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报告编号	HYX34723113020687
报告日期	2023-12-14

检测（试验）报告

产品名称： 电源模块

型号规格： LMX4644SH

生产批号： 2342

样品数量： 9(只)

检验类别： 筛选

委托单位： 北京朗玛芯创技术有限公司



西安环宇芯微电子有限公司

环宇芯微电子有限公司
检测(试验)专用章

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通讯地址：西安市雁塔区电子西街3号102厂房

西安环宇芯微电子有限公司

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检测(试验)报告

委托单位	北京朗玛芯创技术有限公司		地 址	北京市海淀区苏州街 18 号长远天地大厦 A1 座 1604		
联系人	/		联系电话	/	传 真	/
委托日期	2023-11-30		完成日期	2023-12-13	邮 编	/
产品名称	电源模块		生产厂家	北京朗玛芯创技术有限公司	生产批次	2342
型号规格	LMX4644SH		样品数量 (只)	9	质量等级	企军级
试验依据	1. 产品技术手册; 2. 客户筛选要求					
环境条件	温度 (°C)	23.5		湿度 (%RH)	45.4	
试 验 结 果	试验数 (只)	9	合格数 (只)	9	不合格数 (只)	0
	合格率 (结论)		100.0%			
说明事项	数据见附页					
编制人	牛娜		日期	2023-12-14		
审核人			日期	2023-12-14		
批准人			日期	2023.12.14		

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常温测试:

STEP.1(UUT Test seq.1) : D2D 测试中调整(V1=5V 空载) ---- (2' 359) ----- PASS
 Vin (V)= 5.00
 Delay Time (ms)= 800.00
 Message =

Vout Name	Loading (A)	Vout Adjust (V)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	1.500	1.540	1.400	1.500
V2	0.000	1.500	1.540	1.400	1.503
V3	0.000	1.500	1.540	1.400	1.498
V4	0.000	1.500	1.540	1.400	1.505

STEP.2(UUT Test seq.2) : D2D 输入输出测试(V1=5V V1=4A) ---- (1' 453) ----- PASS
 Vin (V)= 4.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	4.000	1.540	1.400	1.512
V2	0.000	*****	*****	1.517
V3	0.000	*****	*****	1.510
V4	0.000	*****	*****	1.517

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	4.000	4.100	*****	4.001
V2	0.000	4.100	*****	0.001
V3	0.000	4.100	*****	0.000
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current (A)	*****	*****	1.600
Input Power (W)	*****	*****	8.002
Output Power (W)	*****	*****	6.051
Efficiency (%)	*****	68.000	75.620

STEP.3(UUT Test seq.3) : D2D 输入输出测试(V1=5V V2=4A) ---- (1' 375) ----- PASS
 Vin (V)= 4.999
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.500
V2	4.000	1.540	1.400	1.501
V3	0.000	*****	*****	1.497
V4	0.000	*****	*****	1.504

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.000
V2	4.000	4.100	*****	4.000
V3	0.000	4.100	*****	0.000
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current (A)	*****	*****	1.599
Input Power (W)	*****	*****	7.996
Output Power (W)	*****	*****	6.006
Efficiency (%)	*****	68.000	75.115

STEP.4(UUT Test seq.4) : D2D 输入输出测试(V1=5V V3=4A) ---- (1' 390) ----- PASS
 Vin (V)= 4.999
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.500
V2	0.000	*****	*****	1.503
V3	4.000	1.540	1.400	1.496
V4	0.000	*****	*****	1.505

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.001
V2	0.000	4.100	*****	0.001
V3	4.000	4.100	*****	4.000
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current (A)	*****	*****	1.601
Input Power (W)	*****	*****	8.009
Output Power (W)	*****	*****	5.988
Efficiency (%)	*****	68.000	74.758

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STEP. 5(UUT Test seq. 5) : D2D 输入输出测试(V1=5V V4=4A) ---- (1' 359) ----- PASS
 Vin (V)= 4.999
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.502
V2	0.000	*****	*****	1.505
V3	0.000	*****	*****	1.500
V4	4.000	1.540	1.400	1.507

