



# Test Report : GS05E-USB

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5W AC-DC Industrial Adaptor

## ■ 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	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	80mVp-p (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	30mVp-p	P
2	VOLTAGE TOLERANCE	-4% ~ +4% (Max)	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD Ta:25°C	-2.8% ~ +0.8%	P
3	LINE REGULATION	-1% ~ +1% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD Ta:25°C	-0% ~ +0%	P
4	LOAD REGULATION	-4% ~ +4% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD Ta:25°C	-1.22% ~ +2.44%	P
5	SET UP TIME	300 mS	I/P:230VAC O/P:FULL LOAD Ta:25°C	160 mS	P
6	RISE TIME	20 mS	I/P:230VAC O/P:FULL LOAD Ta:25°C	21.5 mS	P
7	HOLD UP TIME	50 mS (Min)	I/P:115VAC O/P:FULL LOAD Ta:25°C	86.4 mS	P

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE RANGE	90VAC ~ 264VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	70V ~ 264V	P
2	FREQUENCY RANGE	50HZ - 60HZ (Typ) NO DAMAGE OSC	I/P: 100VAC ~ 240VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	71% (Typ)	I/P:230VAC O/P:FULL LOAD Ta:25°C	72.21%	P
4	AVERAGE EFFICIENCY	68.17% (LEVEL V)	I/P:115/230VAC O/P:25%、50%、75%、100% LOAD Ta:25°C	72.58% (115VAC) 74.26% (230VAC)	P
5	AC CURRENT	0.15A (Max)	I/P: 100VAC O/P:FULL LOAD Ta:25°C	0.127A	P
6	NO LOAD POWER CONSUMPTION	< 0.3W (Max)	I/P:230VAC O/P: NO LOAD Ta:25°C	0.02W	P

7	INRUSH CURRENT	< 35A COLD START	I/P:230VAC O/P:FULL LOAD Ta:25°C	22.58A	P
8	LEAKAGE CURRENT	< 0.25mA	I/P:240VAC O/P:Min LOAD Ta:25°C	L-FG: 0.02mA N-FG: 0.02mA	P

## PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105 ~ 135%	I/P:230VAC O/P:TESTING Ta:25°C	112% HICCUP MODE RESET : AUTO RECOVER	P
2	OVER VOLTAGE PROTECTION	105 ~ 200%	I/P:230VAC O/P:MIN LOAD Ta:25°C	140%	P
3	OVER TEMPERATURE PROTECTION	142°C / U1 (Max)	I/P:230VAC O/P:100% LOAD Ta:TESTING	142°C / U1	P
4	SHORT PROTECTION	SHORT OUTPUT 1 HOUR NO DAMAGE	I/P:264VAC O/P:FULL LOAD Ta:25°C	NO DAMAGE HICCUP MODE RESET AUTO RECOVER	P

## ■ SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:4242 VDC/min	I/P-O/P:4242 VDC/min Ta:25°C	I/P-O/P: 0.03uA 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:230VAC O/P:100% LOAD Ta=25°C 2. ROOM AMBIENT BURN-IN : 6HRS I/P:115VAC O/P:100% LOAD Ta=25°C	<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>I/P C1</td> <td>54.0°C</td> <td>57.2°C</td> </tr> <tr> <td>2</td> <td>Q1</td> <td>71.0°C</td> <td>70.3°C</td> </tr> <tr> <td>3</td> <td>U1</td> <td>67.0°C</td> <td>71.3°C</td> </tr> <tr> <td>4</td> <td>BD1</td> <td>53.2°C</td> <td>58.1°C</td> </tr> <tr> <td>5</td> <td>T1</td> <td>59.2°C</td> <td>62.9°C</td> </tr> <tr> <td>6</td> <td>O/P D3</td> <td>83.9°C</td> <td>84.2°C</td> </tr> <tr> <td>7</td> <td>O/P C6</td> <td>64.4°C</td> <td>65.0°C</td> </tr> <tr> <td>8</td> <td>CASE</td> <td>48.5°C</td> <td>52.5°C</td> </tr> </tbody> </table>	NO	Position	1	2	1	I/P C1	54.0°C	57.2°C	2	Q1	71.0°C	70.3°C	3	U1	67.0°C	71.3°C	4	BD1	53.2°C	58.1°C	5	T1	59.2°C	62.9°C	6	O/P D3	83.9°C	84.2°C	7	O/P C6	64.4°C	65.0°C	8	CASE	48.5°C	52.5°C		P
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2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOURS	I/P : 230VAC O/P : 100% LOAD Ta= -20°C	TEST : OK	P																																				

### OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C6 IS THE MOST CRITICAL COMPONENT I/P:230 VAC O/P:100% LOAD Ta=25°C LIFE TIME= 66717HRS I/P:115 VAC O/P:100% LOAD Ta=25°C LIFE TIME= 64000HRS			P
2	MTBF	MIL-KDBK-217F NOTICES 2 PARTS COUNT TOTAL FAILURE RATE : 0.886321 M.T.B.F : 1128259HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	PETER CHENG	VINCENT TSENG