2		78.0600	39.42	-20.09	19.33	30.00	-10.67	peak	
3		91.2900	41.55	-20.77	20.78	30.00	-9.22	peak	
4		97.7700	44.31	-21.00	23.31	30.00	-6.69	peak	
5	*	103.9800	42.74	-17.01	25.73	30.00	-4.27	peak	
6		103.9800	38.91	-17.01	21.90	30.00	-8.10	QP	

## 2.2 Radiation-(120V Horizontal)



SGS Taiwan Ltd.-Electronics & Communication Laboratory  
 Address: No.134, Wu Kung Road, New Taipei Industrial Park.  
 Tel:+886 2 2299 3279

<b>Site:</b> SGS 966 Chamber A	<b>Date:</b> 2017/11/20	<b>Time:</b> 上午 11:57:15
<b>Limit:</b> EN 55032 Class B 10M Radiation	<b>Polarization:</b> Horizontal	<b>Temperature:</b> 22 °C
<b>EUT:</b>	<b>Power:</b> AC 120V/60Hz	<b>Humidity:</b> 58% RH
<b>M/N:</b>	<b>Distance:</b>	<b>Air Pressure:</b> 985
<b>Mode:</b>		
<b>Note:</b> 45W; 20V/2.25A LD5523		



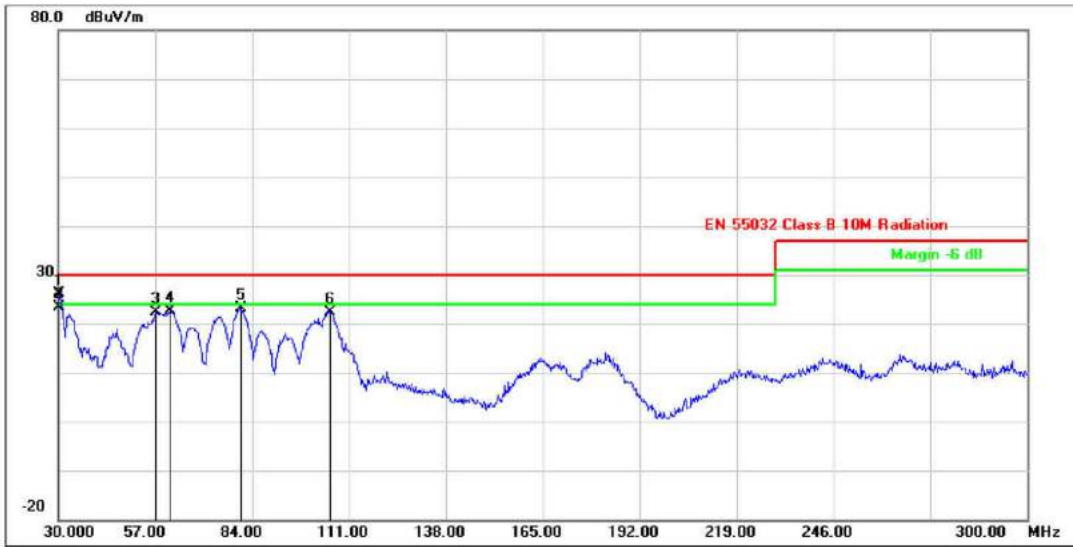
No.	Mk.	Freq. (MHz)	Reading dBuV	Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector	Comment
1	*	31.3500	29.52	-17.91	11.61	30.00	-18.39	peak	
2		99.9300	33.72	-22.14	11.58	30.00	-18.42	peak	
3		105.0600	31.18	-22.08	9.10	30.00	-20.90	peak	
4		156.6300	29.81	-23.47	6.34	30.00	-23.66	peak	
5		179.0400	33.84	-26.53	7.31	30.00	-22.69	peak	

### 2.3 Radiation-(230V Vertical)



SGS Taiwan Ltd.-Electronics & Communication Laboratory  
 Address: No.134, Wu Kung Road, New Taipei Industrial Park.  
 Tel:+886 2 2299 3279

<b>Site:</b> SGS 966 Chamber A	<b>Date:</b> 2017/11/20	<b>Time:</b> 上午 11:58:51
<b>Limit:</b> EN 55032 Class B 10M Radiation	<b>Polarization:</b> Vertical	<b>Temperature:</b> 22°C
<b>EUT:</b>	<b>Power:</b> AC 230V/50Hz	<b>Humidity:</b> 58%RH
<b>M/N:</b>	<b>Distance:</b>	<b>Air Pressure:</b> 985
<b>Mode:</b>		
<b>Note:</b> 45W; 20V/2.25A LD5523		



No.	Mk.	Freq. (MHz)	Reading dBuV	Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector	Comment
1	*	30.0000	41.82	-15.77	26.05	30.00	-3.95	peak	
2		30.0000	39.27	-15.77	23.50	30.00	-6.50	QP	
3		57.0000	45.61	-23.33	22.28	30.00	-7.72	peak	
4		61.0500	46.37	-23.63	22.74	30.00	-7.26	peak	
5		80.7600	42.07	-19.04	23.03	30.00	-6.97	peak	
6		105.6000	38.63	-16.13	22.50	30.00	-7.50	peak	

## 2.4 Radiation-(230V Horizontal)



SGS Taiwan Ltd.-Electronics & Communication Laboratory  
 Address: No.134, Wu Kung Road, New Taipei Industrial Park.  
 Tel:+886 2 2299 3279

<b>Site:</b> SGS 966 Chamber A	<b>Date:</b> 2017/11/20	<b>Time:</b> 下午 12:01:25
<b>Limit:</b> EN 55032 Class B 10M Radiation	<b>Polarization:</b> Horizontal	<b>Temperature:</b> 22 °C
<b>EUT:</b>	<b>Power:</b> AC 230V/50Hz	<b>Humidity:</b> 58% RH
<b>M/N:</b>	<b>Distance:</b>	<b>Air Pressure:</b> 985
<b>Mode:</b>		
<b>Note:</b> 45W; 20V/2.25A LD5523		



No.	Mk.	Freq. (MHz)	Reading dBuV	Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector	Comment
1	*	30.5400	30.25	-17.89	12.36	30.00	-17.64	peak	
2		98.8500	32.95	-22.72	10.23	30.00	-19.77	peak	
3		105.0600	32.22	-22.08	10.14	30.00	-19.86	peak	
4		158.5200	31.86	-24.11	7.75	30.00	-22.25	peak	
5		185.2500	32.20	-25.80	6.40	30.00	-23.60	peak	