

**C E R T I F I C A T E**  
of Conformity



**Registration No.:** AK 60126777 0001

**Report No.:** 28111159 014

**Holder:** Power - One Italy S.p.A.  
Via San Giorgio 642  
52028 Terranuova Bracciolini AR  
Italia

**Product:** Electrical Equipment  
Solar grid tied inverter

**Identification:** Trademark: ABB  
Models: PVS-100-TL  
PVS-120-TL

**Tested acc. to:** EN 61683:2000  
IEC 61683:1999  
CEI EN 61683:2010

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

**Date** 29.01.2018



**TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg**

**TABLE 4.a Efficiency measurement conditions**

MODEL: PVS-120-TL

Test	Vac [V]	Freq [Hz]	Tamb [°C]	Vdc [V]
A1	277	50.00	25.0	420.0
A2	277	50.00	25.0	570.0
A3	277	50.00	25.0	720.0
A4	277	50.00	25.0	800.0
A5	277	50.00	25.0	900.0

Vn = 230Vac for PVS-100-TL; Vn = 277Vac for PVS-120-TL

**TABLE 4.b test results for PVS-120-TL**

Test	A1	A2	A3	A4	A5
Max Efficiency (Eff_peak)	98.25	98.46	98.87	98.67	98.57

**TABLE 4.c Efficiency measurement conditions**

MODEL: PVS-100-TL

Test	Vac [V]	Freq [Hz]	Tamb [°C]	Vdc [V]
A1	230.0	50.00	25.0	420.0
A2	230.0	50.00	25.0	480.0
A3	230.0	50.00	25.0	620.0
A4	230.0	50.00	25.0	800.0
A5	230.0	50.00	25.0	900.0

Vn = 230Vac for PVS-100-TL; Vn = 277Vac for PVS-120-TL

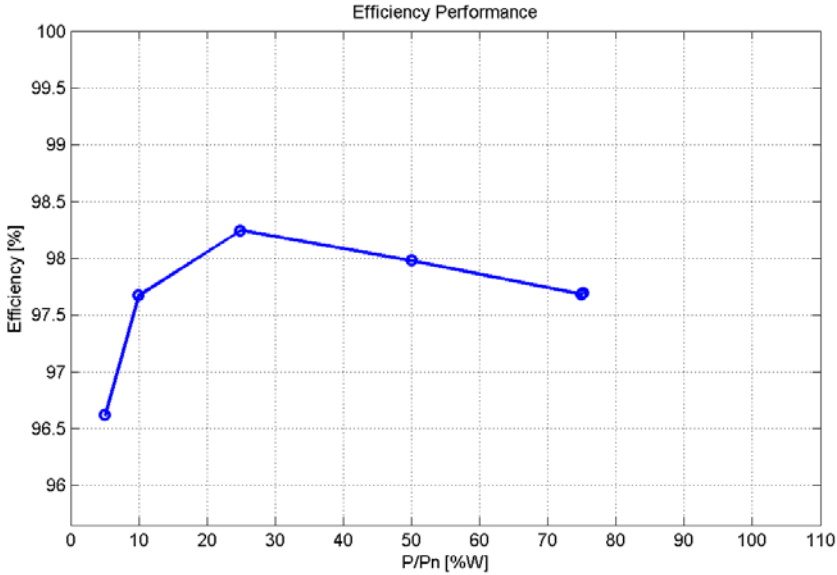
**TABLE 4.d test results for PVS-100-TL**

