

Thermal and Electrical Specification of 7th Generation AMD Processors



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Thermal and Electrical Specification of 7th Generation AMD Processors



AMD Athlon™ Processor Family (Socket A)

Order Part Number (OPN)	AMD Athlon™ Processor Family	Model Number	Speed in MHz	Package Type A = PGA D = OPGA	Operating Voltage (Nominal Core Voltage) P = 1.70V M = 1.75V K = 1.65V U = 1.60V L = 1.50V	Die Temperature V = 85°C T = 90°C S = 95°C	Processor Multiplier	L2 Cache Size 3 = 256KB 4 = 512KB	System-Bus (Front-Side-Bus) Speed B = 200 MHz C = 266 MHz D = 333 MHz E = 400 MHz	Max. Theoretical Thermal Power	Max Current (I _{cc}) in Amperes
AMD Athlon™ XP Processor; Model 10; 0.13µm											
AXDA3200DKV4E	AMD Athlon XP	3200+	2200 MHz	OPGA	1.65V	0°C–85°C	11x	512KB	400 MHz	76.8W	46.5A
AXDA3000DKV4E	AMD Athlon XP	3000+	2100 MHz	OPGA	1.65V	0°C–85°C	10.5x	512KB	400 MHz	68.3W	41.4A
AXDA3000DKV4D	AMD Athlon XP	3000+	2167 MHz	OPGA	1.65V	0°C–85°C	13x	512KB	333 MHz	74.3W	45.0A
AXDA2800DKV4D	AMD Athlon XP	2800+	2083 MHz	OPGA	1.65V	0°C–85°C	12.5x	512KB	333 MHz	68.3W	41.4A
AXDA2600DKV4D	AMD Athlon XP	2600+	1917 MHz	OPGA	1.65V	0°C–85°C	11.5x	512KB	333 MHz	68.3W	41.4A
AXDA2500DKV4D	AMD Athlon XP	2500+	1833 MHz	OPGA	1.65V	0°C–85°C	11x	512KB	333 MHz	68.3W	41.4A
AMD Athlon™ XP Processor; Model 8; 0.13µm											
AXDA2700DKV3D	AMD Athlon XP	2700+	2167 MHz	OPGA	1.65V	0°C–85°C	13x	256KB	333 MHz	68.3W	41.4A
AXDA2600DKV3D	AMD Athlon XP	2600+	2083 MHz	OPGA	1.65V	0°C–85°C	12.5x	256KB	333 MHz	68.3W	41.4A
AXDA2600DKV3C	AMD Athlon XP	2600+	2133 MHz	OPGA	1.65V	0°C–85°C	16x	256KB	266 MHz	68.3W	41.4A
AXDC2400DKV3C	AMD Athlon XP	2400+	2000 MHz	OPGA	1.65V	0°C–85°C	15x	256KB	266 MHz	68.3W	41.4A
AXDA2400DUV3C	AMD Athlon XP	2400+	2000 MHz	OPGA	1.60V	0°C–85°C	15x	256KB	266 MHz	65.3W	40.8A
AXDA2400DKV3C	AMD Athlon XP	2400+	2000 MHz	OPGA	1.65V	0°C–85°C	15x	256KB	266 MHz	68.3W	41.4A
AXDC2200DUV3C	AMD Athlon XP	2200+	1800 MHz	OPGA	1.60V	0°C–85°C	13.5x	256KB	266 MHz	62.8W	39.3A
AXDA2200DUV3C	AMD Athlon XP	2200+	1800 MHz	OPGA	1.60V	0°C–85°C	13.5x	256KB	266 MHz	62.8W	39.3A
AXDA2200DKV3C	AMD Athlon XP	2200+	1800 MHz	OPGA	1.65V	0°C–85°C	13.5x	256KB	266 MHz	67.9W	41.2A
AXDA2100DUT3C	AMD Athlon XP	2100+	1733 MHz	OPGA	1.60V	0°C–90°C	13x	256KB	266 MHz	62.1W	38.8A
AXDC2000DUT3C	AMD Athlon XP	2000+	1667 MHz	OPGA	1.60V	0°C–90°C	12.5x	256KB	266 MHz	60.3W	37.7A
AXDA2000DUT3C	AMD Athlon XP	2000+	1667 MHz	OPGA	1.60V	0°C–90°C	12.5x	256KB	266 MHz	60.3W	37.7A
AXDA2000DKT3C	AMD Athlon XP	2000+	1667 MHz	OPGA	1.65V	0°C–90°C	12.5x	256KB	266 MHz	60.3W	36.5A
AXDA1900DLT3C	AMD Athlon XP	1900+	1600 MHz	OPGA	1.50V	0°C–90°C	12x	256KB	266 MHz	52.5W	35.0A
AXDA1800DUT3C	AMD Athlon XP	1800+	1533 MHz	OPGA	1.60V	0°C–90°C	11.5x	256KB	266 MHz	51.0W	31.9A
AXDA1800DLT3C	AMD Athlon XP	1800+	1533 MHz	OPGA	1.50V	0°C–90°C	11.5x	256KB	266 MHz	51.0W	34.0A