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.001
V2	0.000	4.100	*****	0.001
V3	0.000	4.100	*****	0.000
V4	4.000	4.100	*****	4.000

	Max	Min	Reading
Input Current (A)	*****	*****	1.613
Input Power (W)	*****	*****	8.066
Output Power (W)	*****	*****	6.030
Efficiency (%)	*****	68.000	74.761

STEP. 7(UUT Test seq. 7) : D2D 输出纹波测试(VIN=5V, V1=4A) ---- (5' 906) ----- PASS
 Line Voltage(V)= 5.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	4.000	50.000	0.000	11.729
V2	0.000	*****	*****	-----
V3	0.000	*****	*****	-----
V4	0.000	*****	*****	-----

STEP. 9(UUT Test seq. 9) : D2D 输出纹波测试(VIN=5V, V2=4A) ---- (5' 468) ----- PASS
 Line Voltage(V)= 5.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	4.000	50.000	0.000	14.401
V3	0.000	*****	*****	-----
V4	0.000	*****	*****	-----

STEP. 11(UUT Test seq. 11) : D2D 输出纹波测试(VIN=5V, V3=4A) ---- (5' 547) ----- PASS
 Line Voltage(V)= 5.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	0.000	*****	*****	-----
V3	4.000	50.000	0.000	13.316
V4	0.000	*****	*****	-----

STEP. 13(UUT Test seq. 13) : D2D 输出纹波测试(VIN=5V, V4=4A) ---- (5' 781) ----- PASS
 Line Voltage(V)= 5.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	0.000	*****	*****	-----
V3	0.000	*****	*****	-----
V4	4.000	50.000	0.000	18.139

STEP. 14(UUT Test seq. 14) : D2D 测试中调整(V1=12V 空载) ---- (2' 344) ----- PASS
 Vin (V)= 12.00
 Delay Time (ms)= 800.00
 Message =

Vout Name	Loading (A)	Vout Adjust (V)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	1.500	1.540	1.400	1.502
V2	0.000	1.500	1.540	1.400	1.505
V3	0.000	1.500	1.540	1.400	1.500
V4	0.000	1.500	1.540	1.400	1.508

STEP. 15(UUT Test seq. 15) : D2D 输入输出测试(V1=12V V01=4A) ---- (1' 453) --- PASS
 Vin (V)= 11.998
 Delay Time (ms)= 800.00

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Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	4.000	1.540	1.400	1.518
V2	0.000	1.540	1.400	1.523
V3	0.000	1.540	1.400	1.516
V4	0.000	1.540	1.400	1.523

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	4.000	4.100	*****	4.001
V2	0.000	4.100	*****	0.001
V3	0.000	4.100	*****	0.002
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current (A)	*****	*****	0.706
Input Power (W)	*****	*****	8.472
Output Power (W)	*****	*****	6.077
Efficiency (%)	*****	68.000	71.735

STEP. 16 (UUT Test seq. 16) : D2D 输入输出测试 (V1=12V V02=4A) ---- (1'984) --- PASS
 Vin (V)= 11.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.499
V2	4.000	1.540	1.400	1.501
V3	0.000	*****	*****	1.497
V4	0.000	*****	*****	1.504

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.001
V2	4.000	4.100	*****	4.000
V3	0.000	4.100	*****	0.001
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current (A)	*****	*****	0.694
Input Power (W)	*****	*****	8.336
Output Power (W)	*****	*****	6.008
Efficiency (%)	*****	68.000	72.081

STEP. 17 (UUT Test seq. 17) : D2D 输入输出测试 (V1=12V V03=4A) ---- (1'407) --- PASS
 Vin (V)= 11.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.499
V2	0.000	*****	*****	1.503
V3	4.000	1.540	1.400	1.496
V4	0.000	*****	*****	1.505

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.002
V2	0.000	4.100	*****	0.003
V3	4.000	4.100	*****	4.000
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current (A)	*****	*****	0.695
Input Power (W)	*****	*****	8.344
Output Power (W)	*****	*****	5.991
Efficiency (%)	*****	68.000	71.799

