

# Thermal and Electrical Specification of the AMD64 Processors



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## Chapter 1. AMD Opteron™ Processor

### 1.1. AMD Opteron™ Processor Standard

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Opteron Processor, Model 5, 0.13 micron SOI (Socket 940)</b>								
OSA850CEP5AV	850	SH-CG	2400 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA848CEP5AV	848	SH-CG	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA848CEP5AM	848	SH-C0	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA846CEP5AV	846	SH-CG	2000 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA846CEP5AM	846	SH-C0	2000 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA844CEP5AV	844	SH-CG	1800 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA844CEP5AM	844	SH-C0	1800 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA844CCO5AI	844	SH-B3	1800 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA842CEP5AV	842	SH-CG	1600 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA842CEP5AM	842	SH-C0	1600 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA842CCO5AI	842	SH-B3	1600 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA840CEP5AV	840	SH-CG	1400 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA840CEP5AM	840	SH-C0	1400 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA840CCO5AI	840	SH-B3	1400 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA250CEP5AU	250	SH-CG	2400 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA248CEP5AU	248	SH-CG	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA248CEP5AL	248	SH-C0	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA246CEP5AU	248	SH-CG	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA246CEP5AL	246	SH-C0	2000 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA244CEP5AU	244	SH-CG	1800 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA244CEP5AL	244	SH-C0	1800 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA244CCO5AH	244	SH-B3	1800 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA242CEP5AU	242	SH-CG	1600 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA242CEP5AL	242	SH-C0	1600 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA242CCO5AH	242	SH-B3	1600 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA242CCO5AD	242	SH-B3	1600 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA240CEP5AU	240	SH-CG	1400 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA240CEP5AL	240	SH-C0	1400 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA240CCO5AD	240	SH-B3	1400 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA240CCO5AH	240	SH-B3	1400 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA150CEP5AT	150	SH-CG	2400 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA148CEP5AT	148	SH-CG	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA148CEP5AK	148	SH-C0	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA146CEP5AT	146	SH-CG	2000 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA146CEP5AK	146	SH-C0	2000 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
OSA144CEP5AT	144	SH-CG	1800 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA144CEP5AK	144	SH-C0	1800 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA142CEP5AT	142	SH-CG	1600 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA142CEP5AK	142	SH-C0	1600 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA142CCO5AG	142	SH-B3	1600 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
OSA140CEP5AT	140	SH-CG	1400 MHz	800 MHz	1 MB	1.500 V	70°C	82.1 W
OSA140CEP5AK	140	SH-C0	1400 MHz	800 MHz	1 MB	1.500 V	70°C	85.0 W
OSA140CCO5AG	140	SH-B3	1400 MHz	800 MHz	1 MB	1.550 V	69°C	85.0 W
<b>AMD Opteron Processor, Model 5.1, 0.09 micron SOI (Socket 940)</b>								
OSA846FIK5BD	846	SH8-D4	2000 MHz	800 MHz	1 MB	1.400 V	65°C	67.0 W
OSA248FIK5BC	248	SH8-D4	2200 MHz	800 MHz	1 MB	1.400 V	65°C	67.0 W
OSA246FIK5BC	246	SH8-D4	2000 MHz	800 MHz	1 MB	1.400 V	65°C	67.0 W
OSA146FIK5BB	146	SH8-D4	2000 MHz	800 MHz	1 MB	1.400 V	65°C	85.3 W
<b>AMD Opteron Processor, Model 5.2, 0.09 micron SOI (Socket 940)</b>								
OSA854FAA5BM	854	SH-E4	2800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	67°C	92.6 W
OSA852FAA5BM	852	SH-E4	2600 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	92.6 W
OSA850FAA5BM	850	SH-E4	2400 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Opteron Processor, Model 5.2, 0.09 micron SOI (Socket 940)</b>								
OSA848FAA5BM	848	SH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA846FAA5BM	846	SH-E4	2000 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA844FAA5BM	842	SH-E4	1800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA842FAA5BM	842	SH-E4	1600 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA254FAA5BL	254	SH-E4	2800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	67°C	92.6 W
OSA252FAA5BL	252	SH-E4	2600 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	92.6 W
OSA250FAA5BL	250	SH-E4	2400 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA248FAA5BL	248	SH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA246FAA5BL	246	SH-E4	2000 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA244FAA5BL	244	SH-E4	1800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA242FAA5BL	242	SH-E4	1600 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA154FAA5BK	154	SH-E4	2800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	92.6 W
OSA152FAA5BK	152	SH-E4	2600 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	92.6 W
OSA150FAA5BK	150	SH-E4	2400 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA148FAA5BK	148	SH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA146FAA5BK	146	SH-E4	2000 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA144FAA5BK	144	SH-E4	1800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA142FAA5BK	142	SH-E4	1600 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
<b>AMD Opteron Processor, Model 7.2, 0.09 micron DSL SOI (Socket 939)</b>								
OSA154DAA5BN	154	SH-E4	2800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	65°C	104.0 W
OSA152DAA5BN	152	SH-E4	2600 MHz	1000 MHz	1 MB	1.350 V/1.400 V	65°C	104.0 W
OSA150DAA5BN	150	SH-E4	2400 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA148DAA5BN	148	SH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	85.3 W
OSA146DAA5BN	146	SH-E4	2000 MHz	1000 MHz	1 MB	1.350 V/1.400 V	65°C	67.0 W
OSA144DAA5BN	144	SH-E4	1800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	67.0 W