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Order Part Number (OPN)	AMD Athlon™ Processor Family	Model Number	Speed in MHz	Package Type A = PGA D = OPGA	Operating Voltage (Nominal Core Voltage) P = 1.70V M = 1.75V K = 1.65V U = 1.60V L = 1.50V	Die Temperature V = 85°C T = 90°C S = 95°C	Processor Multiplier	L2 Cache Size 3 = 256KB 4 = 512KB	System-Bus (Front-Side-Bus) Speed B = 200 MHz C = 266 MHz D = 333 MHz E = 400 MHz	Max. Theoretical Thermal Power	Max Current (I _{cc}) in Amperes
AXDA1700DUT3C	AMD Athlon XP	1700+	1467 MHz	OPGA	1.60V	0°C–90°C	11x	256KB	266 MHz	49.4W	30.9A
AXDA1700DLT3C	AMD Athlon XP	1700+	1467 MHz	OPGA	1.50V	0°C–90°C	11x	256KB	266 MHz	49.4W	32.9A
AXDA1600DUT3C	AMD Athlon XP	1600+	1400 MHz	OPGA	1.60V	0°C–90°C	10.5x	256KB	266 MHz	48.5W	30.3A
AMD Athlon™ XP Processor; Model 6; 0.18 μm											
AX2100DMT3C	AMD Athlon XP	2100+	1733 MHz	OPGA	1.75V	0°C–90°C	13x	256KB	266 MHz	72.0W	41.1A
AX2000DMT3C	AMD Athlon XP	2000+	1667 MHz	OPGA	1.75V	0°C–90°C	12.5x	256KB	266 MHz	70.0W	40.0A
AX1900DMT3C	AMD Athlon XP	1900+	1600 MHz	OPGA	1.75V	0°C–90°C	12x	256KB	266 MHz	68.0W	38.9A
AX1800DMT3C	AMD Athlon XP	1800+	1533 MHz	OPGA	1.75V	0°C–90°C	11.5x	256KB	266 MHz	66.0W	37.7A
AX1700DMT3C	AMD Athlon XP	1700+	1467 MHz	OPGA	1.75V	0°C–90°C	11x	256KB	266 MHz	64.0W	36.6A
AX1600DMT3C	AMD Athlon XP	1600+	1400 MHz	OPGA	1.75V	0°C–90°C	10.5x	256KB	266 MHz	62.8W	35.9A
AX1500DMT3C	AMD Athlon XP	1500+	1333 MHz	OPGA	1.75V	0°C–90°C	10x	256KB	266 MHz	60.0W	34.3A
AMD Athlon™ MP Processor; Model 10; 0.13 μm											
AMSN2800DUT4C	AMD Athlon MP	2800+	2133 MHz	OPGA	1.60V	0°C–90°C	16x	512KB	266 MHz	60.0W	37.5A
AMD Athlon™ MP Processor; Model 8; 0.13 μm											
AMSN2600DKT3C	AMD Athlon MP	2600+	2133 MHz	OPGA	1.65V	0°C–90°C	16x	256KB	266 MHz	60.0W	36.4A
AMSN2400DKT3C	AMD Athlon MP	2400+	2000 MHz	OPGA	1.65V	0°C–90°C	15x	256KB	266 MHz	60.0W	36.4A
AMSN2200DKT3C	AMD Athlon MP	2200+	1800 MHz	OPGA	1.65V	0°C–90°C	13.5x	256KB	266 MHz	60.0W	36.4A
AMSN2000DUT3C	AMD Athlon MP	2000+	1667 MHz	OPGA	1.60V	0°C–90°C	12.5x	256KB	266 MHz	58.2W	36.4A
AMD Athlon™ MP Processor; Model 6; 0.18 μm											
AMP2100DMS3C	AMD Athlon MP	2100+	1733 MHz	OPGA	1.75V	0°C–95°C	13x	256KB	266 MHz	66.0W	37.7A
AMP2000DMS3C	AMD Athlon MP	2000+	1667 MHz	OPGA	1.75V	0°C–95°C	12.5x	256KB	266 MHz	66.0W	37.7A
AMP1900DMS3C	AMD Athlon MP	1900+	1600 MHz	OPGA	1.75V	0°C–95°C	12x	256KB	266 MHz	66.0W	37.7A
AMP1800DMS3C	AMD Athlon MP	1800+	1533 MHz	OPGA	1.75V	0°C–95°C	11.5x	256KB	266 MHz	66.0W	37.7A
AMP1600DMS3C	AMD Athlon MP	1600+	1400 MHz	OPGA	1.75V	0°C–95°C	10.5x	256KB	266 MHz	62.8W	35.9A
AMP1500DMS3C	AMD Athlon MP	1500+	1333 MHz	OPGA	1.75V	0°C–95°C	10x	256KB	266 MHz	60.0W	34.3A
AHX1200AMS3C	AMD Athlon MP	N/A	1200 MHz	PGA	1.75V	0°C–95°C	9x	256KB	266 MHz	49.1W	31.3A

