Cooling Systems Division

Nobumasa Kodama

Information telecommunications equipment that composes the information society, for example, Internet and cellular phone, is becoming remarkably smaller in size, larger in capacity and faster in speed. Cooling fans that support cooling these equipments are diversified and require various measures like improvement in the air volume performance, reducing noise, and energy reduction.

The main technological results of the Cooling Systems Division in 2001 are introduced below. We intend to continuously develop the best cooling products through new technology and product development in the pursuit of high performance and environmental compatibility.

"SAN ACE 120L"G type

Starting with a newly designed motor, we have designed this product to achieve energy savings and respond to the need for high air volume in a 120mm sq.×38mm thick fan. As a result, high air volume of approximately 5.1 m^3/min is possible. A life of 100,000 hours at 60℃ is expected at the air volume level of 2.8m^3/min, which is the standard standard performance of conventional products. This will be the main product among 120mm sq.×38mm thick fans in the near future.

"DYNA ACE" 25mm thickness fan for 19-inch rack

This product is developed for the purpose of cooling a high density mounted electric circuit by filling fans on a standard 19-inch rack, and also developed as a thin type space saving high air volume fan which can be installed on a 1U type (about 44mm high) fan tray. It was made to half the thickness of the conventional product a width of 147mm, which makes possible parallel arrangement of three units on a 19-inch rack, and has better performance than a 51mm thickness fan. Details are introduced in the feature article in this technical report.

"SAN ACE 120"G Type 25mm Thickness

A new series, "SAN ACE 120" G type, was developed to add in 120mm sq.×25mm thick fans.

This is a successor of the conventional product and is expected to be the main product of 120mm sq.× 25mm thick fans in the future.

All were newly designed including the motor, which not only contributed to low power consumption and low noise but also achieved the high air volume with an approximately 50% improvement from the conventional product. This is the first product in the Cooling Systems Division certified as an "Eco-Products" (environmental compatible design product) for its performance.

“SAN ACE 92” G Type 32mm Thickness Fan

A new series of 92mm sq. 32mm thickness fan, “SAN ACE 92” G type has been developed.

All components were newly designed starting with a new motor and it is capable of producing a maximum air volume of about 50% larger then the conventional product. At same air volume, the power consumption is also 35% less and the noise level is 5dB less as compared to the conventional product.

Thanks to these outstanding performances, this product has been certified as the “Eco-Products” (environment compatible design product) in the Cooling Systems Division.

Details are introduced in the feature article in this technical report.

“SAN ACE MC” Series

“SAN ACE MC” for Pentium®Ⅲ*
“SAN ACE MC” for 1U server Pentium®Ⅲ*
“SAN ACE MC” for Pentium®4*
“SAN ACE MC-HX” for Pentium®4*

As the number of transistors accumulated on a computer microprocessor (MPU) has reached 55,000,000 pieces and with the motion clock frequency exceeding 2GHz, heating of MPU is increasing as well, especially the heat density has risen substantially, requiring an advanced cooling technology for the MPU.

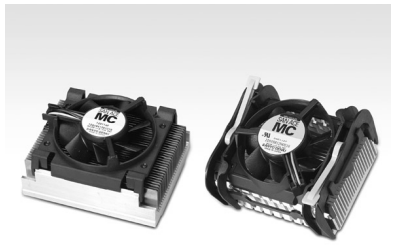
The market trends of heat sinks are changing to copper from the previously mainstream aluminum made sink.

“SAN ACE MC” for cooling Pentium®Ⅲ*, “SAN ACE MC” for Pentium®Ⅲ *1U server, “SAN ACE MC” for Pentium®4, high performance MPU cooler “SAN ACE MC-HX” was produced as new MPU cooler in the “SAN ACE MC” series.

We will make continuous effort to support cooling the latest MPU and to improve the cooling technology further in the future.

*Pentium® is the registered trademark of Intel Corp.

“SAN ACE MC-HX”



“SAN ACE MC” for Pentium®4

“SAN ACE MC” for Pentium®Ⅲ

“SAN ACE MC” for 1U server

Nobumasa Kodama
Joined company in 1978
Cooling Systems Division
Worked on design and development of fan motor