

120W Street lamp LED driver

Device	Application	Input Voltage	Output Power	Output Voltage	Efficiency	Topology	Isolation	PFC	Dimming
NCL30030	LED Driver	90-305 Vac	120W	30-40V	>85%	PFC/Flyback	isolated	>0.95	NO

Feature :

- Combination IC integrates PFC and Flyback function
- Wide range input voltage 90-305Vac , PF >0.9, THD <15%
- Very low no-load power dissipation less than 0.3W
- Low output ripple current, Non Shimmering
- LED Current Regulation of 1% typical
- Suitable for Hi-power LED driver

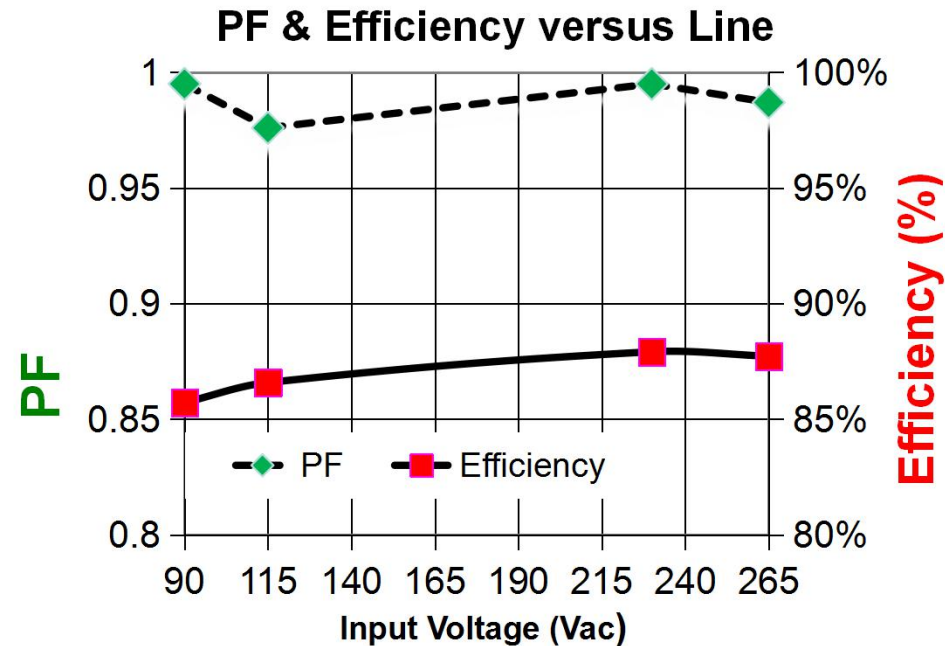
深圳飞捷电子
张先生
15220276385
QQ2355410666



145mm x 54mm

Application:

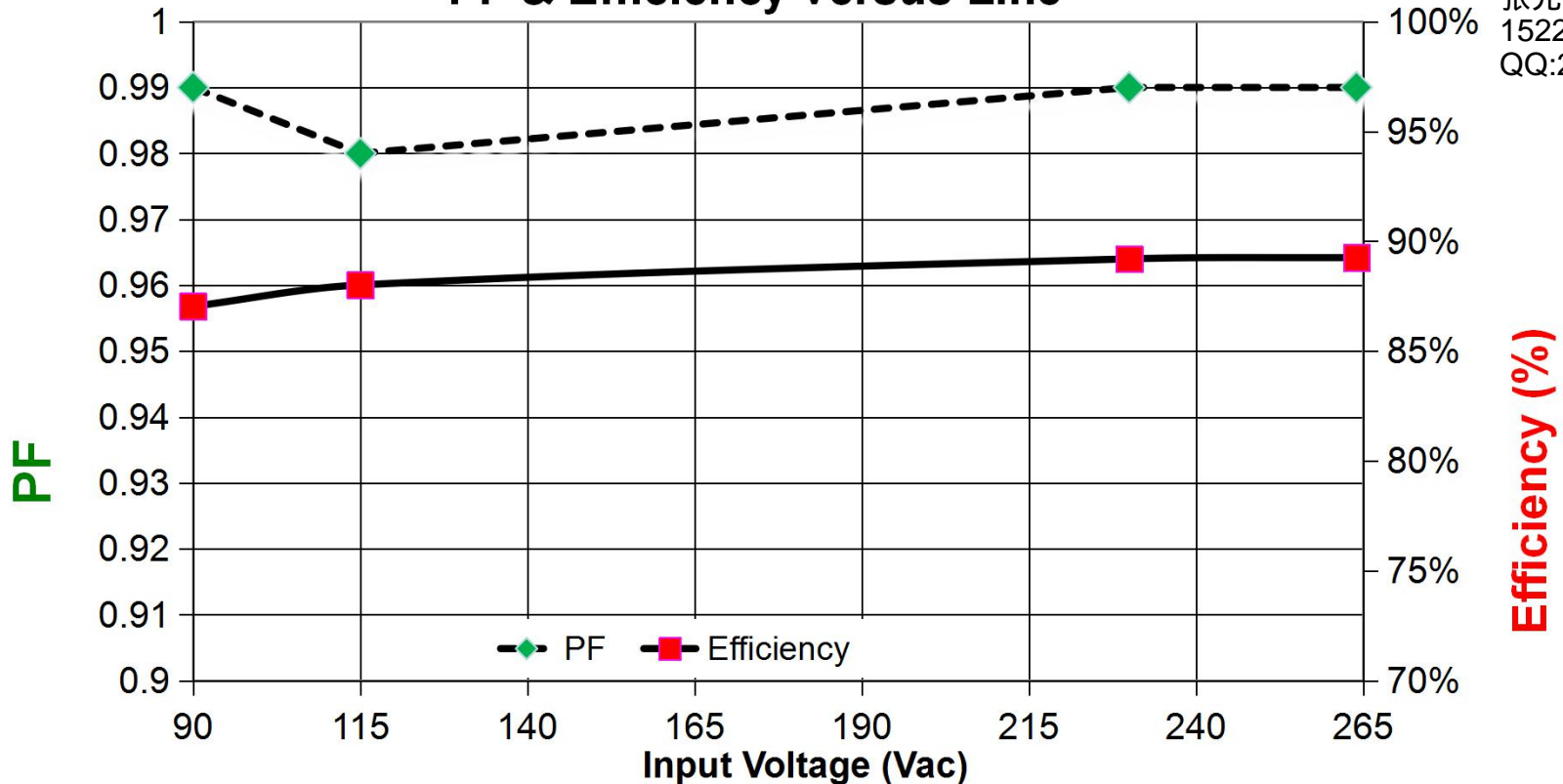
- Ideal for High Power LED driver,
- LED Electronic Control Gear



Test data

Vac	Watts	PF	%THD	Iout	Vout	Pout	Eff
90	136.7	0.99	11.6	3	39.66	118.98	87.0%
115	135.19	0.98	13	3	39.66	118.98	88.0%
230	133.39	0.99	12	3	39.66	118.98	89.2%
264	133.3	0.99	13.2	3	39.66	118.98	89.3%
277	133.4	0.99	12	3	39.66	119	89.5%