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Order Part Number (OPN)	AMD Athlon™ Processor Family	Model Number	Speed in MHz	Package Type A = PGA D = OPGA	Operating Voltage (Nominal Core Voltage) P = 1.70V M = 1.75V K = 1.65V U = 1.60V L = 1.50V	Die Temperature V = 85°C T = 90°C S = 95°C	Processor Multiplier	L2 Cache Size 3 = 256KB 4 = 512KB	System-Bus (Front-Side-Bus) Speed B = 200 MHz C = 266 MHz D = 333 MHz E = 400 MHz	Max. Theoretical Thermal Power	Max Current (I _{cc}) in Amperes
AHX1000AMS3C	AMD Athlon MP	N/A	1000 MHz	PGA	1.75V	0°C–95°C	7.5x	256KB	266 MHz	41.3W	26.3A
AMD Athlon™ Processor											
A1400AMS3C	AMD Athlon	N/A	1400 MHz	PGA	1.75V	0°C–95°C	10.5x	256KB	266 MHz	72.0W	41.2A
A1400AMS3B	AMD Athlon	N/A	1400 MHz	PGA	1.75V	0°C–95°C	14x	256KB	200 MHz	72.0W	41.2A
A1333AMS3C	AMD Athlon	N/A	1333 MHz	PGA	1.75V	0°C–95°C	10x	256KB	266 MHz	70.0W	40.0A
A1300AMS3B	AMD Athlon	N/A	1300 MHz	PGA	1.75V	0°C–95°C	13x	256KB	200 MHz	68.0W	39.0A
A1200AMS3C	AMD Athlon	N/A	1200 MHz	PGA	1.75V	0°C–95°C	9x	256KB	266 MHz	66.0W	38.0A
A1200AMS3B	AMD Athlon	N/A	1200 MHz	PGA	1.75V	0°C–95°C	12x	256KB	200 MHz	66.0W	37.5A
A1133AMS3C	AMD Athlon	N/A	1133 MHz	PGA	1.75V	0°C–95°C	8.5x	256KB	266 MHz	63.0W	35.5A
A1100AMS3B	AMD Athlon	N/A	1100 MHz	PGA	1.75V	0°C–95°C	11x	256KB	200 MHz	60.0W	34.5A
A1000AMS3C	AMD Athlon	N/A	1000 MHz	PGA	1.75V	0°C–95°C	7.5x	256KB	266 MHz	54.0W	31.5A
A1000AMT3B	AMD Athlon	N/A	1000 MHz	PGA	1.75V	0°C–90°C	10x	256KB	200 MHz	54.0W	31.5A
A1000APT3B	AMD Athlon	N/A	1000 MHz	PGA	1.70V	0°C–90°C	10x	256KB	200 MHz	54.3W	31.5A
A0950APT3B	AMD Athlon	N/A	950 MHz	PGA	1.70V	0°C–90°C	9.5x	256KB	200 MHz	52.0W	30.3A
A0900APT3B	AMD Athlon	N/A	900 MHz	PGA	1.70V	0°C–90°C	9x	256KB	200 MHz	49.7W	29.2A
A0850APT3B	AMD Athlon	N/A	850 MHz	PGA	1.70V	0°C–90°C	8.5x	256KB	200 MHz	44.8W	29.4A
A0800APT3B	AMD Athlon	N/A	800 MHz	PGA	1.70V	0°C–90°C	8x	256KB	200 MHz	42.6W	28.0A
A0750APT3B	AMD Athlon	N/A	750 MHz	PGA	1.70V	0°C–90°C	7.5x	256KB	200 MHz	40.4W	26.6A
A0700APT3B	AMD Athlon	N/A	700 MHz	PGA	1.70V	0°C–90°C	7x	256KB	200 MHz	38.3W	25.2A
A0650APT3B	AMD Athlon	N/A	650 MHz	PGA	1.70V	0°C–90°C	6.5x	256KB	200 MHz	36.1W	23.8A

