

San Ace MC

- Brushless DC Motor with Plastic Fan Housing and Impeller with 100% Copper, Aluminium/Copper Hybrid or 100% Aluminium Heatsink
- Permanently Lubricated Dual Ball Bearing System
- Current Limiting System with Reverse Polarity Protection
- Thermal Speed Control Models Available
- Pulse/Lock/Inverse Lock/Low Speed/Inverse Low Speed Sensor Options
- Operating Temperature: -10 °C to +60 °C (No Condensation) (0°C to +60 °C on some models)
- Storage Temperature: -30 °C to +70 °C (No Condensation)
- Rotational Direction: CW looking at label
- Dielectric Strength: 50/60 Hz, 500 VAC, one (1) minute (between lead conductor and frame)



Intel® Pentium®4 μPGA478 Compatible

Click on Model No in red to view dimensional drawings

- Up to 2.2 GHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
95.0x71.3x62.5	0.49/0.42	12	9.0 - 13.8	26/39	0.21	2600/3900	109X9812T0H016*	Preattached
95.0x71.3x62.5	0.42	12	7.0 - 13.8	39	0.21	3900	109X9812H0016	Preattached
83.3x68.5x27.0	0.45	12	7.0 - 13.8	38	0.17	4800	109X9412S1016	109-1008

- Up to 1.8 GHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
83.3x68.5x27.0	0.49	12	7.0 - 13.8	38	0.17	4800	109X9412S1116	109-1008

Intel® Pentium®4 PGA423 Compatible

Click on Model No in red to view dimensional drawings

- Up to 2.0 GHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
88.9x67.3x53.5	0.44	12	9.0 - 13.8	40	0.23	5200	109X9612S5016	-
88.9x67.3x53.5	0.52/0.44	12	9.0 - 13.8	28/40	0.23	3200/5200	109X9612T5S016*	-
88.9x68.4x55.4	0.40	12	9.0 - 13.8	42	0.23	5000	109X9712S5016	-
88.9x68.4x55.4	0.49/0.40	12	9.0 - 13.8	29/42	0.23	3200/5200	109X9712T5S016*	-

San Ace MC

Intel® Pentium®III FC-PGA2

Click on Model No in red to view dimensional drawings

■ Up to 1.40 GHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
79.0x67.3x24.0	0.63	12	7.0 - 13.8	42	0.22	6000	109X7412S4016	Preattached
68.0x67.3x45.0	0.59	12	7.0 - 13.8	31	0.10	3900	109X7612H1176	Preattached

Intel® Pentium®III FC-PGA

Click on Model No in red to view dimensional drawings

■ Up to 1.10 GHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
79.0x67.3x48.0	0.72/0.64	12	9.0 - 13.8	28/38	0.17	3600/4800	109X7612T5S046*	Preattached
79.0x67.3x48.0	0.64	12	7.0 - 13.8	38	0.17	4800	109X7612S5016	Preattached

■ Up to 933 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
68.0x67.3x45.0	0.77	12	7.0 - 13.8	31	0.10	3900	109X7612H1106	Preattached
68.0x67.3x45.0	0.89	12	7.0 - 13.8	31	0.10	3900	109X7612H1116	Preattached
68.0x67.3x45.0	0.89	12	7.0 - 13.8	31	0.10	3900	109X7612H1126	Preattached
68.0x67.3x31.0	0.90	12	7.0 - 13.8	38	0.17	4800	109X7612S2016	Preattached

■ 500 - 850 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
64.0x50.8x45.5	1.20	12	7.0 - 13.8	31	0.06	4400	109X6512H1196	Preattached

■ Up to 800 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
64.0x50.8x31.0	1.15	12	7.0 - 13.8	35	0.07	4800	109X6512A2016**	Preattached

San Ace MC

Intel® Celeron™ FC-PGA2

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■ Up to 1.3 GHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
79.0x67.3x24.0	0.63	12	7.0 - 13.8	42	0.22	6000	109X7412S4016	Preattached
68.0x67.3x45.0	0.59	12	7.0 - 13.8	31	0.10	3900	109X7612H1176	Preattached

Intel® Celeron™ FC-PGA

Click on Model No in red to view dimensional drawings

■ Up to 1.1 GHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
68.0x67.3x45.0	0.89	12	7.0 - 13.8	31	0.10	3900	109X7612H1126	Preattached