STEP. 18 (UUT Test seq. 18) : D2D 输入输出测试 (V1=12V V04=4A) ---- (1'360) --- PASS
 Vin (V)= 11.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.502
V2	0.000	*****	*****	1.505
V3	0.000	*****	*****	1.500
V4	4.000	1.540	1.400	1.507

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.001
V2	0.000	4.100	*****	0.002
V3	0.000	4.100	*****	0.001
V4	4.000	4.100	*****	4.000

	Max	Min	Reading
Input Current(A)	*****	*****	0.691
Input Power(W)	*****	*****	8.290
Output Power(W)	*****	*****	6.033
Efficiency(%)	*****	68.000	72.768

STEP. 20(UUT Test seq.20) : D2D 输出纹波测试(VIN=12V,VO1=4A) ---- (5'750) -- PASS
Line Voltage(V)= 12.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	4.000	50.000	0.000	12.498
V2	0.000	*****	*****	-----
V3	0.000	*****	*****	-----
V4	0.000	*****	*****	-----

STEP. 22(UUT Test seq.22) : D2D 输出纹波测试(VIN=12V,VO2=4A) ---- (5'594) -- PASS
Line Voltage(V)= 12.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	4.000	50.000	0.000	16.414
V3	0.000	*****	*****	-----
V4	0.000	*****	*****	-----

STEP. 24(UUT Test seq.24) : D2D 输出纹波测试(VIN=12V,VO3=4A) ---- (5'765) -- PASS
Line Voltage(V)= 12.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	0.000	*****	*****	-----
V3	4.000	50.000	0.000	20.171
V4	0.000	*****	*****	-----

STEP. 26(UUT Test seq.26) : D2D 输出纹波测试(VIN=12V,VO4=4A) ---- (5'640) -- PASS
Line Voltage(V)= 12.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	0.000	*****	*****	-----
V3	0.000	*****	*****	-----
V4	4.000	50.000	0.000	16.857

STEP. 27(UUT Test seq.27) : D2D 电压调整度(Vin=5V-12V) ---- (2'578) ----- PASS
Vin1(V)= 5.000
Vin2(V)= 12.000
Vin3(V)= 5.000
Delay(ms)= 800.000000

Vout Name	Loading (A/Ohm/V)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	0.000	1.540	1.400	1.502	1.503	1.502
V2	0.000	1.540	1.400	1.506	1.506	1.506
V3	0.000	1.540	1.400	1.501	1.501	1.501
V4	0.000	1.540	1.400	1.509	1.509	1.509

Vout Name	TR MIN(mV)	TR MAX(mV)	TR (mV)	SV MIN(%)	SV MAX(%)	SV (%)
V1	*****	22.500	0.500	*****	1.500	0.033
V2	*****	22.500	0.500	*****	1.500	0.033
V3	*****	22.500	0.400	*****	1.500	0.027
V4	*****	22.500	0.760	*****	1.500	0.050

STEP. 28(UUT Test seq.28) : D2D 负载调整度(VO1=4A) ---- (1'672) ----- PASS
Vin(V)= 12.00
Delay(ms)= 500.000

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	4.000	1.540	1.400	1.518	1.503	1.519
V2	0.000	*****	*****	1.523	1.506	1.524
V3	0.000	*****	*****	1.516	1.501	1.516
V4	0.000	*****	*****	1.584	1.509	1.584

Vout Name	TR MIN(mV)	TR MAX(mV)	TR (mV)	SI MIN(%)	SI MAX(%)	SI (%)
V1	*****	30.000	15.400	*****	2.000	1.014

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V2	*****	*****	17.100	*****	*****	1.122
V3	*****	*****	15.400	*****	*****	1.016
V4	*****	*****	74.870	*****	*****	4.727

STEP. 29(UUT Test seq. 29) : D2D 负载调整度(V02=4A) ---- (1' 704) ----- PASS
 Vin(V)= 12.00
 Delay(ms)= 500.000