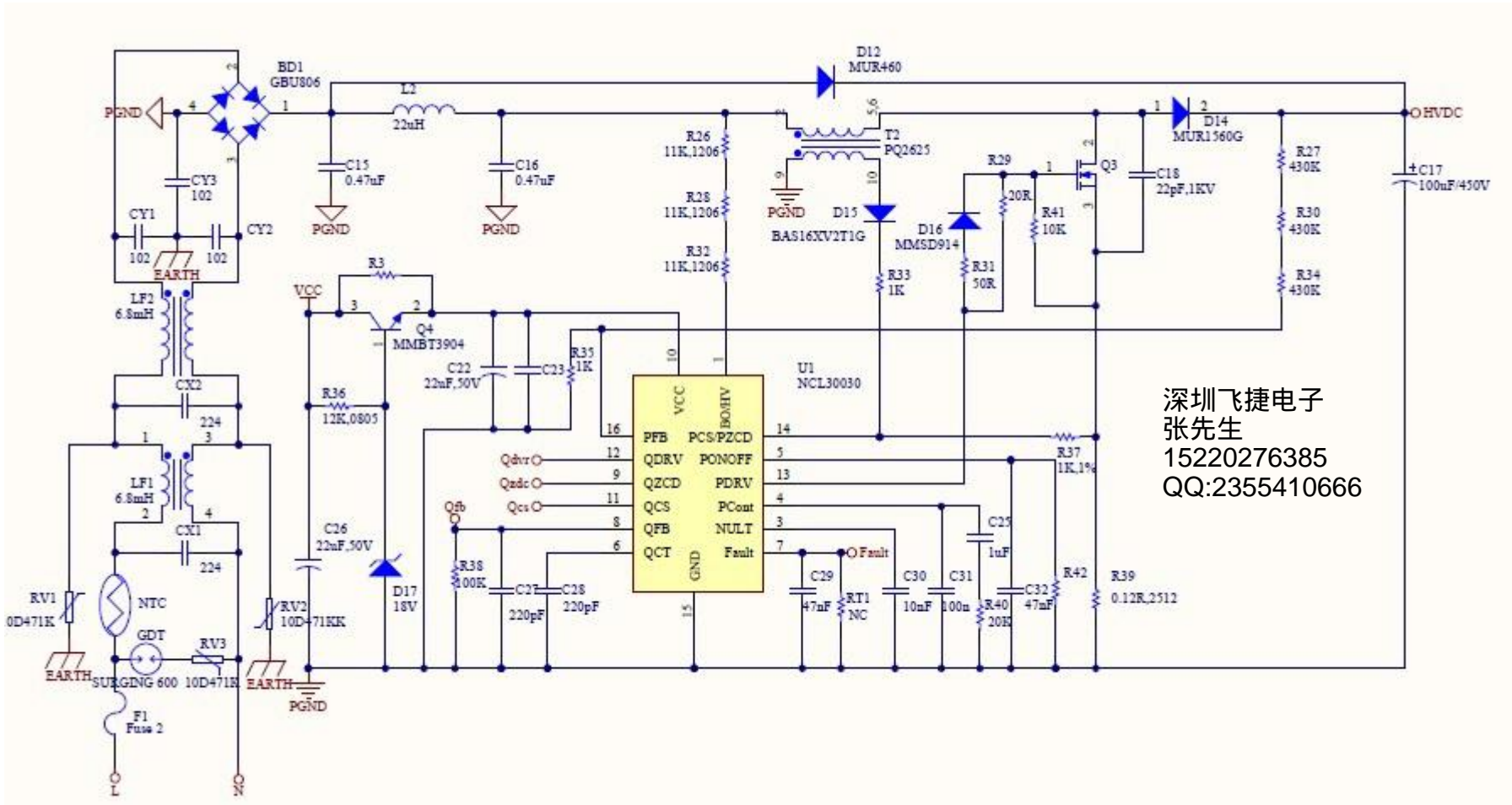
PF & Efficiency versus Line



深圳飞捷电子
 张先生
 15220276385
