



**Technical Documentation for EU Regulation 2019/424 laying down ecodesign requirements for servers and data storage product pursuant to Directive 2009/125/EC**

2020-02-07

The following information is based on IBM's knowledge as of the date of this document, which may be based on its records and information from third parties. This documentation applies to finished products that IBM newly puts on the market in the European Union and other jurisdictions which require this Technical Documentation as of the above date.

Product Information			
Machine Type(s)	Model(s)	Part Number	Product Type
8335	GTG, GTH, GTX	-	2-socket, rack mount, server with integrated APA

Model GTX is a water cooled option. SERT testing does not support water-cooled options. Model GTX meets the efficiency metrics in this technical document.

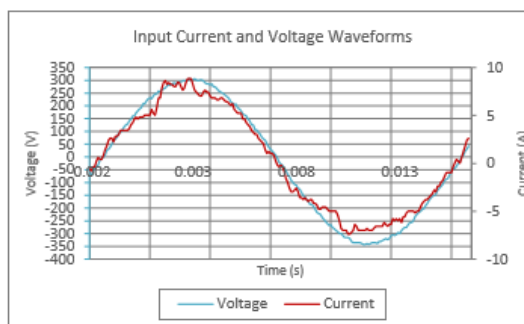
Manufacturer's name, registered trade name and registered trade address:



Year of manufacture  
**2020**

Power Supply Unit (PSU) efficiency, power factor and rated power output:

ID Number	SO-1279
Manufacturer	AcBel Polytech Inc.
Model Number	FSF069
Serial Number	11S01KL779YL10A075B10C
Year	2017
Type	CUSTOM
Test Date	06/01/17



Input AC Current Waveform (ITHD = 8.13%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	200-277	Volts
Input Current	12	Amps
Input Frequency	50/60	Hz
Rated Output Power	2,200	Watts

Note: All measurements were taken with input voltage at 230 V nominal and 80 Hz.

I <sub>RMS</sub> A	PF	I <sub>THD</sub> (%)	Load (%)	Fraction of Load	Input Watts	External Fan (W)*	DC Terminal Voltage (V)/ DC Load Current (A)		Output Watts	Efficiency %
							12.2V	12Vsb		
1.20	0.90	8.36	10%	Low	250	1.92	12.27/17.83	12.26/0.25	222	88.86%
2.17	0.96	5.76	20%	Light	481	2.64	12.27/35.67	12.24/0.5	444	92.31%
5.17	0.99	8.13	50%	Typical	1177	16.56	12.25/90.14	12.2/1.24	1120	95.11%
10.43	0.99	3.44	100%	Full	2386	9.72	12.23/178.28	12.12/2.48	2210	92.62%

\* Fan power is not included in the efficiency calculations

**1 socket configuration**

Idle State Power High End Configuration

N/A



Idle State Power Low End Configuration

**N/A**

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of  $\geq 1$  Gbit, onboard Ethernet
  - = 1 Gb/s : **N/A**
  - $> 1$  Gb/s and  $< 10$  Gb/s : **N/A**
  - $\geq 10$  Gb/s and  $< 25$ Gb/s : **N/A**
  - $\geq 25$  Gb/s and  $< 50$ Gb/s : **N/A**
  - $\geq 50$  Gb/s : **N/A**
- Other: **N/A**

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : **N/A**
- Additional PSU installed explicitly for power redundancy : **N/A**
- HDD installed : **N/A**
- SSD installed : **N/A**
- Installed memory greater than 4 GB : **N/A**
- Installed buffered DDR channels greater than 8 channels : **N/A**
- Installed I/O devices greater than two ports of  $\geq 1$  Gbit, onboard Ethernet
  - = 1 Gb/s : **N/A**
  - $> 1$  Gb/s and  $< 10$  Gb/s : **N/A**
  - $\geq 10$  Gb/s and  $< 25$ Gb/s : **N/A**
  - $\geq 25$  Gb/s and  $< 50$ Gb/s : **N/A**
  - $\geq 50$  Gb/s : **N/A**
- Other: **N/A**

Maximum power for high end configuration

**N/A**

Maximum power for low end configuration

**N/A**

Active state efficiency and performance in active state for high end configuration

**N/A**

Active state efficiency and performance in active state for low end configuration

**N/A**

Declared operating condition class for high end configuration

**N/A**

Declared operating condition class for low end configuration



**N/A**

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):

**N/A**

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):

**N/A**

## **2 socket configuration**

Idle State Power High End Configuration

**346.2 Watts**

Idle State Power Low End Configuration

**293.5 Watts**

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : **2**
- Additional PSU installed explicitly for power redundancy : **1**
- HDD installed : **0**
- SSD installed : **2**
- Installed memory greater than 4 GB : **2037.8 GB**
- Installed buffered DDR channels greater than 8 channels : **8**
- Installed I/O devices greater than two ports of  $\geq 1$  Gbit, onboard Ethernet
  - = 1 Gb/s : **1**
  - > 1 Gb/s and < 10 Gb/s : **0**
  - $\geq 10$  Gb/s and < 25Gb/s : **0**
  - $\geq 25$  Gb/s and < 50Gb/s : **0**
  - $\geq 50$  Gb/s : **0**
- Other: **0**