Test	A1	A2	A3	A4	A5
Max Efficiency (Eff_peak)	98.06	98.21	98.43	98.20	98.06

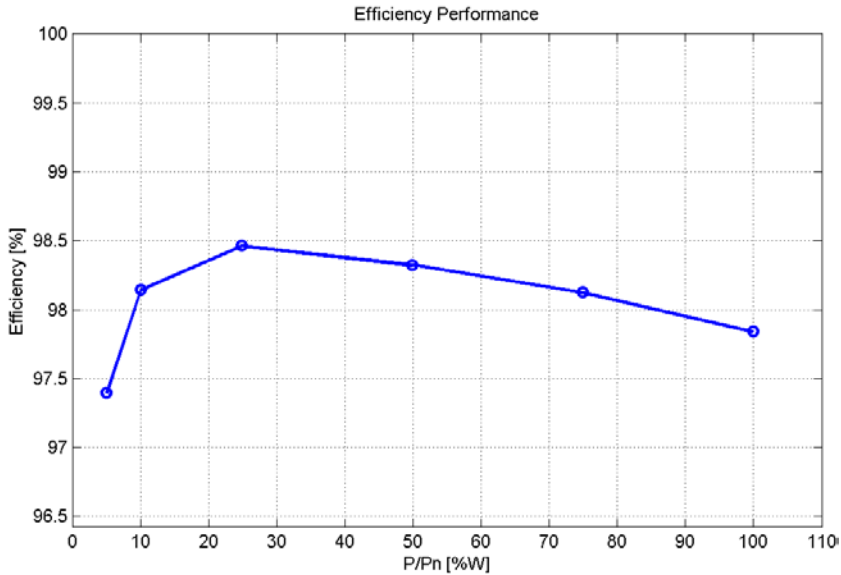
NOTE: Test performed on the most complex version

**TABLE 5.1a: TEST RESULTS FOR PVS-120-TL**

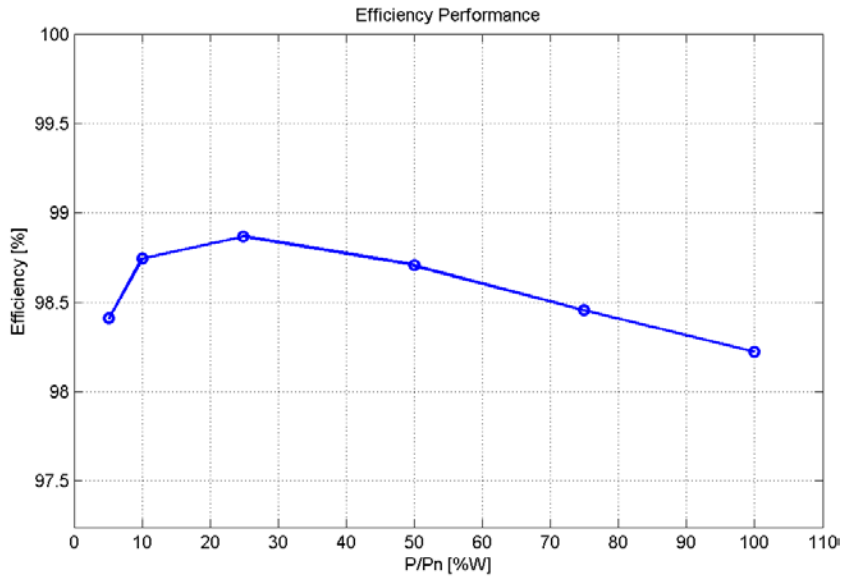
Test A1		
P/Pn [%W]	Pin_Tot	Efficiency [%]
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74.9	92060.1	97.686
50.0	61187.0	97.982
24.9	30440.1	98.247
9.9	12224.3	97.674
5.0	6255.5	96.620

Test A2		
P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	122534.6	97.843
74.9	91640.1	98.127
49.9	60928.8	98.324
24.9	30379.7	98.464
10.0	12237.3	98.143
5.0	6214.3	97.396

Test A3		
P/Pn [%W]	Pin_Tot	Efficiency [%]
100.0	122119.0	98.225
74.9	91302.6	98.459
50.0	60741.6	98.709
24.9	30274.3	98.869
10.0	12144.6	98.746
5.1	6179.3	98.409