## 1.2. AMD Opteron™ Processor HE

<b>AMD Opteron Processor HE, Model 5, 0.13 micron SOI (Socket 940)</b>								
OSK846CMP5AV	846	SH-CG	2000 MHz	800 MHz	1 MB	1.300 V	70°C	50.0 W
OSK246CMP5AU	246	SH-CG	2000 MHz	800 MHz	1 MB	1.300 V	70°C	50.0 W
OSK146CMP5AT	146	SH-CG	2000 MHz	800 MHz	1 MB	1.300 V	70°C	50.0 W
<b>AMD Opteron Processor HE, Model 5.2, 0.09 micron DSL SOI (Socket 940)</b>								
OSK850FAA5BM	850	SH-E4	2400 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	54.7 W
OSK848FAA5BM	848	SH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	54.7 W
OSK846FAA5BM	846	SH-E4	2000 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	54.7 W
OSK250FAA5BL	250	SH-E4	2400 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	54.7 W
OSK248FAA5BL	248	SH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	54.7 W
OSK246FAA5BL	246	SH-E4	2000 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	54.7 W
OSK148FAA5BK	148	SH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	54.7 W

## 1.3. AMD Opteron™ Processor EE

<b>AMD Opteron Processor EE, Model 5, 0.13 micron SOI (Socket 940)</b>								
OSB840CSP5AV	840	SH-CG	1400 MHz	800 MHz	1 MB	1.150 V	70°C	30.0 W
OSB240CSP5AU	240	SH-CG	1400 MHz	800 MHz	1 MB	1.150 V	70°C	30.0 W
OSB140CSP5AT	140	SH-CG	1400 MHz	800 MHz	1 MB	1.150 V	70°C	30.0 W