 QQ:2355410666



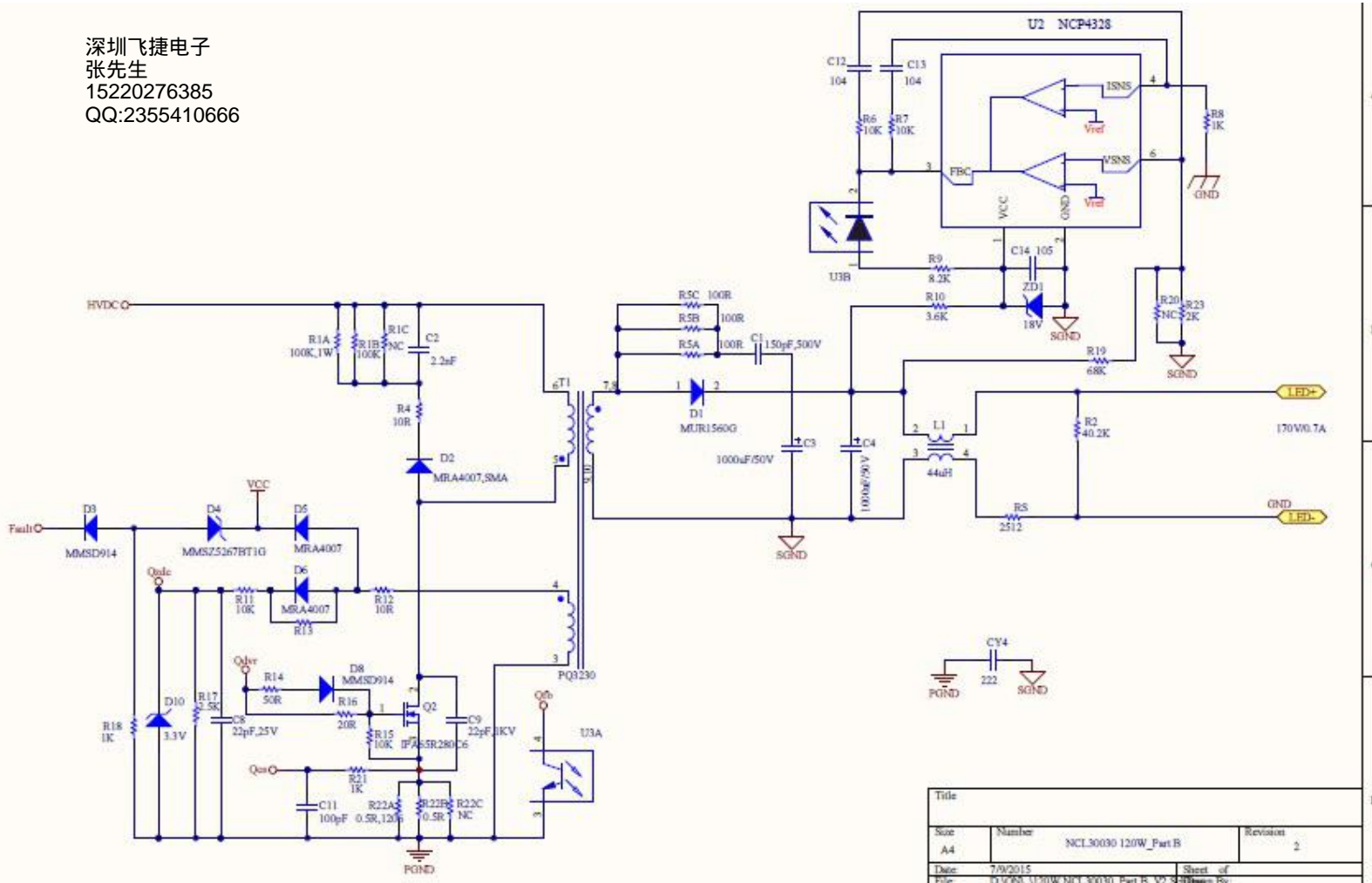
120W Street lamp Driver Application Schematic