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	0.000	*****	*****	1.500	1.503	1.500
V2	4.000	1.540	1.400	1.502	1.507	1.502
V3	0.000	*****	*****	1.497	1.501	1.497
V4	0.000	*****	*****	1.565	1.509	1.565

Vout Name	TR MIN (mV)	TR MAX (mV)	TR (mV)	SI MIN (%)	SI MAX (%)	SI (%)
V1	*****	*****	3.300	*****	*****	0.220
V2	*****	30.000	4.600	*****	2.000	0.306
V3	*****	*****	3.700	*****	*****	0.247
V4	*****	*****	56.250	*****	*****	3.594

STEP. 30(UUT Test seq. 30) : D2D 负载调整度(V03=4A) ---- (1' 734) ----- PASS
 Vin(V)= 12.00
 Delay(ms)= 500.000

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	0.000	*****	*****	1.500	1.503	1.500
V2	0.000	*****	*****	1.504	1.507	1.504
V3	4.000	1.540	1.400	1.497	1.501	1.497
V4	0.000	*****	*****	1.566	1.509	1.566

Vout Name	TR MIN (mV)	TR MAX (mV)	TR (mV)	SI MIN (%)	SI MAX (%)	SI (%)
V1	*****	*****	2.900	*****	*****	0.193
V2	*****	*****	2.800	*****	*****	0.186
V3	*****	30.000	4.200	*****	2.000	0.281
V4	*****	*****	57.080	*****	*****	3.645

STEP. 31(UUT Test seq. 31) : D2D 负载调整度(V04=4A) ---- (1' 765) ----- PASS
 Vin(V)= 12.00
 Delay(ms)= 500.000

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	0.000	*****	*****	1.503	1.503	1.503
V2	0.000	*****	*****	1.506	1.507	1.506
V3	0.000	*****	*****	1.501	1.501	1.500
V4	4.000	1.540	1.400	1.508	1.509	1.508

Vout Name	TR MIN (mV)	TR MAX (mV)	TR (mV)	SI MIN (%)	SI MAX (%)	SI (%)
V1	*****	*****	0.500	*****	*****	0.033
V2	*****	*****	0.500	*****	*****	0.033
V3	*****	*****	0.600	*****	*****	0.040
V4	*****	30.000	1.390	*****	2.000	0.092

常温复测:

STEP. 1(UUT Test seq. 1) : D2D 测试中调整(V1=5V 空载) ---- (1' 734) ----- PASS
 Vin (V)= 5.00
 Delay Time (ms)= 800.00
 Message =

Vout Name	Loading (A)	Vout Adjust (V)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	1.500	1.540	1.400	1.500
V2	0.000	1.500	1.540	1.400	1.515
V3	0.000	1.500	1.540	1.400	1.508
V4	0.000	1.500	1.540	1.400	1.501

STEP. 2(UUT Test seq. 2) : D2D 输入输出测试(V1=5V V1=4A) ---- (1' 343) ----- PASS
 Vin (V)= 4.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	4.000	1.540	1.400	1.508
V2	0.000	*****	*****	1.525
V3	0.000	*****	*****	1.516
V4	0.000	*****	*****	1.509

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	4.000	4.100	*****	4.001
V2	0.000	4.100	*****	0.001
V3	0.000	4.100	*****	0.000
V4	0.000	4.100	*****	0.000

Max Min Reading

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Input Current(A) ***** 1.597
Input Power(W) ***** 7.987
Output Power(W) ***** 6.034
Efficiency(%) ***** 68.000 75.555
    
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STEP. 3(UUT Test seq. 3) : D2D 输入输出测试(V1=5V V2=4A) ---- (1'344) ----- PASS
 Vin (V)= 4.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.499
V2	4.000	1.540	1.400	1.512
V3	0.000	*****	*****	1.506
V4	0.000	*****	*****	1.499

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.000
V2	4.000	4.100	*****	4.000
V3	0.000	4.100	*****	0.000
V4	0.000	4.100	*****	0.000

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Max Min Reading
Input Current(A) ***** 1.619
Input Power(W) ***** 8.096
Output Power(W) ***** 6.050
Efficiency(%) ***** 68.000 74.724
    
