

MESSRS :

Reliability Test Data

CUSTOMER'S PRODUCT NAME:

TDK-Lambda
PRODUCT NAME: DC/DC CONVERTER UNIT ALD-605012Px131



TDK-Lambda Corporation

PREPARED BY	APPROVED BY	AUTHORIZED BY
<i>Jun.27,2012 Y.Miyaoka</i>	<i>Jun.27,2012 Y.Kimura</i>	<i>Jun.27,2012 H.Masuoka</i>

[1] Test Sample

Vibration Test and Shock Test : ALD-605012PJ131 3pcs. for each
 Other Test Items : ALD-605012PJ131 5pcs. for each

[2] Test Condition

Input Voltage Vin : 12.0 [V]
 Dimming Conditions Vbr : 2.0 [V] Io1~6(TOTAL)=150mA
 V_{PWM} : 100 [%] Max. Brightness
 Load RL : 600 [Ω]

[3] Result

The test result is shown on the next page. There was no problem.
 The measurement condition and Instrument depends on the following.

Measurement Condition

Input Voltage Vin : 12.0 [V]
 Dimming Conditions Vbr : 3.8 [V] Max. Brightness
 V_{PWM} : 100 [%] Max. Brightness
 Load RL : 600 [Ω]
 Ambient temp Ta : 25 [°C]

Measuring Instrument

Power supply : PAR160A(KIKUSUI) or equivalent
 Input DC current meter : R6840(ADVANTEST) or equivalent
 Output DC current meter : 187 (FLUKE) or equivalent

[4] Test Item

Item	Condition	Judgement Standard
High Temperature Continuous Operation	85°C , 500hrs.	Electrical and appearance should be in the spec.
Heat Shock	-40°C <-> 85°C 30min./each 100cycles	
Humidity Environment Off and on Operation	60°C 90%R.H. On 1hr / Off 3hrs. 500cycles.	
Vibration	5~10Hz Amplitude 10mm 10~200Hz Accerarated Verocity 21.6m/s ² (2.2G) Log Sweep :10min. X,Y,Z direction 60min/each total 3hrs.	
Shock	588m/s ² (60G) 11ms Half-sine wave once each axis X,Y,Z,-X,-Y,-Z total 6times	

TDK-Lambda	No.	MATERIALS NAME	QU	MATERIAL	REMARK
	PRODUCT NAME or MODEL,TITLE				
	DC/DC CONVERTER UNIT ALD-605012Px131				
	NAME OF DRAWING		DRAWING No.		PAGE
Reliability Test Data		CTR-4388-X		1	

High Temperature Continuous Operation

	No.	Iin [A]	Iout1 [mA]	Iout2 [mA]	Iout3 [mA]	Iout4 [mA]	Iout5 [mA]	Iout6 [mA]
Before Test	1	1.079	49.30	49.41	49.51	50.02	49.75	49.31
	2	1.105	50.07	49.80	50.46	50.75	50.01	49.94
	3	1.070	49.28	49.35	49.64	49.49	49.65	49.06
	4	1.076	48.93	49.48	49.36	49.74	49.56	49.52
	5	1.070	49.31	49.54	49.58	49.67	49.67	49.50
After Test	1	1.062	49.70	49.03	48.87	48.95	49.01	48.11
	2	1.050	49.50	48.90	48.66	48.70	48.88	48.43
	3	1.064	50.56	50.03	49.85	49.94	50.01	49.95
	4	1.068	50.49	49.67	49.81	50.20	50.13	49.92
	5	1.080	50.86	49.84	50.40	50.41	50.28	49.81
Supper		1.20	60.0	60.0	60.0	60.0	60.0	60.0
Slower		-	40.0	40.0	40.0	40.0	40.0	40.0
Judgement		OK	OK	OK	OK	OK	OK	OK

Heat Shock

	No.	Iin [A]	Iout1 [mA]	Iout2 [mA]	Iout3 [mA]	Iout4 [mA]	Iout5 [mA]	Iout6 [mA]
Before Test	6	1.079	49.30	49.41	49.51	50.02	49.75	49.31
	7	1.105	50.07	49.80	50.46	50.75	50.01	49.94
	8	1.070	49.28	49.35	49.64	49.49	49.65	49.06
	9	1.076	48.93	49.48	49.36	49.74	49.56	49.52
	10	1.070	49.31	49.54	49.58	49.67	49.67	49.50
After Test	6	1.099	49.99	50.14	50.32	50.46	50.11	50.23
	7	1.105	50.04	49.77	50.43	50.72	49.98	49.91
	8	1.070	49.27	49.34	49.63	49.49	49.65	49.05
	9	1.075	48.87	49.46	49.34	49.72	49.55	49.50
	10	1.069	49.31	49.53	49.57	49.66	49.66	49.49
Supper		1.20	60.0	60.0	60.0	60.0	60.0	60.0
Slower		-	40.0	40.0	40.0	40.0	40.0	40.0
Judgement		OK	OK	OK	OK	OK	OK	OK

Humidity Environment Off and on Operation

	No.	Iin [A]	Iout1 [mA]	Iout2 [mA]	Iout3 [mA]	Iout4 [mA]	Iout5 [mA]	Iout6 [mA]
Before Test	11	1.071	50.11	49.16	49.85	49.19	49.38	49.55
	12	1.094	50.62	49.68	50.00	50.03	50.21	49.57
	13	1.075	50.45	49.94	49.83	49.89	49.48	49.33
	14	1.109	50.99	49.92	50.37	49.99	50.63	50.08
	15	1.109	51.01	49.93	50.38	50.01	50.65	50.11
After Test	11	1.069	50.09	49.14	49.83	49.18	49.37	48.96
	12	1.093	50.60	49.67	50.00	50.02	50.20	49.56
	13	1.086	50.46	49.94	49.83	50.09	49.54	49.38
	14	1.084	50.17	49.45	49.40	49.97	49.55	49.57
	15	1.109	51.00	49.93	50.38	50.00	50.64	50.10
Supper		1.20	60.0	60.0	60.0	60.0	60.0	60.0
Slower		-	40.0	40.0	40.0	40.0	40.0	40.0
Judgement		OK	OK	OK	OK	OK	OK	OK

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TDK-Lambda	NAME OF DRAWING		DRAWING No.	PAGE
	Reliability Test Data		CTR-4388-X	2

<The drawings may be changed without any notice.>

Vibration -> Shock

	No.	Iin [A]	Iout1 [mA]	Iout2 [mA]	Iout3 [mA]	Iout4 [mA]	Iout5 [mA]	Iout6 [mA]
Before Test	16	1.122	51.19	50.17	50.18	50.73	50.29	50.49
	17	1.093	50.45	49.58	50.21	50.25	50.15	49.75
	18	1.087	50.13	49.87	49.41	50.18	49.63	49.46
After Test	16	1.122	51.19	50.16	50.17	50.72	50.29	50.49
	17	1.094	50.48	49.61	50.23	50.28	50.18	49.79
	18	1.091	50.17	50.01	49.45	50.21	49.66	49.49
Supper		1.20	60.0	60.0	60.0	60.0	60.0	60.0
Slower		-	40.0	40.0	40.0	40.0	40.0	40.0
Judgement		OK	OK	OK	OK	OK	OK	OK

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	Reliability Test Data		CTR-4388-X	3

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