➤ Rev:4

120W Street lamp Driver Application Schematic

深圳飞捷电子
张先
15220276385
QQ:2355410666



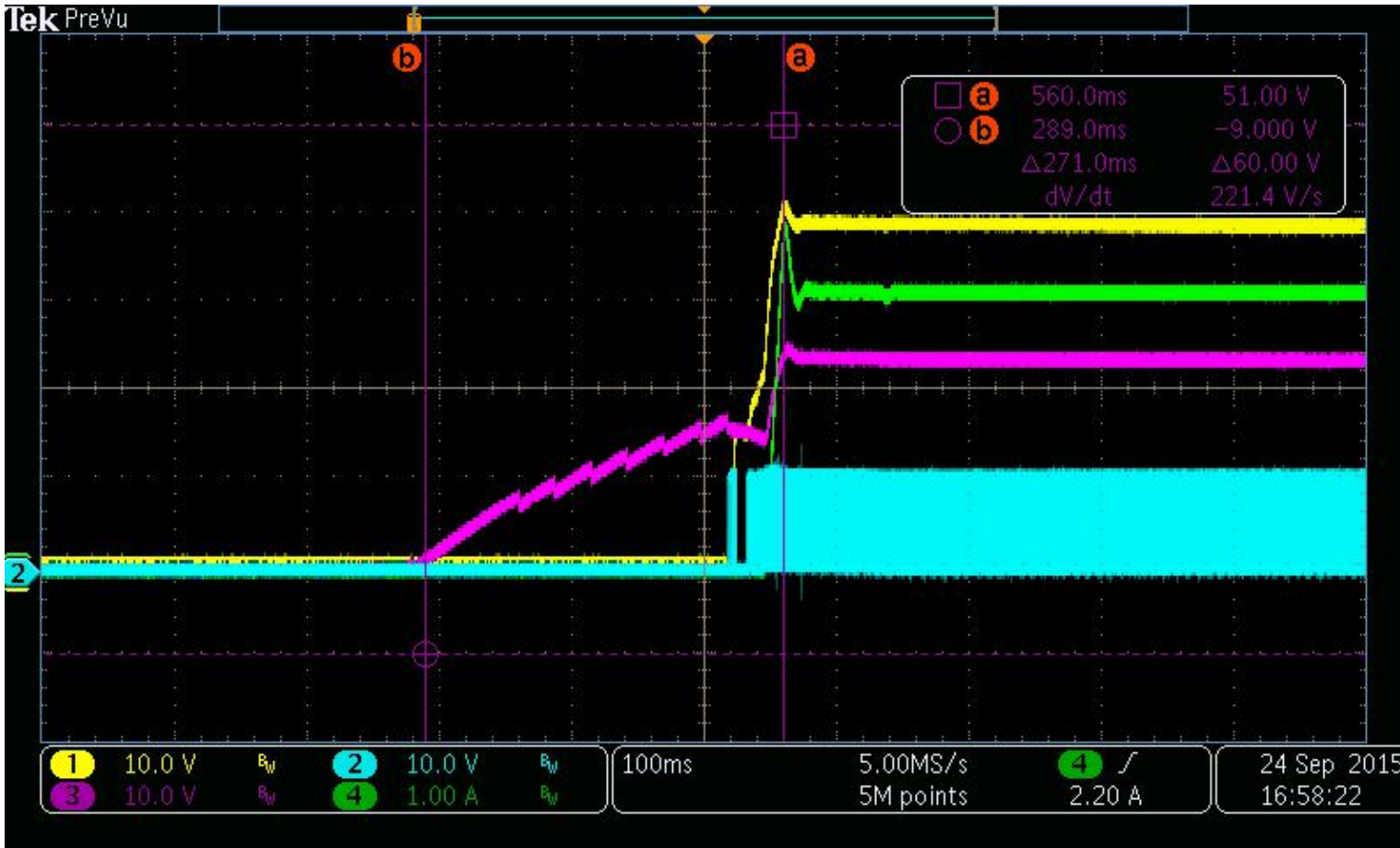
➤ Rev:4



Start up time at 115Vac input

深圳飞捷电子
张先生
15220276385
QQ:2355410666

Test condition: Full load (40V,3A) , input: 230Vac/50Hz



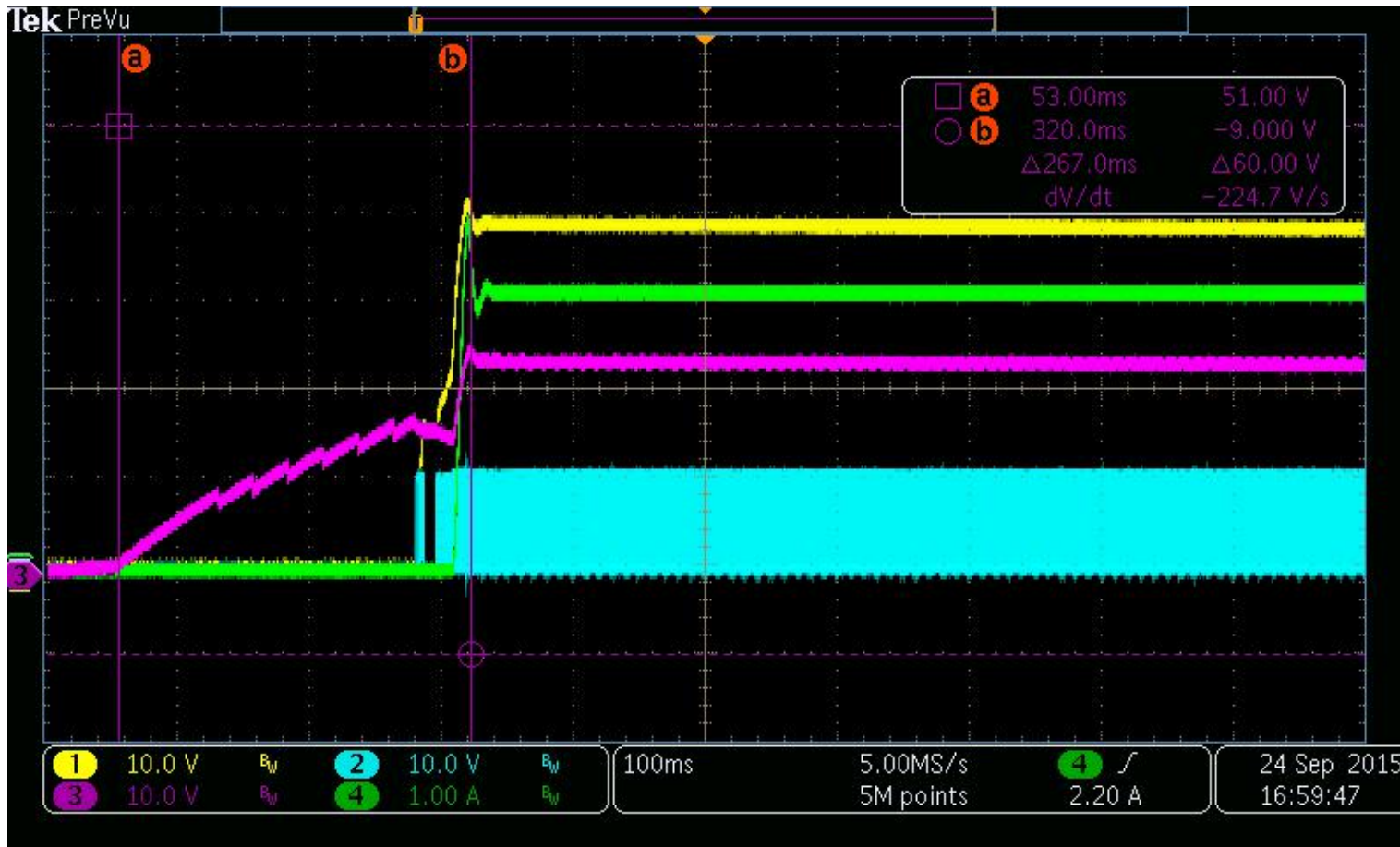
Start up time : 270mS <500mS

Result: **PASS**