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STEP. 4(UUT Test seq. 4) : D2D 输入输出测试(V1=5V V3=4A) ---- (1'343) ----- PASS
 Vin (V)= 4.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.500
V2	0.000	*****	*****	1.515
V3	4.000	1.540	1.400	1.506
V4	0.000	*****	*****	1.501

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.000
V2	0.000	4.100	*****	0.001
V3	4.000	4.100	*****	4.000
V4	0.000	4.100	*****	0.000

```

Max Min Reading
Input Current(A) ***** 1.603
Input Power(W) ***** 8.014
Output Power(W) ***** 6.025
Efficiency(%) ***** 68.000 75.189
    
```

STEP. 5(UUT Test seq. 5) : D2D 输入输出测试(V1=5V V4=4A) ---- (1'359) ----- PASS
 Vin (V)= 4.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.502
V2	0.000	*****	*****	1.517
V3	0.000	*****	*****	1.510
V4	4.000	1.540	1.400	1.502

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.000
V2	0.000	4.100	*****	0.001
V3	0.000	4.100	*****	0.000
V4	4.000	4.100	*****	4.000

```

Max Min Reading
Input Current(A) ***** 1.620
Input Power(W) ***** 8.113
Output Power(W) ***** 6.011
Efficiency(%) ***** 68.000 74.092
    
```

STEP. 7(UUT Test seq. 7) : D2D 输出纹波测试(VIN=5V, V1=4A) ---- (5'765) ----- PASS
 Line Voltage(V)= 5.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	4.000	50.000	0.000	12.986
V2	0.000	*****	*****	-----
V3	0.000	*****	*****	-----
V4	0.000	*****	*****	-----

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STEP. 9(UUT Test seq. 9) : D2D 输出纹波测试(VIN=5V, V2=4A) ---- (5' 469) ----- PASS
Line Voltage(V)= 5.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	4.000	50.000	0.000	15.602
V3	0.000	*****	*****	-----
V4	0.000	*****	*****	-----

STEP. 11(UUT Test seq. 11) : D2D 输出纹波测试(VIN=5V, V3=4A) ---- (5' 500) ----- PASS
Line Voltage(V)= 5.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	0.000	*****	*****	-----
V3	4.000	50.000	0.000	13.040
V4	0.000	*****	*****	-----

STEP. 13(UUT Test seq. 13) : D2D 输出纹波测试(VIN=5V, V4=4A) ---- (5' 656) ----- PASS
Line Voltage(V)= 5.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	0.000	*****	*****	-----
V3	0.000	*****	*****	-----
V4	4.000	50.000	0.000	18.072

STEP. 14(UUT Test seq. 14) : D2D 测试中调整(VI=12V 空载) ---- (1' 985) ----- PASS
Vin (V)= 12.00
Delay Time (ms)= 800.00
Message =

Vout Name	Loading (A)	Vout Adjust (V)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	1.500	1.540	1.400	1.501
V2	0.000	1.500	1.540	1.400	1.517
V3	0.000	1.500	1.540	1.400	1.510
V4	0.000	1.500	1.540	1.400	1.504

STEP. 15(UUT Test seq. 15) : D2D 输入输出测试(VI=12V V01=4A) ---- (1' 391) ---- PASS
Vin (V)= 11.998
Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	4.000	1.540	1.400	1.511
V2	0.000	1.540	1.400	1.528
V3	0.000	1.540	1.400	1.520
V4	0.000	1.540	1.400	1.513

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	4.000	4.100	*****	4.001
V2	0.000	4.100	*****	0.001
V3	0.000	4.100	*****	0.002
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current (A)	*****	*****	0.697
Input Power (W)	*****	*****	8.366
Output Power (W)	*****	*****	6.050
Efficiency (%)	*****	68.000	72.310

STEP. 16(UUT Test seq. 16) : D2D 输入输出测试(VI=12V V02=4A) ---- (1' 344) ---- PASS
Vin (V)= 11.997
Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.498
V2	4.000	1.540	1.400	1.511
V3	0.000	*****	*****	1.506
V4	0.000	*****	*****	1.499