Mobile Processors Not Included

Please always refer to the product datasheets for detailed information.

Thermal and Electrical Specification of 7th Generation AMD Processors



AMD Duron™ Family Processor Socket A

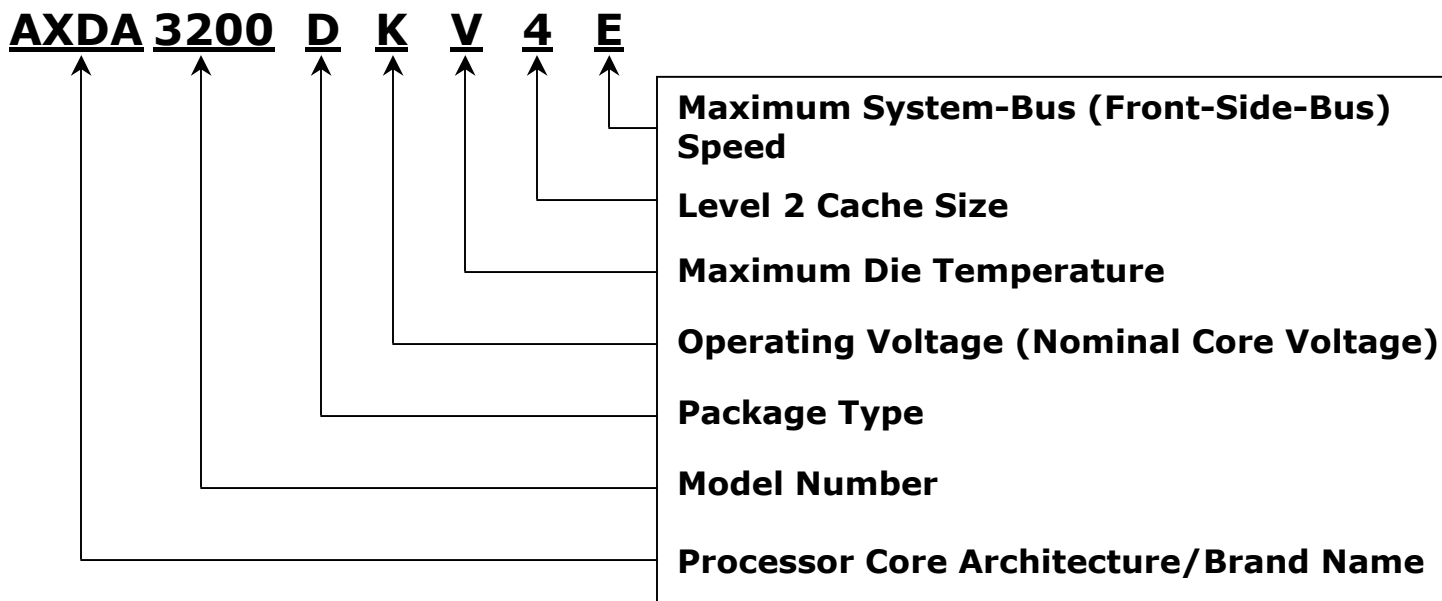
Ordering Part Number (OPN)	AMD Duron™ Processor Family	Speed in MHz	Package Type A = PGA D = OPGA	Operating Voltage (Nominal Core Voltage) U = 1.60V M = 1.75V L = 1.50V	Die Temperature T = 90°C V = 85°C	Processor Multiplier	L2 Cache Size 1 = 64KB	System-Bus (Front-Side-Bus) Speed B = 200MHz C = 266MHz	Max. Theoretical Thermal Power	Max Current (I _{cc}) in Amperes
AMD Duron™ Processor; Model 8; 0.13 μm										
DHD1400DLV1C	AMD Duron	1400MHz	OPGA	1.50V	0°C – 85°C	10.5x	64KB	266 MHz	57.0W	38.0A
DHD1600DLV1C	AMD Duron	1600MHz	OPGA	1.50V	0°C – 85°C	12x	64KB	266 MHz	57.0W	38.0A
DHD1800DLV1C	AMD Duron	1800MHz	OPGA	1.50V	0°C – 85°C	13.5x	64KB	266 MHz	57.0W	38.0A
AMD Duron™ Processor; 0.18 μm										
DHD1300AMT1B	AMD Duron	1300MHz	PGA	1.75V	0°C – 90°C	13x	64KB	200 MHz	60.0W	34.3A