Start up time at 230Vac input

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张先生
15220276385
QQ:2355410666

Test condition: Full load (40V,3A) , input: 230Vac/50Hz



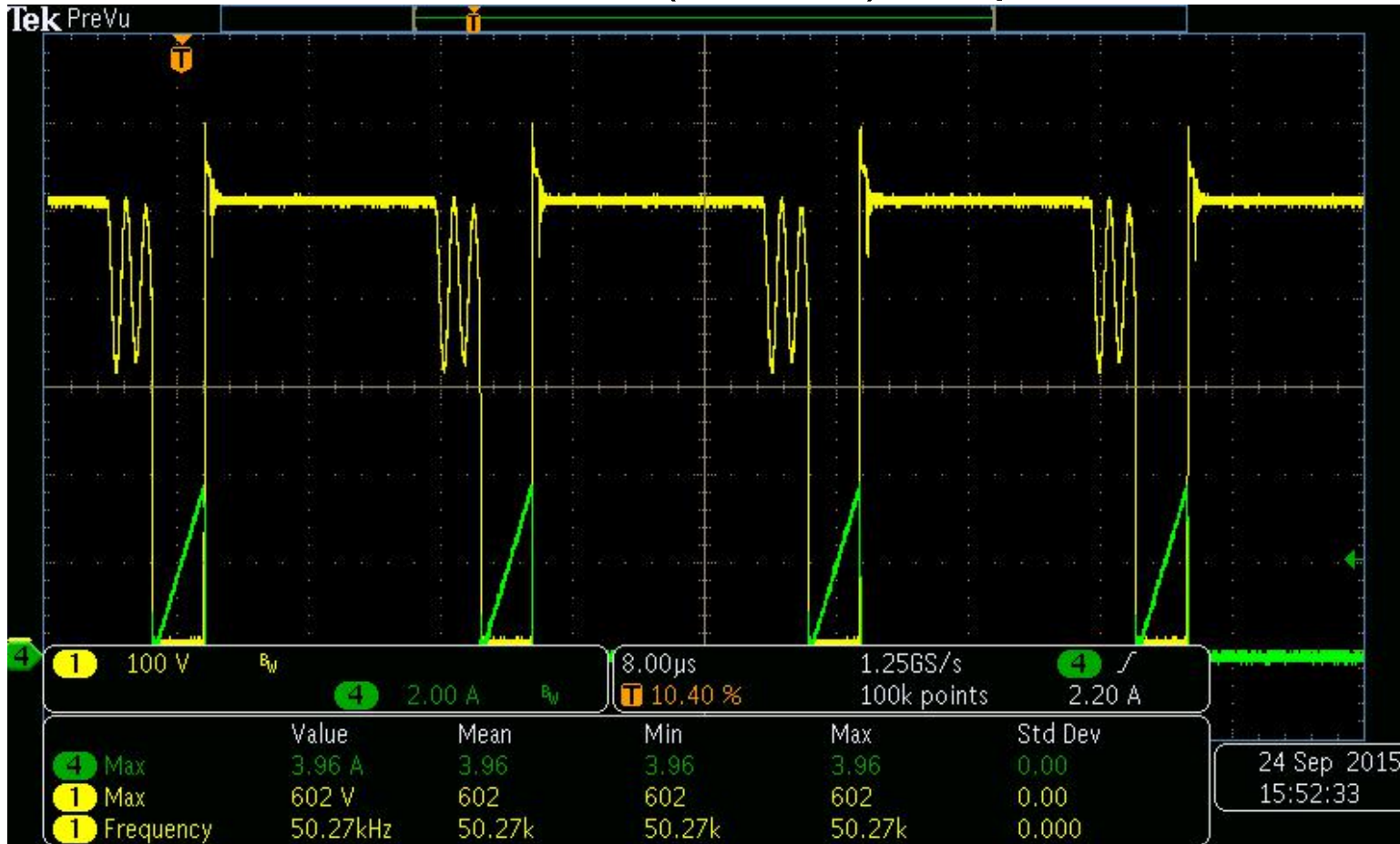
Start up time : 267mS < 500mS

Result: **PASS**

QR Flyback Stage Mosfet

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张先生
15220276385
QQ:2355410666