Vout	Loading	Iout	Iout	Iout

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Name	(A)	Max(A)	Min(A)	(A)
V1	0.000	4.100	*****	0.001
V2	4.000	4.100	*****	4.000
V3	0.000	4.100	*****	0.000
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current(A)	*****	*****	0.696
Input Power(W)	*****	*****	8.344
Output Power(W)	*****	*****	6.048
Efficiency(%)	*****	68.000	72.479

STEP. 17(UUT Test seq. 17) : D2D 输入输出测试(V1=12V V03=4A) ---- (1'344) --- PASS
 Vin (V)= 11.998
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.499
V2	0.000	*****	*****	1.514
V3	4.000	1.540	1.400	1.506
V4	0.000	*****	*****	1.501

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.001
V2	0.000	4.100	*****	0.001
V3	4.000	4.100	*****	4.000
V4	0.000	4.100	*****	0.000

	Max	Min	Reading
Input Current(A)	*****	*****	0.694
Input Power(W)	*****	*****	8.325
Output Power(W)	*****	*****	6.030
Efficiency(%)	*****	68.000	72.430

STEP. 18(UUT Test seq. 18) : D2D 输入输出测试(V1=12V V04=4A) ---- (1'343) --- PASS
 Vin (V)= 11.997
 Delay Time (ms)= 800.00

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout (V)
V1	0.000	*****	*****	1.501
V2	0.000	*****	*****	1.516
V3	0.000	*****	*****	1.510
V4	4.000	1.540	1.400	1.503

Vout Name	Loading (A)	Iout Max (A)	Iout Min (A)	Iout (A)
V1	0.000	4.100	*****	0.001
V2	0.000	4.100	*****	0.001
V3	0.000	4.100	*****	0.001
V4	4.000	4.100	*****	4.000

	Max	Min	Reading
Input Current(A)	*****	*****	0.689
Input Power(W)	*****	*****	8.268
Output Power(W)	*****	*****	6.015
Efficiency(%)	*****	68.000	72.747

STEP. 20(UUT Test seq. 20) : D2D 输出纹波测试(VIN=12V, V01=4A) ---- (5'860) -- PASS
 Line Voltage(V)= 12.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	4.000	50.000	0.000	11.136
V2	0.000	*****	*****	-----
V3	0.000	*****	*****	-----
V4	0.000	*****	*****	-----

STEP. 22(UUT Test seq. 22) : D2D 输出纹波测试(VIN=12V, V02=4A) ---- (5'672) -- PASS
 Line Voltage(V)= 12.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	4.000	50.000	0.000	15.891
V3	0.000	*****	*****	-----
V4	0.000	*****	*****	-----

STEP. 24(UUT Test seq. 24) : D2D 输出纹波测试(VIN=12V, V03=4A) ---- (5'656) -- PASS
 Line Voltage(V)= 12.00

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Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	0.000	*****	*****	-----
V3	4.000	50.000	0.000	18.670
V4	0.000	*****	*****	-----

STEP. 26 (UT Test seq. 26) : D2D 输出纹波测试 (VIN=12V, VO4=4A) ---- (5' 766) --- PASS
Line Voltage (V) = 12.00

Vout Name	Loading (A)	Vpp Max (mV)	Vpp Min (mV)	Vpp Reading (mV)
V1	0.000	*****	*****	-----
V2	0.000	*****	*****	-----
V3	0.000	*****	*****	-----
V4	4.000	50.000	0.000	20.359

STEP. 27 (UT Test seq. 27) : D2D 电压调整度 (Vin=5V-12V) ---- (2' 562) ----- PASS
Vin1 (V) = 5.000
Vin2 (V) = 12.000
Vin3 (V) = 5.000
Delay (ms) = 800.000000

Vout Name	Loading (A/Ohm/V)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	0.000	1.540	1.400	1.502	1.503	1.502
V2	0.000	1.540	1.400	1.518	1.518	1.518
V3	0.000	1.540	1.400	1.512	1.512	1.512
V4	0.000	1.540	1.400	1.505	1.506	1.505