## Chapter 2. AMD Opteron™ Dual-Core Processor

### 2.1. AMD Opteron™ Dual-Core Processor Standard

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Opteron Dual-Core Processor, Model 1.2, 0.09 micron DSL SOI (Socket 940)</b>								
OSA880FAA6CC	880	JH-E6	2400 MHz	1000 MHz	2 MB	1.350 V/1.400 V	67°C	95.0 W
OSA875FKM6BS	875	JH-E1	2200 MHz	1000 MHz	2 MB	1.350 V	67°C	95.0 W
OSA875FAA6CC	875	JH-E6	2200 MHz	1000 MHz	2 MB	1.350 V	67°C	95.0 W
OSA870FKM6BS	870	JH-E1	2000 MHz	1000 MHz	2 MB	1.350 V	67°C	95.0 W
OSA870FAA6CC	870	JH-E6	2000 MHz	1000 MHz	2 MB	1.350 V	67°C	95.0 W
OSA865FKM6BS	865	JH-E1	1800 MHz	1000 MHz	2 MB	1.350 V	67°C	95.0 W
OSA865FAA6CC	865	JH-E6	1800 MHz	1000 MHz	2 MB	1.350 V	67°C	95.0 W
OSA280FAA6CB	280	JH-E6	2400 MHz	1000 MHz	2 MB	1.350 V/1.400 V	67°C	95.0 W
OSA275FAA6CB	275	JH-E6	2200 MHz	1000 MHz	2 MB	1.300 V/1.350 V	67°C	95.0 W
OSA270FAA6CB	270	JH-E6	2000 MHz	1000 MHz	2 MB	1.300 V/1.350 V	67°C	95.0 W
OSA265FAA6CB	265	JH-E6	1800 MHz	1000 MHz	2 MB	1.300 V/1.350 V	67°C	95.0 W
OSA165FAA6CB	165	JH-E6	1800 MHz	1000 MHz	2 MB	1.300 V/1.350 V	67°C	95.0 W
<b>AMD Opteron Dual-Core Processor, Model 3.2, 0.09 micron DSL SOI (Socket 939)</b>								
OSA180DAA6CD	180	JH-E6	2400 MHz	1000 MHz	2 MB	1.300 V/1.350 V	65°C	110.0 W
OSA175DAA6CD	175	JH-E6	2200 MHz	1000 MHz	2 MB	1.300 V/1.350 V	65°C	110.0 W
OSA170DAA6CD	170	JH-E6	2000 MHz	1000 MHz	2 MB	1.300 V/1.350 V	65°C	110.0 W
OSA165DAA6CD	165	JH-E6	1800 MHz	1000 MHz	2 MB	1.300 V/1.350 V	65°C	110.0 W
<b>AMD Opteron Dual-Core Processor, Model 1.4, 0.09 micron DSL SOI (Socket F)</b>								
OSY8220GAA6CR	8220	JH-F2	2800 MHz	1000 MHz	2 MB	1.35 V/1.40 V	72°C	119.2 W
OSA8218GAA6CR	8218	JH-F2	2600 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
OSA8216GAA6CR	8216	JH-F2	2400 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
OSA8214GAA6CR	8214	JH-F2	2200 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
OSA8212GAA6CR	8212	JH-F2	2000 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
OSY2220GAA6CQ	2220	JH-F2	2800 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	119.2 W
OSA2218GAA6CQ	2218	JH-F2	2600 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
OSA2216GAA6CQ	2216	JH-F2	2400 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
OSA2214GAA6CQ	2214	JH-F2	2200 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
OSA2212GAA6CQ	2212	JH-F2	2000 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
OSA2210GAA6CQ	2210	JH-F2	1800 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	95.0 W
<b>AMD Opteron Dual-Core Processor, Model 3.4, 0.09 micron DSL SOI (Socket AM2)</b>								
OSX1220IAA6CS	1220	JH-F2	2800 MHz	1000 MHz	2 MB	1.35 V/1.40 V	72°C	125.0 W
OSA1218IAA6CS	1218	JH-F2	2600 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	103.0 W
OSA1216IAA6CS	1216	JH-F2	2400 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	103.0 W
OSA1214IAA6CS	1214	JH-F2	2200 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	103.0 W
OSA1212IAA6CS	1212	JH-F2	2000 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	103.0 W
OSA1210IAA6CS	1210	JH-F2	1800 MHz	1000 MHz	2 MB	1.30 V/1.35 V	72°C	103.0 W

### 2.2. AMD Opteron™ Dual-Core Processor HE

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Opteron Dual-Core Processor HE, Model 1.2, 0.09 micron DSL SOI (Socket 940)</b>								
OSK870FAA6CC	870	JH-E6	2000 MHz	1000 MHz	2 MB	1.150 V/1.200 V	71°C	55.0 W
OSK865FAA6CC	865	JH-E6	1800 MHz	1000 MHz	2 MB	1.150 V/1.200 V	71°C	55.0 W
OSK860FAA6CC	860	JH-E6	1600 MHz	1000 MHz	2 MB	1.150 V/1.200 V	71°C	55.0 W
OSK270FAA6CB	270	JH-E6	2000 MHz	1000 MHz	2 MB	1.150 V/1.200 V	71°C	55.0 W
OSK265FAA6CB	265	JH-E6	1800 MHz	1000 MHz	2 MB	1.150 V/1.200 V	71°C	55.0 W
OSK260FAA6CB	260	JH-E6	1600 MHz	1000 MHz	2 MB	1.150 V/1.200 V	71°C	55.0 W



