



Test Report: PV-SMI-1000

1000VA Microinverter

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Control Function Test

■ SAFETY & E.M.C. TEST

Safety Test

E.M.C. Test

■ RELIABILITY TEST

ENVIRONMENT TEST

■ DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE	230V@50Hz	I/P: NONE O/P: FULL LOAD Ta: 25°C	1040W for A serie
2	FREQUENCE	230V@50Hz ±0. 5Hz	I/P: NONE O/P: FULL LOAD Ta: 25°C	50. 03Hz
3	THD	<5%	I/P: NONE O/P: FULL LOAD Ta:25°C	3. 38%
4	EFF	97. 3%	I/P: 48V O/P: 75% LOAD Ta: 25°C	97. 5%
5	PF	0. 99	I/P: NONE O/P: FULL LOAD Ta:25°C	0. 9975
6	LOSS AT NIGHT	110mW	I/P: 0V O/P: NO LOAD Ta:25°C	56mW
7	TOTLE POWER	1000W	I/P: NONE O/P:1000W Ta:25°C	Test: OK

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	24~60V	I/P: Testing O/P:NO LOAD Ta:25°C	22. 6V~60V
2	INPUT CURRENT	18A*2	I/P: 35 Vdc O/P: Ta: 25°C	20A
3	PV POWER	750W*2	I/P: 35 Vdc O/P: FULL LOAD Ta: 25°C	700W
4	MPPT VOLTAGE RANGGE	22~55Vdc	I/P: Testing O/P:NO LOAD Ta:25°C	21V~58Vdc

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT OVER VOLTAGE	>60Vdc	I/P: Testing O/P: Battery Ta:25°C	68V
2	INPUT UNDERVOLTAGE	<24Vdc	I/P: Testing O/P: Battery Ta:25°C	22. 6V
3	OUTPUT OVER VOLTAGE	Power grid voltage>253VAC Shut down after 10 minutes Power grid voltage>287. 5VAC Shut down immediately	I/P: Testing O/P: Battery Ta:25°C	Test: OK

4	OUTPUT UNDERVOLTAGE	Power grid voltage<184VAC Shut down after 10 minutes; Power grid voltage<108VAC Shut down immediately	I/P: Testing O/P: Battery Ta:25°C	Test: OK
5	OUTPUT UNDERFREQUENCY	Power grid frequency<47.5Hz Shut down o/p output	I/P: Testing O/P: Battery Ta:25°C	Test: OK
6	OUTPUT OVER FREQUENCY	Power grid frequency>51.5Hz Shut down o/p output	I/P: Testing O/P: Battery Ta:25°C	Test: OK
6	SHORT PROTECTION FOR AC OUTPUT	Output shut down, recovers automatically after fault condition is removed	I/P: Testing O/P: Battery Ta:25°C	Test: OK

■ SAFETY& E.M.C. TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P: 4KVDC O/P-FG: 4KVDC	Primary circuit to Enclosure: 4KVDC Primary circuit to secondary circuit : 4KVDC Ta:25°C	Primary circuit to Enclosure: OK Primary circuit to secondary circuit: OK NO DAMAGE
2	Test by certified Lab & Test Report Prepare Any contradictions of the test results, please refer to the latest SAFETY test report			

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	CONDUCTION	EN301 489-17 V3.2.4, EN IEC61000-6-3:2021 CLASS B	I/P:40VDC O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab
2	RADIATION	EN301 489-17 V3.2.4, EN IEC61000-6-3:2021 CLASS B	I/P:40VDC O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab
3	E.S.D	EN 301 489-17 V3.2.4, ,EN 61000-6-1:2019 AIR : 8KV / Contact : 4KV	I/P:40VDC O/P:FULL LOAD Ta:25°C	■CRITERIA B
4	E.F.T	EN 301 489-1 V2.2.3:2019, EN 61000-4-4: 2012 INPUT : 1KV	I/P:40VDC O/P:FULL LOAD Ta:25°C	■CRITERIA B
	Surge	EN 301 489-1 V2.2.3:2019, EN 61000-4-4: 2012 2KV/Line-Line,2KV/Line-Earth	I/P:40VDC O/P:FULL LOAD Ta:25°C	■CRITERIA B

5	Test by certified Lab & Test Report Prepare Any contradictions of the test results, please refer to the latest EMC test report
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■ RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT																																				
1	TEMPERATURE RISE TEST	MODEL : PV-SMI-1000A HIGH AMBIENT BURN-IN : 2 HRS I/P : 55VDC O/P : FULL LOAD Ta=65°C <table><thead><tr><th>NO</th><th>Position</th><th>HIGH AMBIENT Ta=50°C</th></tr></thead><tbody><tr><td>1</td><td>T2</td><td>80.1°C</td></tr><tr><td>2</td><td>MT1</td><td>75.5°C</td></tr><tr><td>3</td><td>L3</td><td>75.8°C</td></tr><tr><td>4</td><td>L4</td><td>78.5°C</td></tr><tr><td>5</td><td>U13</td><td>77.6°C</td></tr><tr><td>6</td><td>Q3</td><td>77.5°C</td></tr><tr><td>7</td><td>Q11</td><td>79.7°C</td></tr><tr><td>8</td><td>C75</td><td>73.8°C</td></tr><tr><td>9</td><td>C71</td><td>75.1°C</td></tr><tr><td>10</td><td>TD33</td><td>82.2°C</td></tr><tr><td>11</td><td>U14</td><td>74.9°C</td></tr></tbody></table>			NO	Position	HIGH AMBIENT Ta=50°C	1	T2	80.1°C	2	MT1	75.5°C	3	L3	75.8°C	4	L4	78.5°C	5	U13	77.6°C	6	Q3	77.5°C	7	Q11	79.7°C	8	C75	73.8°C	9	C71	75.1°C	10	TD33	82.2°C	11	U14	74.9°C
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2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P:55VDC O/P : 100%LOAD Ta= -45°C	TEST : OK																																				

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	Jinkj		Chenhm

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