



Test Report : RDDW08F-05

8W DIP Package Reliable Railway DC-DC Converter

■ DESIGN VERIFY TEST

Output Function Test
Input Function Test
Protection Function Test
Control 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:24VDC O/P:FULL LOAD Ta:25°C	V1 : -0.18% V2 : +0.36%	P
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1 : 12 mV V2 : 13 mV	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:9VDC-36VDC O/P:FULL LOAD Ta:25°C	V1 : -0.10% ~ +0.01% V2 : -0.01% ~ +0.04%	P
4	LOAD REGULATION	-1.0% ~ +1.0% (Max)	I/P:24VDC O/P:0% LOAD-FULL LOAD Ta:25°C	V1 : -0.11% ~ +0.18% V2 : -0.04% ~ +0.14%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	9 VDC ~36 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.12 ~36.0 VDC	P
2	EFFICIENCY	82% (Typ)	I/P:24VDC O/P:FULL LOAD Ta:25°C	85.2%	P
3	DC CURRENT	406 mA / FULL LOAD (Max) 10 mA / NO LOAD (Max)	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	391.3mA / FULL LOAD 6.6 mA / NO LOAD	P
4	UNDER VOLTAGE LOCKOUT	POWER UP 8.8VDC (Typ) POWER DOWN 8.0VDC (Typ)	I/P:TESTING O/P:FULL LOAD Ta:25°C	POWER UP 8.45VDC POWER DOWN 8.03VDC	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	CONTINUOUS	I/P:36VDC O/P:FULL LOAD Ta:25°C	HICCUP MODE AUTO-RECOVER	P
2	OVER LOAD PROTECTION	120% ~ 180%	I/P:24VDC O/P:TESTING Ta:25°C	174.0% HICCUP MODE AUTO-RECOVER	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	Power on : R.C - Vin >3.5Vdc~ 36Vdc or Open Power off : R.C - Vin <1.2Vdc or Short	I/P:24VDC O/P:FULL LOAD Ta:25°C	Power on : R.C>2.2Vdc or Open Power off : R.C<1.8Vdc or Short	P

SAFETY TEST

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1.5K VDC/min	I/P-O/P:1.5K VDC/min Ta:25°C	I/P-O/P: 0.002mA 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:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:24VDC O/P:FULL LOAD Ta=71°C			P								
		<table border="1"> <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>51.6°C</td> <td>93.0°C</td> </tr> </tbody> </table>				NO	Position	1	2	1	CASE	51.6°C	93.0°C
NO	Position	1	2										
1	CASE	51.6°C	93.0°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:24VDC 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 : 0.814 M.T.B.F : 1228980HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	VINCENT ZENG