DHD1200AMT1B	AMD Duron	1200MHz	PGA	1.75V	0°C – 90°C	12x	64KB	200 MHz	54.7W	31.3 A
DHD1100AMT1B	AMD Duron	1100MHz	PGA	1.75V	0°C – 90°C	11x	64KB	200 MHz	50.3W	28.7 A
DHD1000AMT1B	AMD Duron	1000MHz	PGA	1.75V	0°C – 90°C	10x	64KB	200 MHz	46.1W	26.3 A
AMD Duron™ Processor; 0.18 μm										
D0950AUT1B	AMD Duron	950MHz	PGA	1.60V	0°C – 90°C	9.5x	64KB	200 MHz	41.5W	25.9 A
D0900AUT1B	AMD Duron	900MHz	PGA	1.60V	0°C – 90°C	9x	64KB	200 MHz	39.5W	24.7 A
D0850AUT1B	AMD Duron	850MHz	PGA	1.60V	0°C – 90°C	8.5x	64KB	200 MHz	37.4W	23.4 A
D0800AUT1B	AMD Duron	800MHz	PGA	1.60V	0°C – 90°C	8x	64KB	200 MHz	35.4W	22.1 A
D0750AUT1B	AMD Duron	750MHz	PGA	1.60V	0°C – 90°C	7.5x	64KB	200 MHz	33.4W	20.9 A
D0700AUT1B	AMD Duron	700MHz	PGA	1.60V	0°C – 90°C	7x	64KB	200 MHz	31.4W	19.6 A
D0650AUT1B	AMD Duron	650MHz	PGA	1.60V	0°C – 90°C	6.5x	64KB	200 MHz	29.4W	18.4 A
D0600AUT1B	AMD Duron	600MHz	PGA	1.60V	0°C – 90°C	6x	64KB	200 MHz	27.4W	17.1 A
D0550AUT1B	AMD Duron	550MHz	PGA	1.60V	0°C – 90°C	5.5x	64KB	200 MHz	21.1W	15.8 A