## 2.3. AMD Opteron™ Dual-Core Processor 68W

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Opteron Dual-Core Processor 68W, Model 1.4, 0.09 micron DSL SOI (Socket F)</b>								
OSP8216GAA6CR	8216	JH-F2	2400 MHz	1000 MHz	2 MB	1.20 V/1.25 V	72°C	68.0 W
OSP8214GAA6CR	8214	JH-F2	2200 MHz	1000 MHz	2 MB	1.20 V/1.25 V	72°C	68.0 W
OSP8212GAA6CR	8212	JH-F2	2000 MHz	1000 MHz	2 MB	1.20 V/1.25 V	72°C	68.0 W
OSP2216GAA6CQ	2216	JH-F2	2400 MHz	1000 MHz	2 MB	1.20 V/1.25 V	72°C	68.0 W
OSP2214GAA6CQ	2214	JH-F2	2200 MHz	1000 MHz	2 MB	1.20 V/1.25 V	72°C	68.0 W
OSP2212GAA6CQ	2212	JH-F2	2000 MHz	1000 MHz	2 MB	1.20 V/1.25 V	72°C	68.0 W

## Chapter 3. AMD Athlon™64 Processor

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Athlon 64 Processor, Model 4.0, 0.13 micron SOI (Socket 754)</b>								
ADA3700AEP5AR	3700	SH-CG	2400 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADA3400AEP5AR	3400	SH-CG	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADA3400AEP5AP	3400	SH-C0	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADA3200AEP5AR	3200	SH-CG	2000 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADA3200AEP5AP	3200	SH-C0	2000 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADA3000AEP4AR	3000	SH-CG	2000 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA3000AEP4AP	3000	SH-C0	2000 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA2800AEP4AP	2800	SH-C0	1800 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
<b>AMD Athlon 64 Processor, Model 7.0, 0.13 micron SOI (Socket 939)</b>								
ADA4000DEP5AS	4000	SH7-CG	2400 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
<b>AMD Athlon 64 Processor, Model 7.2, 0.09 micron SOI (Socket 939)</b>								
ADA4000DKA5CF	4000	SH-E5	2400 MHz	1000 MHz	1 MB	1.350 V	65°C	89 W
ADA4000DAA5BN	4000	SH-E4	2400 MHz	1000 MHz	1 MB	1.350 V/1.400 V	70°C	92.0 W
ADA3700DAA5CF	3700	SH-E5	2200 MHz	1000 MHz	1 MB	1.350 V	65°C	89.0 W
ADA3700DAA5BN	3700	SH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	70°C	89.0 W
ADA3500DAA4BN	3500	SH-E4	2200 MHz	1000 MHz	512 KB	1.350 V/1.400 V	70°C	67.0 W
<b>AMD Athlon 64 Processor, Model C.0, 0.13 micron SOI (Socket 754)</b>								
ADA3400AEP4AX	3400	DH-CG	2400 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA3200AEP5AX	3200	SH-CG	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADA3200AEP4AX	3200	DH-CG	2200 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA3000AEP4AX	3000	DH-CG	2000 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA2800AEP4AX	2800	DH-CG	1800 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA2600AEP4AX	2600	DH-CG	1600 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
<b>AMD Athlon 64 Processor, Model C.2, 0.09 micron DSL SOI (Socket 754)</b>								
ADA3400AIK4BO	3400	DH-E3	2400 MHz	1000 MHz	512 KB	1.400 V	70°C	67.0 W
ADA3300AIK3BO	3300	DH-E3	2400 MHz	1000 MHz	256 KB	1.400 V	70°C	67.0 W
ADA3200AIO4BX	3200	DH-E6	2200 MHz	1000 MHz	512 KB	1.400 V	69°C	59.0 W
ADA3000AIK4BX	3000	DH-E6	2000 MHz	1000 MHz	512 KB	1.400 V	65°C	51.0 W
<b>AMD Athlon 64 Processor, Model F.0, 0.13 micron SOI (Socket 939)</b>								
ADA3800DEP4AW	3800	DH-CG	2400 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA3500DEP4AW	3500	DH-CG	2200 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA3400DEP4AZ	3400	DH-CG	2200 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA3200DEP4AW	3200	DH-CG	2000 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
ADA2800DEP4AW	2800	DH-CG	1800 MHz	800 MHz	512 KB	1.500 V	70°C	89.0 W
<b>AMD Athlon 64 Processor, Model F.1, 0.09 micron SOI (Socket 939)</b>								
ADA3500DIK4BI	3500	DH-D0	2200 MHz	1000 MHz	512 KB	1.400 V	70°C	67.0 W
ADA3200DIK4BI	3200	DH-D0	2000 MHz	1000 MHz	512 KB	1.400 V	70°C	67.0 W
ADA3000DIK4BI	3000	DH-D0	1800 MHz	1000 MHz	512 KB	1.400 V	70°C	67.0 W

