



Test Report : MDD01N-12

1W SIP Package DC-DC Medical Grade Unregulated Converter

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

■ SAFETY TEST

Safety Test

■ RELIABILITY TEST

Environment Test

Other Test

DESIGN VERIFY TEST
OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-5%~+5% (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1 +1.52% V2 +1.69%	P
2	RIPPLE & NOISE	75 mVp-p (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1 37mV V2 35mV	P
3	LINE REGULATION	-12% ~ +12% (Max)	I/P:21.6VDC~26.4VDC O/P:FULL LOAD Ta:25°C	V1 -10.48% ~ +10.75% V2 -10.61% ~ +10.58%	P
4	LOAD REGULATION	-10% ~ +10% (Max)	I/P:24VDC O/P:MINI LOAD-FULL LOAD Ta:25°C	V1 -1.18% ~ +1.39% V2 -1.14% ~ +1.34%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	77 % (Typ)	I/P:24VDC O/P:FULL LOAD Ta:25°C	77.4%	P
2	DC CURRENT	56 mA / FULL LOAD (Max) 10 mA / NO LOAD (Max)	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	55.55mA / FULL LOAD 9.48mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	MOMENTARY 3sec. max	I/P:24VDC O/P:FULL LOAD Ta:25°C	NO DAMAGE OK	P

SAFETY TEST
SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:6000 VDC/min	I/P-O/P:6000 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
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■ RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT								
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 8 HRS I/P:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8 HRS I/P:24VDC O/P:FULL LOAD Ta=85°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>44.6°C</td> <td>98.2°C</td> </tr> </tbody> </table>				NO	Position	1	2	1	CASE	44.6°C	98.2°C
NO	Position	1	2										
1	CASE	44.6°C	98.2°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 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,Full Load TOTAL FAILURE RATE : 0.2297 M.T.B.F : 4354000 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN	VINCENT ZENG