■ Up to 800 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
64.0x50.8x31.0	1.15	12	7.0 - 13.8	35	0.07	4800	109X6512A2016**	Preattached
64.0x50.8x44.5	1.20	12	7.0 - 13.8	31	0.06	4400	109X6512H1196	Preattached
68.0x67.3x45.0	0.77	12	7.0 - 13.8	31	0.10	3900	109X7612H1106	Preattached
68.0x67.3x31.0	0.90	12	7.0 - 13.8	38	0.17	4800	109X7612S2016	Preattached

Intel® Celeron™ PPGA

Click on Model No in red to view dimensional drawings

■ 533 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
64.0x50.8x44.5	0.77	12	7.0 - 13.8	35	0.07	4800	109X6512A1116	Preattached

■ 466 - 500 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
64.0x50.8x44.5	0.80	12	7.0 - 13.8	31	0.06	4400	109X6512H1136	Preattached

San Ace MC

Intel® Celeron™ PPGA2

Click on Model No in red to view dimensional drawings

■ 300 - 500 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
64.0x50.8x35.4	0.83	12	7.0 - 13.8	33	0.07	4800	109X6512A1016	Preattached

■ 300 - 433 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
64.0x50.8x31.0	1.04	12	7.0 - 13.8	30	0.06	4400	109X6512H2016	Preattached
64.0x50.8x31.0	1.04	12	7.0 - 13.8	30	0.06	4400	109X6512H2046**	Preattached

Intel® Celeron™ SEPP

Click on Model No in red to view dimensional drawings

■ Up to 433 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
137.2x50.8x31.0	0.94	12	10.8 - 13.2	29	0.06	3600	109X1512H2016	109-694

Intel® Pentium® II SECC2

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■ Up to 1.0 GHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
137.2x56.0x33.6	0.76	12	9.0 - 13.2	38	0.08	5300	109X1612S2016	109-693

■ Up to 866 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
137.2x56.0x33.6	0.98	12	10.8 - 13.2	33	0.06	4400	109X1612H2016	109-693

■ Up to 733 MHz

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
137.2x50.8x31.0	1.46	12	10.8 - 13.2	29	0.06	3600	109X1512H2086	109-693

San Ace MC

Intel® Pentium® Pro

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Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
66.0x62.0x30.0	0.79	5	4.5 - 5.5	29	0.20	3600	109P6605H2016	109-636
66.0x62.0x30.0	0.79	12	10.8 - 13.2	29	0.08	3600	109P6612H2016	109-636

Intel® Pentium®

Click on Model No in red to view dimensional drawings

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
45.0x18.0	1.70	5	4.5 - 5.5	27	0.14	5000	109P4405H8016	109-680
45.0x18.0	1.70	12	7.0 - 13.8	27	0.07	5000	109P4412H8016	109-680
50.8x30.0	0.97	5	4.5 - 5.5	28	0.12	4000	109P5405H2016	109-683
50.8x30.0	0.97	12	7.0 - 13.8	28	0.06	4000	109P5412H2016	109-683
54.0x18.0	1.40	5	4.5 - 5.5	29	0.15	5400	109P5405H8016	-
54.0x18.0	1.40	12	7.0 - 13.8	29	0.075	5400	109P5412H8016	-
45.5x19.3	1.55	5	4.5 - 5.5	27	0.14	5000	109X4405H6016	109-684
45.5x19.3	1.55	12	7.0 - 13.8	27	0.06	5000	109X4412H6016	109-684

Mobile CPU, PCI Card

Click on Model No in red to view dimensional drawings

Size	Thermal Resistance	Nominal Voltage	Voltage Range	Sound Pressure	Current	Nominal Speed	Model No.	Clip
mm	K/W	V	V	db(A)	A	min ⁻¹		
44.5x10.0(1-way)	3.10	5	4.5 - 5.5	27	0.14	6000	109P4405H9016	-
44.5x10.0(1-way)	3.10	12	7.0 - 13.8	27	0.085	6000	109P4412H9016	-
44.5x10.0(2-way)	2.50	5	4.5 - 5.5	27	0.14	6000	109P4405H9216	-
44.5x10.0(2-way)	2.50	12	7.0 - 13.8	27	0.085	6000	109P4412H9216	-
44.5x10.0(4-way)	2.10	5	4.5 - 5.5	28	0.14	6000	109P4405H9416	-
44.5x10.0(4-way)	2.10	12	7.0 - 13.8	28	0.085	6000	109P4412H9416	-

Notes: (1) Listed models are pulse sensor types (exceptions: *thermal speed control, **non-sensor type).

(2) Noise ratings are average values as measured from a point one (1) meter from intake of fan suspended in an anechoic chamber.

(3) Some model types are without UL, CSA and TÜV approvals.

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