

MESSRS :

Reliability Test Data

CUSTOMER'S PRODUCT NAME:

TDK-Lambda
PRODUCT NAME: DC/DC CONVERTER UNIT ALD-310012PJ125



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

ALD-310012PJ125 3pcs. for each

[2] Test Condition

Input Voltage Vin : 12.0 [V]
 Dimming Conditions Vbr : 2.5 [V] Max. Brightness
 Rbr : 10 [kΩ] Max. Brightness
 Load RL : 380 [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 : 2.5 [V] Max. Brightness
 Rbr : 10 [kΩ] Max. Brightness
 Load RL : 380 [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
 Frequency counter : 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 Accelerated Velocity 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	

	No.	MATERIALS NAME	QU	MATERIAL	REMARK
	PRODUCT NAME or MODEL, TITLE				
	DC/DC CONVERTER UNIT ALD-310012PJ125				
TDK-Lambda	NAME OF DRAWING		DRAWING No.		PAGE
	Reliability Test Data		CTR-4386-X		1

High Temperature Continuous Operation

	No.	Iin [A]	Iout1 [mA]	Iout2 [mA]	Iout3 [mA]	F [Hz]
Before Test	1	1.02	99.1	99.7	99.3	225.0
	2	1.01	98.8	99.1	98.3	211.0
	3	1.00	98.5	99.0	98.5	234.0
After Test	1	1.06	99.1	99.5	99.3	228.0
	2	1.06	98.2	98.8	98.7	216.0
	3	1.05	97.7	98.2	98.9	233.0
Supper		1.50	115.0	115.0	115.0	270.0
Slower		-	85.0	85.0	85.0	180.0
Judgement		OK	OK	OK	OK	OK

Heat Shock

	No.	Iin [A]	Iout1-1 [mA]	Iout2-1 [mA]	Iout2-1 [mA]	F [Hz]
Before Test	4	1.11	100.4	101.3	101.0	220.0
	5	1.04	98.0	97.6	97.9	223.0
	6	1.05	98.4	99.0	98.0	233.0
After Test	4	1.11	100.7	101.2	100.1	219.0
	5	1.05	97.3	97.5	97.7	222.0
	6	1.06	97.4	98.3	97.7	243.0
Supper		1.50	115.0	115.0	115.0	270.0
Slower		-	85.0	85.0	85.0	180.0
Judgement		OK	OK	OK	OK	OK

Humidity Environment Off and on Operation

	No.	Iin [A]	Iout1-1 [mA]	Iout2-1 [mA]	Iout2-1 [mA]	F [Hz]
Before Test	7	1.04	99.5	100.1	99.9	234.0
	8	1.00	98.0	98.4	98.2	220.0
	9	1.02	97.8	98.5	98.5	220.0
After Test	7	1.04	99.8	100.2	100.0	235.0
	8	1.02	98.1	98.5	98.5	220.0
	9	1.01	97.2	98.4	99.5	225.0
Supper		1.50	115.0	115.0	115.0	270.0
Slower		-	85.0	85.0	85.0	180.0
Judgement		OK	OK	OK	OK	OK

Vibration -> Shock

	No.	Iin [A]	Iout1-1 [mA]	Iout2-1 [mA]	Iout2-1 [mA]	F [Hz]
Before Test	10	1.03	99.7	99.7	99.6	240.0
	11	1.00	97.8	97.9	97.3	228.0
	12	1.05	99.9	101.3	100.4	222.0
After Test	10	1.07	99.9	100.4	100.1	238.0
	11	1.04	97.9	98.6	98.1	228.0
	12	1.09	99.9	100.7	99.4	228.0
Supper		1.50	115.0	115.0	115.0	270.0
Slower		-	85.0	85.0	85.0	180.0
Judgement		OK	OK	OK	OK	OK

No.	MATERIALS NAME	QU	MATERIAL	REMARK
PRODUCT NAME or MODEL, TITLE				
DC/DC CONVERTER UNIT ALD-310012PJ125				
TDK-Lambda	NAME OF DRAWING		DRAWING No.	PAGE
	Reliability Test Data		CTR-4386-X	2