Mobile Processors Not Included

Please always refer to the product datasheets for detailed information.

AMD Athlon™ and AMD Duron™ Processor Ordering Part Number (OPN) Breakdown

Processors are identified by markings known as Ordering Part Number (OPN). The OPN identifies the processor and its specifications.



Processor Core Architecture/Brand Name:

These alpha characters define the core architecture of the processor.

OPN Code	Brand Name	Technology
AXDA, AXDC	AMD Athlon™ XP	0.13μm
AX	AMD Athlon™ XP	0.18μm
AMSN	AMD Athlon™ MP	0.13μm
AMP/AHX	AMD Athlon™ MP	0.18μm
K7/A	AMD Athlon™	0.18μm
AHM	Mobile AMD Athlon™ 4	0.18μm
AXMS/AXMD/AXDH	Mobile AMD Athlon™ XP	0.13μm
D/DHD/DHM/DHL	AMD Duron™	0.18μm

Model Number:

This four digit numeric field defines the speed of the processor in megahertz or Model Number as appropriate.

OPN Code	Frequency
0500	500 MHz
0550	550 MHz
0600	600 MHz
0650	650 MHz
0700	700 MHz
0750	750 MHz
0800	800 MHz
0850	850 MHz
0900	900 MHz
0950	950 MHz
1000	1000 MHz
1100	1100 MHz
1133	1133 MHz
1200	1200 MHz
1300	1300 MHz
1333	1333 MHz
1400	1400 MHz (Desktop)

OPN Code	Model Number
1400	1400+ (Mobile)
1500	1500+
1600	1600+
1700	1700+
1800	1800+
1900	1900+
2000	2000+
2100	2100+
2200	2200+
2400	2400+
2500	2500+
2600	2600+
2700	2700+
2800	2800+
3000	3000+
3200	3200+

Package Type:

This single alpha character defines the package type for this device.

OPN Code	Package Type
A	CPGA
B	OBGA
D	OPGA
E	uPGA
F	OPGA
G	uPGA

Operating Voltage (Nominal Core Voltage):

This single alpha character defines the voltage for this processor.

OPN Code	Voltage
Y	1.10 V
C	1.15 V
T	1.20 V
X	1.25 V
W	1.30 V
J	1.35 V
V	1.40 V
Q	1.45 V
L	1.50 V
H	1.55 V
U	1.60 V
K	1.65 V
P	1.70 V
M	1.75 V
N	1.80 V

Maximum Die Temperature:

This single alpha character defines the maximum die temperature for this processor.

OPN Code	Temperature
R	70 °C
V	85 °C
T	90 °C
S	95 °C
Q	100 °C

Level 2 Cache Size:

This single alpha character defines the Level 2 Cache Size for this processor, in addition to 128KB Level 1 Cache.

OPN Code	Cache Size
1	64 KB
2	128 KB
3	256 KB
4	512 KB

Maximum System-Bus Speed:

This single alpha character defines the maximum System-Bus speed for this processor.

OPN Code	Speed
B	200 MHz
C	266 MHz
D	333 MHz
E	400 MHz