



Test Report : SMA01N-05

1W DC-DC Unregulated Single Output Converter

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

■ SAFETY TEST

Safety Test

■ RELIABILITY TEST

Environment Test

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|------------------|-------------------|---|------------------|---------|
| 1 | VOLTAGE ACCURACY | -2%~+2% (Max) | I/P:24VDC O/P:100% LOAD Ta:25°C | -0.10% | P |
| 2 | RIPPLE & NOISE | 100mVp-p (Max) | I/P:24VDC O/P:FULL LOAD Ta:25°C | 24 mV | P |
| 3 | LINE REGULATION | -12%~+12% (Max) | I/P:21.6VDC~26.4VDC O/P:FULL LOAD Ta:25°C | -11.01% ~ +9.96% | P |
| 4 | LOAD REGULATION | -8.0%~+8.0% (Max) | I/P:24VDC O/P:MIN-FULL LOAD Ta:25°C | -2.23% ~ +1.57% | P |

INPUT FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|------------|--|--|-------------------------------------|---------|
| 1 | EFFICIENCY | 77% (Typ) | I/P:24VDC O/P:FULL LOAD Ta:25°C | 77.08% | P |
| 2 | DC CURRENT | 57 mA / FULL LOAD (Max) 11 mA / NO LOAD (Max) | I/P:24VDC O/P:NO / FULL LOAD Ta:25°C | 54 mA / FULL LOAD 9 mA / NO LOAD | P |

SAFETY TEST

SAFETY TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|----------------------|----------------------|---------------------------------|------------------------------|---------|
| 1 | WITHSTAND VOLTAGE | I/P-O/P:1500 VDC/min | I/P-O/P:1500 VDC/min Ta:25°C | I/P-O/P: 0.02mA 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 : 6HRS I/P:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 16HRS I/P:24VDC O/P:FULL LOAD Ta=85°C | | | P | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>P/N</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>CENTER</td> <td>49.4°C</td> <td>100.8°C</td> </tr> </tbody> </table> | NO | Position | | P/N | 1 | 2 | 1 | CASE | CENTER | 49.4°C | 100.8°C | |
| NO | Position | P/N | 1 | 2 | | | | | | | | | | |
| 1 | CASE | CENTER | 49.4°C | 100.8°C | | | | | | | | | | |
| 2 | LOW TEMPERATURE TURN ON TEST | TURN ON AFTER 3 HOURS | I/P:24VDC O/P: 100% LOAD Ta= -40°C | TEST : OK | P | | | | | | | | | |

| DATE | SAMPLE | TEST RESULT | TESTER | APPROVAL |
|----------|----------------|-------------|--------|--------------|
| 2009.9.5 | PRODUCT SAMPLE | PASS | PETER | VINCENT ZENG |