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Athlon 64 Processor, Model F.2, 0.09 micron SOI (Socket 939)</b>								
ADA3800DAA4BW	3800	DH-E6	2400 MHz	1000 MHz	512 KB	1.350 V/1.400 V	70°C	89.0 W
ADA3800DAA4BP	3800	DH-E3	2400 MHz	1000 MHz	512 KB	1.350 V/1.400 V	70°C	89.0 W
ADA3500DKA4CG	3500	DH-E6	2200 MHz	1000 MHz	512 KB	1.350 V	65°C	67.0 W
ADA3500DAA4BW	3500	DH-E6	2200 MHz	1000 MHz	512 KB	1.350 V/1.400 V	70°C	67.0 W
ADA3500DAA4BP	3500	DH-E3	2200 MHz	1000 MHz	512 KB	1.350 V/1.400 V	70°C	67.0 W
ADA3200DKA4CG	3200	DH-E6	2000 MHz	1000 MHz	512 KB	1.350 V	65°C	67.0 W
ADA3200DAA4BW	3200	DH-E6	2000 MHz	1000 MHz	512 KB	1.350 V/1.400 V	70°C	67.0 W
ADA3200DAA4BP	3200	DH-E3	2000 MHz	1000 MHz	512 KB	1.350 V/1.400 V	70°C	67.0 W
ADA3000DAA4BW	3000	DH-E6	1800 MHz	1000 MHz	512 KB	1.350 V/1.400 V	70°C	67.0 W
ADA3000DAA4BP	3000	DH-E4	1800 MHz	1000 MHz	512 KB	1.300 V/1.350 V	70°C	67.0 W
<b>AMD Athlon 64 Processor, Model F.4, 0.09 micron SOI (Socket AM2)</b>								
ADA3800IAA4CN	3800	DH-F2	2400 MHz	1000 MHz	512 KB	1.25V/1.35V/1.40V	69°C	62.0 W
ADA3500IAA4CN	3500	DH-F2	2200 MHz	1000 MHz	512 KB	1.25V/1.35V/1.40V	69°C	62.0 W
ADA3500IAA4CN	3500	DH-F2	2200 MHz	1000 MHz	512 KB	1.25V/1.35V/1.40V	70°C	62.0 W
ADD3500IAA4CW	3500	DH-F2	2200 MHz	1000 MHz	512 KB	1.200V/1.250V	78°C	35.0 W
ADA3000IAA3CN	3000	DH-F2	2000 MHz	1000 MHz	256 KB	1.25V/1.35V/1.40V	69°C	62.0 W