Test condition: Full load (40V,3A) , input: 230Vac/50Hz



Vds_max:602V (Mosfet Vdss=650V)

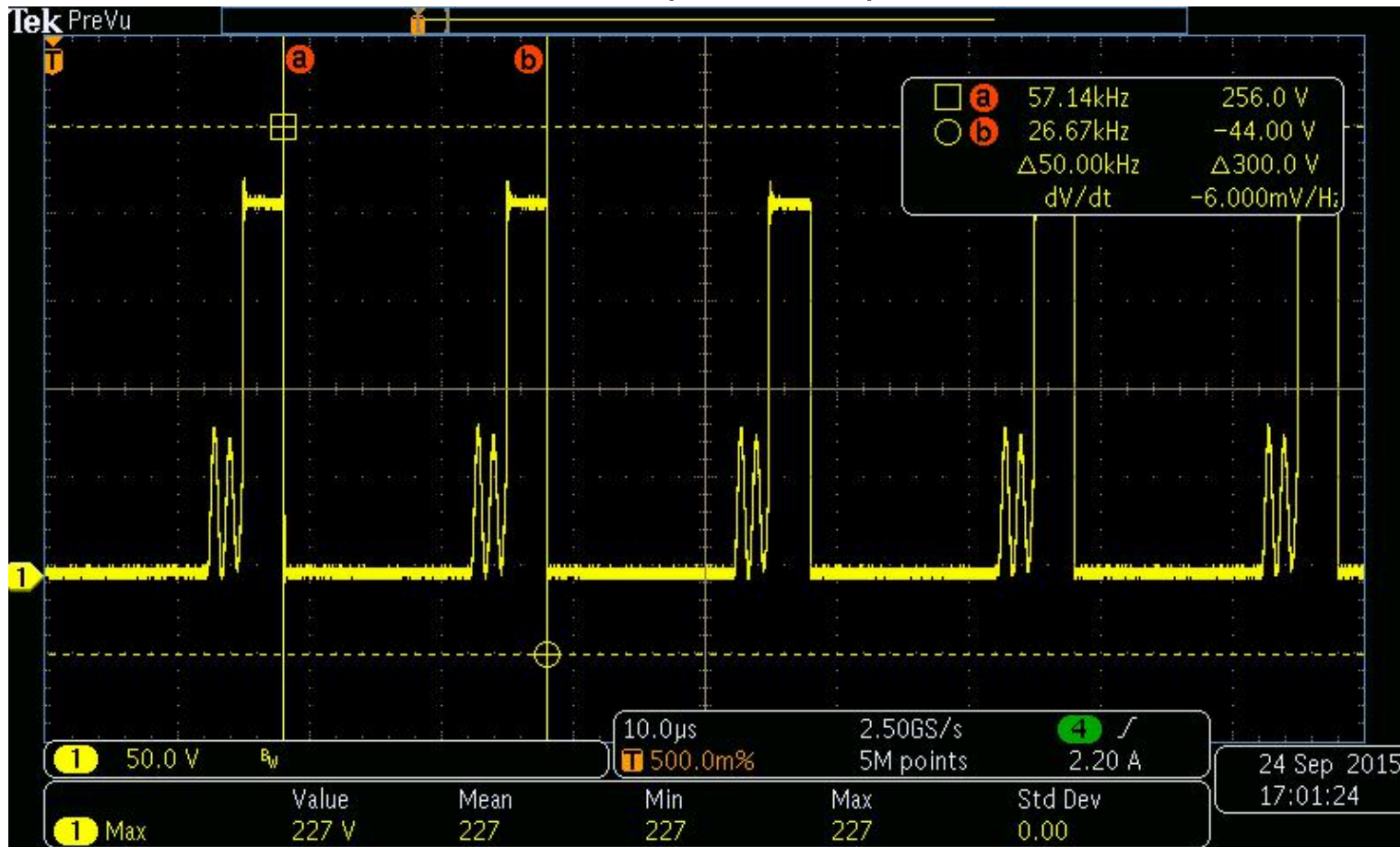
I_{ds}_max: 3.96A → B_{max}=0.26mT

Result: **PASS**

Output Diode Reverse Voltage

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张先生
15220276385
QQ:2355410666

Test condition: Full load (40V,3A) , input: 230Vac/50Hz



CH1:VR
CH2:..
CH3:..
CH4: ..