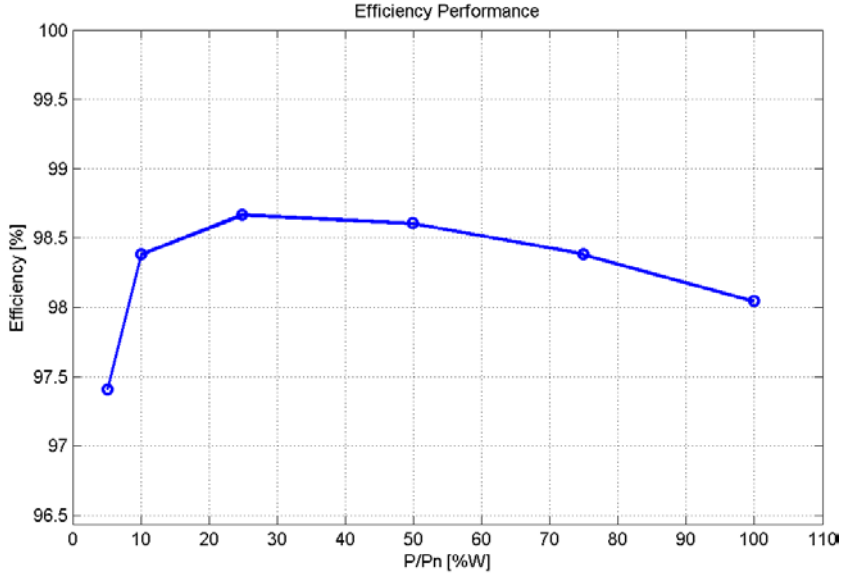
  


The graph for Test A3 shows Efficiency [%] on the y-axis (ranging from 97.5 to 100) and P/Pn [%W] on the x-axis (ranging from 0 to 110). The data points are connected by a blue line, showing a peak efficiency of approximately 98.87% at P/Pn = 24.9%.

P/Pn [%W]	Pin_Tot	Efficiency [%]
100.0	122119.0	98.225
74.9	91302.6	98.459
50.0	60741.6	98.709
24.9	30274.3	98.869
10.0	12144.6	98.746
5.1	6179.3	98.409

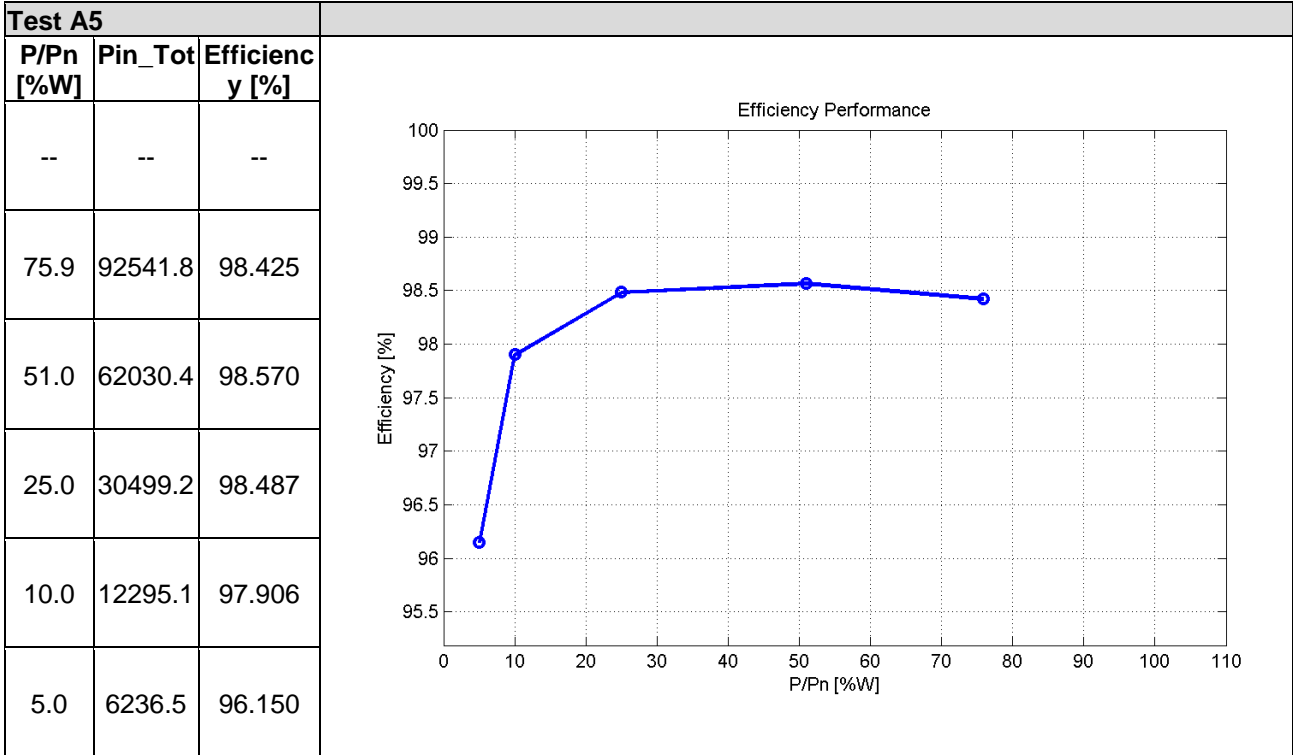
  

Test A4		
P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	122302.9	98.047
74.9	91396.5	98.387
49.9	60752.0	98.608
24.9	30316.0	98.669
10.0	12218.7	98.384
5.1	6243.8	97.413