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : **2**
- Additional PSU installed explicitly for power redundancy : **1**
- HDD installed : **2**
- SSD installed : **0**
- Installed memory greater than 4 GB : **247.6 GB**
- Installed buffered DDR channels greater than 8 channels : **8**
- Installed I/O devices greater than two ports of  $\geq 1$  Gbit, onboard Ethernet
  - = 1 Gb/s : **1**
  - > 1 Gb/s and < 10 Gb/s : **0**
  - $\geq 10$  Gb/s and < 25Gb/s : **0**
  - $\geq 25$  Gb/s and < 50Gb/s : **0**
  - $\geq 50$  Gb/s : **0**
- Other: **0**



Maximum power for high end configuration  
**765 Watts**

Maximum power for low end configuration  
**625 Watts**

Active state efficiency and performance in active state for high end configuration  
**15.2**

Active state efficiency and performance in active state for low end configuration  
**11.7**

Declared operating condition class for high end configuration  
**A3**

Declared operating condition class for low end configuration  
**A3**

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):  
**455.2 Watts**

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):  
**402.5 Watts**

### **3 socket configuration**

Idle State Power High End Configuration  
**N/A**

Idle State Power Low End Configuration  
**N/A**

List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : N/A
- Additional PSU installed explicitly for power redundancy : N/A
- HDD installed : N/A
- SSD installed : N/A
- Installed memory greater than 4 GB : N/A
- Installed buffered DDR channels greater than 8 channels : N/A
- Installed I/O devices greater than two ports of  $\geq 1$  Gbit, onboard Ethernet
  - = 1 Gb/s : N/A
  - $> 1$  Gb/s and  $< 10$  Gb/s : N/A
  - $\geq 10$  Gb/s and  $< 25$ Gb/s : N/A
  - $\geq 25$  Gb/s and  $< 50$ Gb/s : N/A
  - $\geq 50$  Gb/s : N/A
- Other: N/A

List of extra components for additional idle power allowances (Low End Configuration):



- CPU Performance : N/A
- Additional PSU installed explicitly for power redundancy : N/A
- HDD installed : N/A
- SSD installed : N/A
- Installed memory greater than 4 GB : N/A
- Installed buffered DDR channels greater than 8 channels : N/A
- Installed I/O devices greater than two ports of  $\geq 1$  Gbit, onboard Ethernet
  - = 1 Gb/s : N/A
  - $> 1$  Gb/s and  $< 10$  Gb/s : N/A
  - $\geq 10$  Gb/s and  $< 25$ Gb/s : N/A
  - $\geq 25$  Gb/s and  $< 50$ Gb/s : N/A
  - $\geq 50$  Gb/s : N/A
- Other N/A

Maximum power for high end configuration  
N/A

Maximum power for low end configuration  
N/A

Active state efficiency and performance in active state for high end configuration  
N/A

Active state efficiency and performance in active state for low end configuration  
N/A

Declared operating condition class for high end configuration  
N/A

Declared operating condition class for low end configuration  
N/A

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.

Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):  
N/A

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):  
N/A

#### **4 socket configuration**

Idle State Power High End Configuration  
N/A

Idle State Power Low End Configuration  
N/A



List of extra components for additional idle power allowances (High End Configuration):

- CPU Performance : N/A
- Additional PSU installed explicitly for power redundancy : N/A
- HDD installed : N/A
- SSD installed : N/A
- Installed memory greater than 4 GB : N/A
- Installed buffered DDR channels greater than 8 channels : N/A
- Installed I/O devices greater than two ports of  $\geq 1$  Gbit, onboard Ethernet
  - = 1 Gb/s : N/A
  - $> 1$  Gb/s and  $< 10$  Gb/s : N/A
  - $\geq 10$  Gb/s and  $< 25$ Gb/s : N/A
  - $\geq 25$  Gb/s and  $< 50$ Gb/s : N/A
  - $\geq 50$  Gb/s : N/A
- Other: N/A

List of extra components for additional idle power allowances (Low End Configuration):

- CPU Performance : N/A
- Additional PSU installed explicitly for power redundancy : N/A
- HDD installed : N/A
- SSD installed : N/A
- Installed memory greater than 4 GB : N/A
- Installed buffered DDR channels greater than 8 channels : N/A
- Installed I/O devices greater than two ports of  $\geq 1$  Gbit, onboard Ethernet
  - = 1 Gb/s : N/A
  - $> 1$  Gb/s and  $< 10$  Gb/s : N/A
  - $\geq 10$  Gb/s and  $< 25$ Gb/s : N/A
  - $\geq 25$  Gb/s and  $< 50$ Gb/s : N/A
  - $\geq 50$  Gb/s : N/A
- Other N/A

Maximum power for high end configuration

N/A

Maximum power for low end configuration

N/A

Active state efficiency and performance in active state for high end configuration

N/A

Active state efficiency and performance in active state for low end configuration

N/A

Declared operating condition class for high end configuration

N/A

Declared operating condition class for low end configuration

N/A

This product has been tested in order to verify that it will function within the boundaries of the declared operating condition class.



Idle state power at the higher boundary temperature of the declared operating condition class (High End Configuration):

N/A

Idle state power at the higher boundary temperature of the declared operating condition class (Low End Configuration):

N/A

Secure data functionality:

[http://www.ibm.com/support/knowledgecenter/POWER9/p9eah/p9eah\\_secure\\_data\\_deletion.htm](http://www.ibm.com/support/knowledgecenter/POWER9/p9eah/p9eah_secure_data_deletion.htm)

[http://www.ibm.com/support/knowledgecenter/en/linuxonibm/liaau/Linux\\_secure\\_delete.html](http://www.ibm.com/support/knowledgecenter/en/linuxonibm/liaau/Linux_secure_delete.html)



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