

## 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 <sup>-1</sup>		
95.0x71.3x62.5	0.49/0.42	12	9.0 - 13.8	26/39	0.21	2600/3900	<a href="#">109X9812T0H016*</a>	Preattached
95.0x71.3x62.5	0.42	12	7.0 - 13.8	39	0.21	3900	<a href="#">109X9812H0016</a>	Preattached
83.3x68.5x27.0	0.45	12	7.0 - 13.8	38	0.17	4800	<a href="#">109X9412S1016</a>	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 <sup>-1</sup>		
83.3x68.5x27.0	0.49	12	7.0 - 13.8	38	0.17	4800	<a href="#">109X9412S1116</a>	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 <sup>-1</sup>		
88.9x67.3x53.5	0.44	12	9.0 - 13.8	40	0.23	5200	<a href="#">109X9612S5016</a>	-
88.9x67.3x53.5	0.52/0.44	12	9.0 - 13.8	28/40	0.23	3200/5200	<a href="#">109X9612T5S016*</a>	-
88.9x68.4x55.4	0.40	12	9.0 - 13.8	42	0.23	5000	<a href="#">109X9712S5016</a>	-
88.9x68.4x55.4	0.49/0.40	12	9.0 - 13.8	29/42	0.23	3200/5200	<a href="#">109X9712T5S016*</a>	-

## 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 <sup>-1</sup>		
79.0x67.3x24.0	0.63	12	7.0 - 13.8	42	0.22	6000	<a href="#">109X7412S4016</a>	Preattached
68.0x67.3x45.0	0.59	12	7.0 - 13.8	31	0.10	3900	<a href="#">109X7612H1176</a>	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 <sup>-1</sup>		
79.0x67.3x48.0	0.72/0.64	12	9.0 - 13.8	28/38	0.17	3600/4800	<a href="#">109X7612T5S046*</a>	Preattached
79.0x67.3x48.0	0.64	12	7.0 - 13.8	38	0.17	4800	<a href="#">109X7612S5016</a>	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 <sup>-1</sup>		
68.0x67.3x45.0	0.77	12	7.0 - 13.8	31	0.10	3900	<a href="#">109X7612H1106</a>	Preattached
68.0x67.3x45.0	0.89	12	7.0 - 13.8	31	0.10	3900	<a href="#">109X7612H1116</a>	Preattached
68.0x67.3x45.0	0.89	12	7.0 - 13.8	31	0.10	3900	<a href="#">109X7612H1126</a>	Preattached
68.0x67.3x31.0	0.90	12	7.0 - 13.8	38	0.17	4800	<a href="#">109X7612S2016</a>	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 <sup>-1</sup>		
64.0x50.8x45.5	1.20	12	7.0 - 13.8	31	0.06	4400	<a href="#">109X6512H1196</a>	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 <sup>-1</sup>		
64.0x50.8x31.0	1.15	12	7.0 - 13.8	35	0.07	4800	<a href="#">109X6512A2016**</a>	Preattached