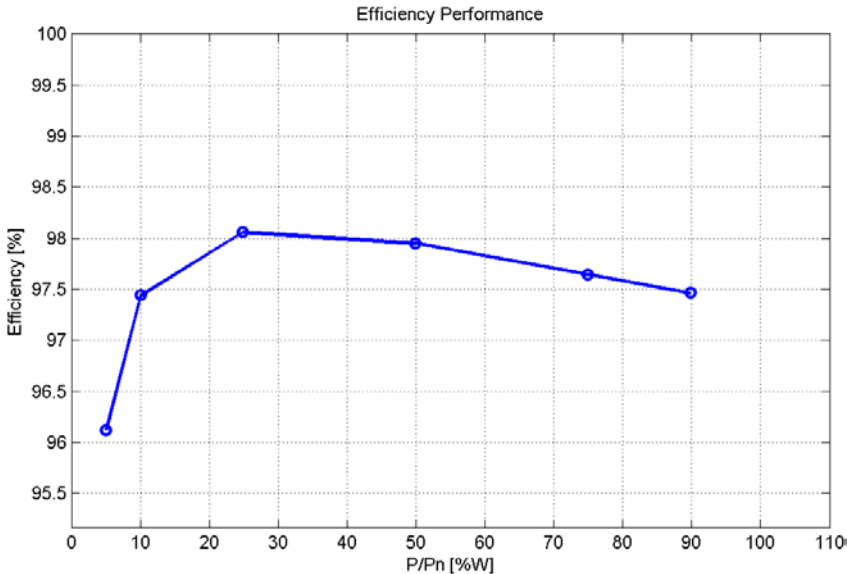
The graph for Test A4 shows Efficiency [%] on the y-axis (ranging from 96.5 to 100) and P/Pn [%W] on the x-axis (ranging from 0 to 110). The data points are connected by a blue line, showing a peak efficiency of approximately 98.67% at P/Pn = 24.9%.

P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	122302.9	98.047
74.9	91396.5	98.387
49.9	60752.0	98.608
24.9	30316.0	98.669
10.0	12218.7	98.384
5.1	6243.8	97.413



**TABLE 5.2a: TEST RESULTS FOR PVS-100-TL**

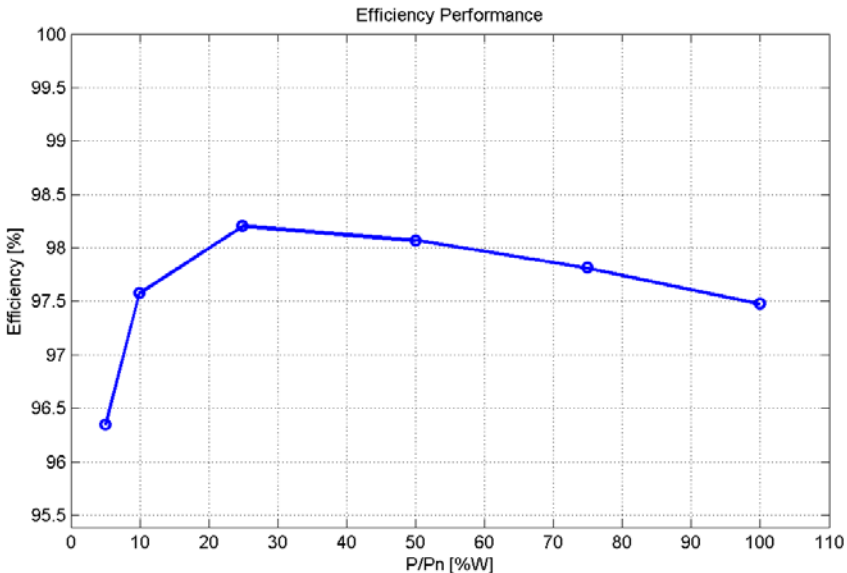
Test A1		
P/Pn [%W]	Pin_Tot	Efficiency [%]
89.8	92084.6	97.467
74.9	76749.6	97.647
49.9	50983.1	97.950
24.9	25429.3	98.065
10.0	10212.2	97.442
5.0	5211.8	96.121

The graph for Test A1 shows Efficiency [%] on the y-axis (95.5 to 100) and P/Pn [%W] on the x-axis (0 to 110). The data points are: (5, 96.121), (10, 97.442), (24.9, 98.065), (49.9, 97.950), (74.9, 97.647), (89.8, 97.467). The efficiency peaks at 98.065% at P/Pn = 24.9%.