## Chapter 4. AMD Athlon™ 64 X2 Dual-Core Processor

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Athlon 64 X2 Dual-Core Processor, Model 3.4, 0.09 micron DSL SOI (Socket AM2)</b>								
ADA4800IAA6CS	4800	JH-F2	2400 MHz	1000 MHz	2 MB	1.300 V/1.350 V	70°C	89.0 W
ADA4400IAA6CS	4400	JH-F2	2200 MHz	1000 MHz	2 MB	1.300 V/1.350 V	70°C	89.0 W
ADA4000IAA6CS	4000	JH-F2	2000 MHz	1000 MHz	2 MB	1.300 V/1.350 V	70°C	89.0 W
<b>AMD Athlon 64 X2 Dual-Core Processor, Model 3.2, 0.09 micron DSL SOI (Socket 939)</b>								
ADA4800DAA6CD	4800	JH-E6	2400 MHz	1000 MHz	2 MB	1.350 V/1.400 V	65°C	110.0 W
ADV4400DAA6CD	4400	JH-E6	2200 MHz	1000 MHz	2 MB	1.350 V/1.400 V	71°C	89.0 W
ADA4400DAA6CD	4400	JH-E6	2200 MHz	1000 MHz	2 MB	1.350 V/1.400 V	65°C	110.0 W
ADA3800DAA5CD	3800	JH-E6	2000 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	89.0 W
<b>AMD Athlon 64 X2 Dual-Core Processor, Model B.2, 0.09 micron DSL SOI (Socket 939)</b>								
ADA4600DAA5BV	4600	BH-E4	2400 MHz	1000 MHz	1 MB	1.350 V/1.400 V	65°C	110.0 W
ADA4200DAA5BV	4200	BH-E4	2200 MHz	1000 MHz	1 MB	1.350 V/1.400 V	65°C	110.0 W
ADA3800DAA5BV	3800	BH-E4	2000 MHz	1000 MHz	1 MB	1.350 V/1.400 V	71°C	89.0 W
<b>AMD Athlon 64 X2 Dual-Core Processor, Model B.4, 0.09 micron DSL SOI (Socket AM2)</b>								
ADO5000IAA5CU	5000	BH-F2	2600 MHz	1000 MHz	1 MB	1.300 V/1.350 V	70°C	89.0 W
ADO4600IAA5CU	4600	BH-F2	2400 MHz	1000 MHz	1 MB	1.200 V/1.250 V	72°C	65.0 W
ADA4600IAA5CU	4600	BH-F2	2400 MHz	1000 MHz	1 MB	1.300 V/1.350 V	70°C	89.0 W
ADO4200IAA5CU	4200	BH-F2	2200 MHz	1000 MHz	1 MB	1.200 V/1.250 V	72°C	65.0 W
ADA4200IAA5CU	4200	BH-F2	2200 MHz	1000 MHz	1 MB	1.300 V/1.350 V	70°C	89.0 W
ADO3800IAA5CU	3800	BH-F2	2000 MHz	1000 MHz	1 MB	1.200 V/1.250 V	72°C	65.0 W
ADA3800IAA5CU	3800	BH-F2	2000 MHz	1000 MHz	1 MB	1.300 V/1.350 V	70°C	89.0 W
ADD3800IAA5CU	3800	BH-F2	2000 MHz	1000 MHz	1 MB	1.025 V/1.075 V	78°C	35.0 W

## Chapter 5. AMD Athlon™64 FX Processor

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Athlon 64 FX Processor, Model 5.0, 0.13 micron SOI (Socket 940)</b>								
ADAFX53CEP5AT	53	SH-CG	2400 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADAFX51CEP5AT	51	SH-CG	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADAFX51CEP5AK	51	SH-C0	2200 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
<b>AMD Athlon 64 FX Processor, Model 7.0, 0.13 micron SOI (Socket 939)</b>								
ADAFX53DEP5AS	53	SH-CG	2400 MHz	800 MHz	1 MB	1.500 V	70°C	89.0 W
ADAFX55DEI5AS	55	SH-CG	2600 MHz	800 MHz	1 MB	1.500 V	63°C	104.0 W
<b>AMD Athlon 64 FX Processor, Model 7.2, 0.09 micron SOI (Socket 939)</b>								
ADAFX55DAA5BN	55	SH-E4	2600 MHz	1000 MHz	1 MB	1.350 V/1.400 V	63°C	89.0 W
ADAFX57DAA5BN	57	SH-E4	2800 MHz	1000 MHz	1 MB	1.350 V/1.400 V	63°C	104.0 W

## Chapter 6. AMD Athlon™64 FX Dual-Core Processor

OPN	Model	Core Rev.	Core Freq.	HTL Speed	L2 Cache	VCORE	TCase max	TDP
<b>AMD Athlon 64 FX Dual-Core Processor, Model 3.2, 0.09 micron DSL SOI (Socket 939)</b>								
ADAFX60DAA6CD	60	JH-E6	2600 MHz	1000 MHz	2 MB	1.350 V/1.400 V	65°C	110.0 W
<b>AMD Athlon 64 FX Dual-Core Processor, Model 3.4, 0.09 micron DSL SOI (Socket AM2)</b>								
ADAFX62IAA6CS	62	JH-F2	2800 MHz	1000 MHz	2 MB	1.350 V/1.400 V	63°C	125.0 W



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