



# Test Report : DCWN06C-15

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6W DIP Package DC-DC Regulated Converter

## ■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

## ■ SAFETY TEST

Safety Test

## ■ RELIABILITY TEST

Environment Test

Other

## DESIGN VERIFY TEST

### OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-1.5 % ~ +1.5 % (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	V1: -0.59 % V2: -0.49%	P
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	V1: 33mV V2: 30mV	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:36VDC~72VDC O/P:FULL LOAD Ta:25°C	V1: -0.034% ~ +0.027% V2: -0.047% ~ +0.027%	P
4	LOAD REGULATION	-1.0% ~ +1.0% (Max)	I/P:48VDC O/P:25% LOAD~FULL LOAD Ta:25°C	V1: -0.04% ~ +0.01% V2: -0.04% ~ +0.03%	P

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	36 VDC ~72 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	31.29VDC ~72.0 VDC	P
2	EFFICIENCY	87 % (Typ)	I/P:48VDC O/P:FULL LOAD Ta:25°C	87.5%	P
3	DC CURRENT	144 mA / FULL LOAD (Max) 10 mA / NO LOAD (Max)	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	142 mA / FULL LOAD 4.0 mA / NO LOAD	P

### PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	CONTINUOUS	I/P:72VDC O/P:FULL LOAD Ta:25°C	HICCUP MODE AUTO-RECOVER	P
2	OVER LOAD PROTECTION	120% ~250%	I/P:48VDC O/P:TESTING Ta:25°C	175.6% HICCUP MODE AUTO-RECOVER	P
3	Under Voltage Lockout	Power Up 34Vdc Power Down 31Vdc	I/P:48VDC O/P:NO LOAD Ta:25°C	Power Up 32.58Vdc Power Down 31.29Vdc	P

## SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:3K VDC/min	I/P-O/P:3K VDC/min Ta:25°C	I/P-O/P: 0.002 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P:500 VDC Ta:25°C	I/P-O/P>100MΩ NO DAMAGE	P

## RELIABILITY TEST

### ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT								
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 8HRS I/P:48VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:48VDC O/P:FULL LOAD Ta=80°C	<table border="1" data-bbox="651 1055 1147 1149"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>46.4°C</td> <td>100.0°C</td> </tr> </tbody> </table>	NO	Position	1	2	1	CASE	46.4°C	100.0°C		P
NO	Position	1	2										
1	CASE	46.4°C	100.0°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOURS	I/P:48VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P								

### OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 0.578 M.T.B.F : 1729389HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	VINCENT ZENG