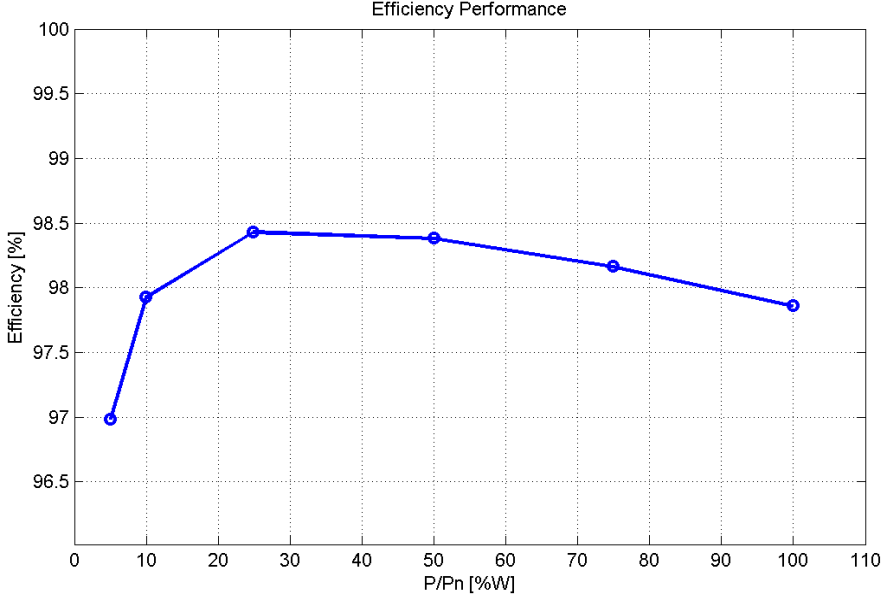
  

Test A2		
P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	102523.8	97.479
74.9	76615.2	97.813
50.0	50945.1	98.070
24.9	25395.1	98.207
9.9	10172.4	97.580
5.0	5211.3	96.352

The graph for Test A2 shows Efficiency [%] on the y-axis (95.5 to 100) and P/Pn [%W] on the x-axis (0 to 110). The data points are: (5, 96.352), (9.9, 97.580), (24.9, 98.207), (50.0, 98.070), (74.9, 97.813), (99.9, 97.479). The efficiency peaks at 98.207% at P/Pn = 24.9%.

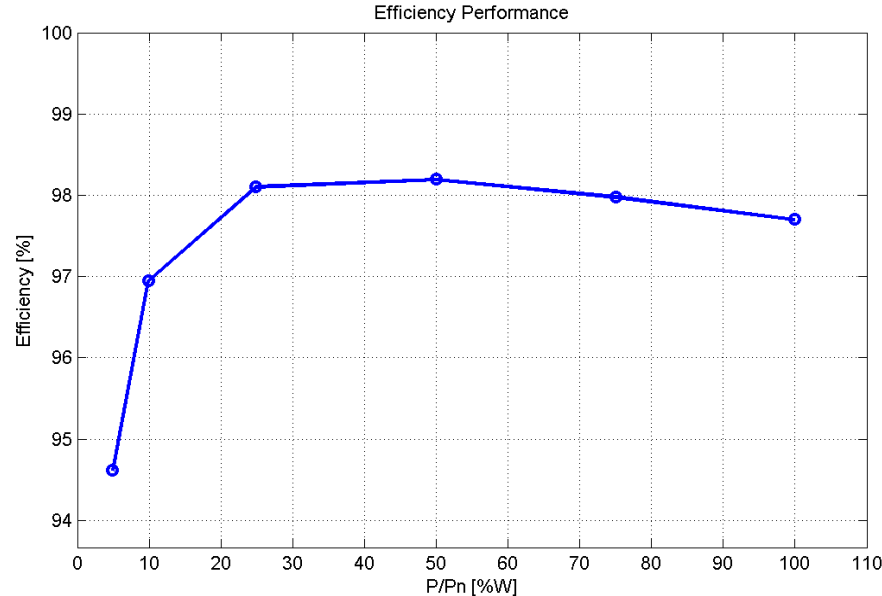
Test A3		
P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	102083.3	97.861
74.9	76335.8	98.166
50.0	50793.7	98.384
24.9	25344.7	98.433
9.9	10131.0	97.927
5.0	5173.5	96.987