Vout Name	TR MIN (mV)	TR MAX (mV)	TR (mV)	SV MIN (%)	SV MAX (%)	SV (%)
V1	*****	22.500	0.400	*****	1.500	0.027
V2	*****	22.500	0.400	*****	1.500	0.026
V3	*****	22.500	0.300	*****	1.500	0.020
V4	*****	22.500	0.690	*****	1.500	0.046

STEP. 28 (UT Test seq. 28) : D2D 负载调整度 (VO1=4A) ---- (1' 641) ----- PASS
Vin (V) = 12.00
Delay (ms) = 500.000

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	4.000	1.540	1.400	1.512	1.503	1.513
V2	0.000	*****	*****	1.529	1.518	1.529
V3	0.000	*****	*****	1.522	1.512	1.522
V4	0.000	*****	*****	1.575	1.505	1.575

Vout Name	TR MIN (mV)	TR MAX (mV)	TR (mV)	SI MIN (%)	SI MAX (%)	SI (%)
V1	*****	30.000	9.500	*****	2.000	0.628
V2	*****	*****	11.200	*****	*****	0.732
V3	*****	*****	10.200	*****	*****	0.670
V4	*****	*****	69.430	*****	*****	4.409

STEP. 29 (UT Test seq. 29) : D2D 负载调整度 (VO2=4A) ---- (1' 672) ----- PASS
Vin (V) = 12.00
Delay (ms) = 500.000

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	0.000	*****	*****	1.499	1.503	1.498
V2	4.000	1.540	1.400	1.512	1.518	1.512
V3	0.000	*****	*****	1.507	1.512	1.507
V4	0.000	*****	*****	1.560	1.505	1.560

Vout Name	TR MIN (mV)	TR MAX (mV)	TR (mV)	SI MIN (%)	SI MAX (%)	SI (%)
V1	*****	*****	4.400	*****	*****	0.294
V2	*****	30.000	5.800	*****	2.000	0.384
V3	*****	*****	4.600	*****	*****	0.305
V4	*****	*****	55.380	*****	*****	3.549

STEP. 30 (UT Test seq. 30) : D2D 负载调整度 (VO3=4A) ---- (1' 657) ----- PASS
Vin (V) = 12.00
Delay (ms) = 500.000

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	0.000	*****	*****	1.500	1.503	1.500
V2	0.000	*****	*****	1.515	1.518	1.515
V3	4.000	1.540	1.400	1.508	1.512	1.508
V4	0.000	*****	*****	1.562	1.505	1.562

Vout Name	TR MIN (mV)	TR MAX (mV)	TR (mV)	SI MIN (%)	SI MAX (%)	SI (%)
V1	*****	*****	*****	*****	*****	*****
V2	*****	*****	*****	*****	*****	*****
V3	*****	*****	*****	*****	*****	*****
V4	*****	*****	*****	*****	*****	*****

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V1	*****	*****	3.100	*****	*****	0.207
V2	*****	*****	2.900	*****	*****	0.191
V3	*****	30.000	4.300	*****	2.000	0.285
V4	*****	*****	56.670	*****	*****	3.628

STEP. 31 (UUT Test seq. 31) : D2D 负载调整度 (V04=4A) ---- (1' 640) ----- PASS

Vin(V) = 12.00
 Delay(ms) = 500.000

Vout Name	Loading (A)	Vout Max (V)	Vout Min (V)	Vout1 (V)	Vout2 (V)	Vout3 (V)
V1	0.000	*****	*****	1.502	1.503	1.502
V2	0.000	*****	*****	1.517	1.518	1.517
V3	0.000	*****	*****	1.511	1.512	1.511
V4	4.000	1.540	1.400	1.504	1.505	1.504

Vout Name	TR MIN (mV)	TR MAX (mV)	TR (mV)	SI MIN (%)	SI MAX (%)	SI (%)
V1	*****	*****	0.900	*****	*****	0.060
V2	*****	*****	0.900	*****	*****	0.059
V3	*****	*****	0.900	*****	*****	0.060
V4	*****	30.000	1.770	*****	2.000	0.118

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