## San Ace MC

### Intel® Celeron™ FC-PGA2

Click on Model No in red to view dimensional drawings

■ 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 <sup>-1</sup>		
79.0x67.3x24.0	0.63	12	7.0 - 13.8	42	0.22	6000	<a href="#">109X7412S4016</a>	Preattached
68.0x67.3x45.0	0.59	12	7.0 - 13.8	31	0.10	3900	<a href="#">109X7612H1176</a>	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 <sup>-1</sup>		
68.0x67.3x45.0	0.89	12	7.0 - 13.8	31	0.10	3900	<a href="#">109X7612H1126</a>	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 <sup>-1</sup>		
64.0x50.8x31.0	1.15	12	7.0 - 13.8	35	0.07	4800	<a href="#">109X6512A2016**</a>	Preattached
64.0x50.8x44.5	1.20	12	7.0 - 13.8	31	0.06	4400	<a href="#">109X6512H1196</a>	Preattached
68.0x67.3x45.0	0.77	12	7.0 - 13.8	31	0.10	3900	<a href="#">109X7612H1106</a>	Preattached
68.0x67.3x31.0	0.90	12	7.0 - 13.8	38	0.17	4800	<a href="#">109X7612S2016</a>	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 <sup>-1</sup>		
64.0x50.8x44.5	0.77	12	7.0 - 13.8	35	0.07	4800	<a href="#">109X6512A1116</a>	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 <sup>-1</sup>		
64.0x50.8x44.5	0.80	12	7.0 - 13.8	31	0.06	4400	<a href="#">109X6512H1136</a>	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 <sup>-1</sup>		
64.0x50.8x35.4	0.83	12	7.0 - 13.8	33	0.07	4800	<a href="#">109X6512A1016</a>	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 <sup>-1</sup>		
64.0x50.8x31.0	1.04	12	7.0 - 13.8	30	0.06	4400	<a href="#">109X6512H2016</a>	Preattached
64.0x50.8x31.0	1.04	12	7.0 - 13.8	30	0.06	4400	<a href="#">109X6512H2046**</a>	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 <sup>-1</sup>		
137.2x50.8x31.0	0.94	12	10.8 - 13.2	29	0.06	3600	<a href="#">109X1512H2016</a>	109-694

### Intel® Pentium® II SECC2

Click on Model No in red to view dimensional drawings

■ 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 <sup>-1</sup>		
137.2x56.0x33.6	0.76	12	9.0 - 13.2	38	0.08	5300	<a href="#">109X1612S2016</a>	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 <sup>-1</sup>		
137.2x56.0x33.6	0.98	12	10.8 - 13.2	33	0.06	4400	<a href="#">109X1612H2016</a>	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 <sup>-1</sup>		
137.2x50.8x31.0	1.46	12	10.8 - 13.2	29	0.06	3600	<a href="#">109X1512H2086</a>	109-693

## San Ace MC

### Intel® Pentium® Pro

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 <sup>-1</sup>		
66.0x62.0x30.0	0.79	5	4.5 - 5.5	29	0.20	3600	<a href="#">109P6605H2016</a>	109-636
66.0x62.0x30.0	0.79	12	10.8 - 13.2	29	0.08	3600	<a href="#">109P6612H2016</a>	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 <sup>-1</sup>		
45.0x18.0	1.70	5	4.5 - 5.5	27	0.14	5000	<a href="#">109P4405H8016</a>	109-680
45.0x18.0	1.70	12	7.0 - 13.8	27	0.07	5000	<a href="#">109P4412H8016</a>	109-680
50.8x30.0	0.97	5	4.5 - 5.5	28	0.12	4000	<a href="#">109P5405H2016</a>	109-683
50.8x30.0	0.97	12	7.0 - 13.8	28	0.06	4000	<a href="#">109P5412H2016</a>	109-683
54.0x18.0	1.40	5	4.5 - 5.5	29	0.15	5400	<a href="#">109P5405H8016</a>	-
54.0x18.0	1.40	12	7.0 - 13.8	29	0.075	5400	<a href="#">109P5412H8016</a>	-
45.5x19.3	1.55	5	4.5 - 5.5	27	0.14	5000	<a href="#">109X4405H6016</a>	109-684
45.5x19.3	1.55	12	7.0 - 13.8	27	0.06	5000	<a href="#">109X4412H6016</a>	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 <sup>-1</sup>		
44.5x10.0(1-way)	3.10	5	4.5 - 5.5	27	0.14	6000	<a href="#">109P4405H9016</a>	-
44.5x10.0(1-way)	3.10	12	7.0 - 13.8	27	0.085	6000	<a href="#">109P4412H9016</a>	-
44.5x10.0(2-way)	2.50	5	4.5 - 5.5	27	0.14	6000	<a href="#">109P4405H9216</a>	-
44.5x10.0(2-way)	2.50	12	7.0 - 13.8	27	0.085	6000	<a href="#">109P4412H9216</a>	-
44.5x10.0(4-way)	2.10	5	4.5 - 5.5	28	0.14	6000	<a href="#">109P4405H9416</a>	-
44.5x10.0(4-way)	2.10	12	7.0 - 13.8	28	0.085	6000	<a href="#">109P4412H9416</a>	-

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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