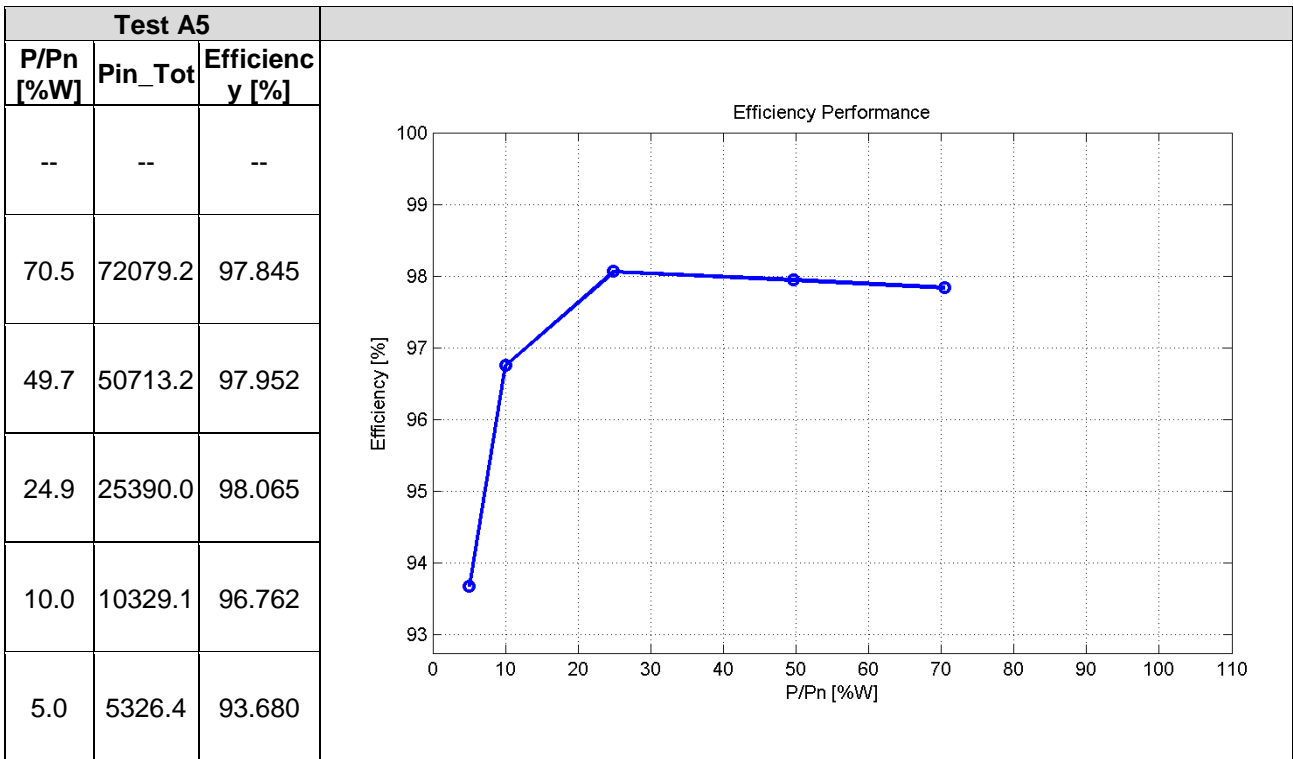
The graph for Test A3 shows Efficiency [%] on the y-axis (96.5 to 100) and P/Pn [%W] on the x-axis (0 to 110). The data points are connected by a blue line, showing a peak efficiency of approximately 98.4% at P/Pn values of 24.9 and 50.0.

Test A4		
P/Pn [%W]	Pin_Tot	Efficiency [%]
99.9	102251.2	97.705
75.0	76533.5	97.982
50.0	50878.3	98.197
24.9	25394.6	98.105
9.9	10247.3	96.951
4.9	5202.2	94.615

The graph for Test A4 shows Efficiency [%] on the y-axis (94 to 100) and P/Pn [%W] on the x-axis (0 to 110). The data points are connected by a blue line, showing a peak efficiency of approximately 98.2% at P/Pn values of 24.9 and 50.0.



Devices above listed are also compliant to the IEC 61683:1999 and CEI EN 61683:2010 requirements. These standards are completely the same of EN 61683:2000 without any additional requirements.