Vds_max:227 (Diode: Vrrm=400V)

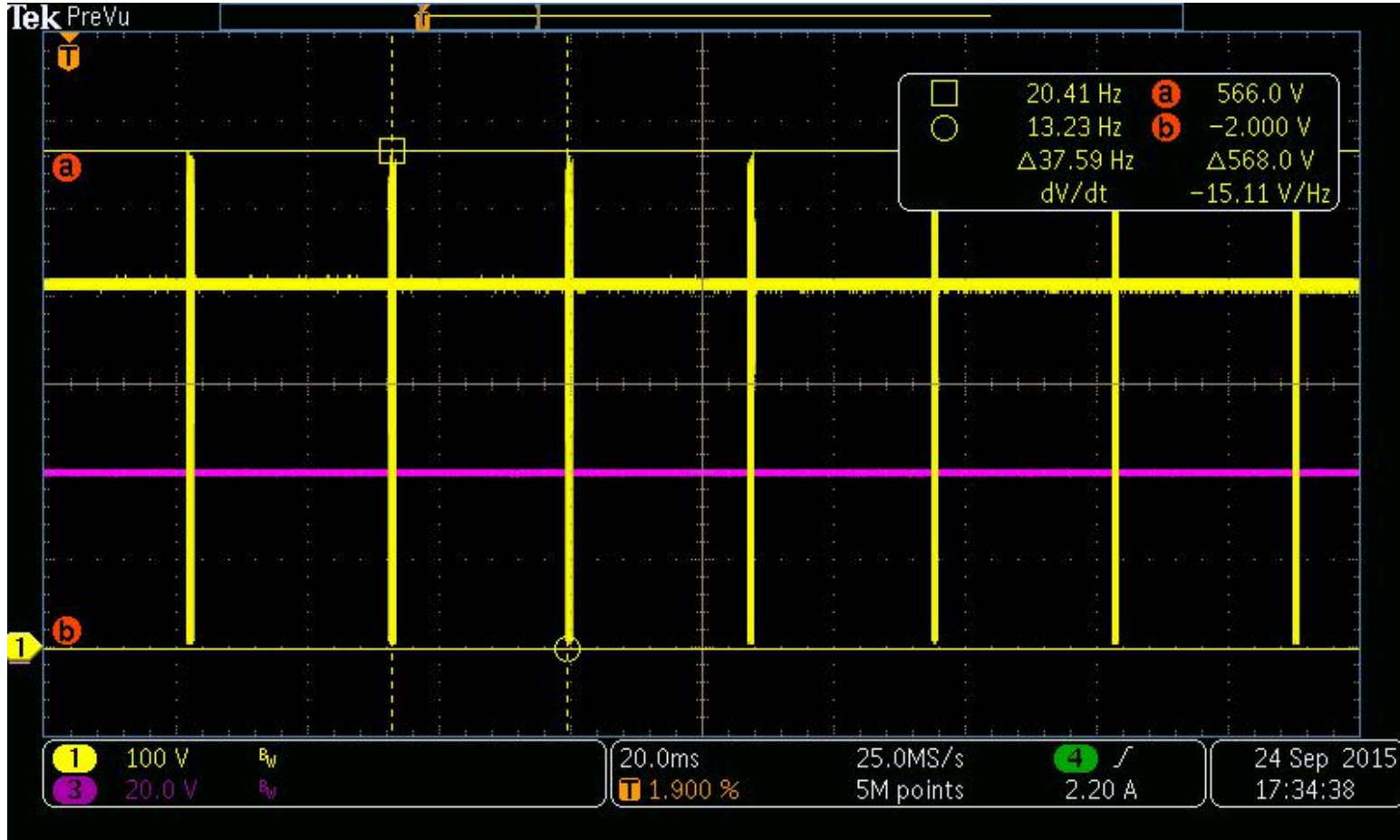
Result: **PASS**



Skip Mode at No-Load

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张先生
15220276385
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Test condition: No-Load , input: 230Vac/50Hz



Result: **PASS**



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THANKS!