



12815 NE 124th St STE#D, Kirkland, WA-98034

MT40A1G16TD-062E:AATF vs AS4C1G16D4A-62BCN Comparison

Part Number & result Parameter	MT40A1G16TD-062E:AATF	AS4C1G16D4A-62BCN	Comparison Result
Product Description	DDR4 SDRAM	DDR4 SDRAM	Same
Die	Micron Die, Rev.F	Micron Die, Rev.F	Same
Capacity	16Gb (1G x 16)	16Gb (1G x 16)	Same
Memory Organization	128Meg, x16bits, x8 banks	128Meg, x16bits, x8 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = 1.2V (+/- 60mV)	V _{DD} & V _{DDQ} = 1.2V (+/- 60mV)	Same
	V _{pp} = 2.5V (-125mV,+250mV)	V _{pp} = 2.5V (-125mV,+250mV)	Same
Operating Temperature	Automotive (-40°C ≤ Tc ≤ 105°C)	Commercial (0°C ≤ Tc ≤ 95°C)	Different
Max Clock Frequency	1600 MHz	1600 MHz	Same
Min. Cycle Time	0.625ns	0.625ns	Same
Max Data Rate	3200 Mbps	3200 Mbps	Same
CAS Latency	22	22	Same
tAA(ns)	13.75	13.75	Same
tRCD (ns)	13.75	13.75	Same
tRP (ns)	13.75	13.75	Same
Number of Bank groups	2	2	Same
Bank Count per Group	4	4	Same
Row Addressing	128K (A0..A16)	128K (A0..A16)	Same
Column Addressing	1K (A0..9)	1K (A0..9)	Same
Page Size per bank	2KB	2KB	Same
Temperature controlled Refresh time	8192 Cycles at Tc range 64ms at 0C ~ 85C 32ms at 85C ~ 95C 16ms at >95C to 105C	8192 Cycles at Tc range 64ms at 0C ~ 85C 32ms at 85C ~ 95C	Different
Low Power Auto Self Refresh support	Yes	Yes	Same
I/O Capacitance	CIO = 0.82pF Max	CIO = 0.82pF Max	Same
Pin to Pin Compatible	Pin to Pin Compatible		
AC/DC Characteristics	Same		Meet JEDEC



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IDD Specification			
Parameter	MT40A1G16TD-062E:AATF	AS4C1G16D4A-62BCN	Comparison Result
IDD Spec conditions	-40C ≤ Tc ≤ 105C	-40C ≤ Tc ≤ 85C	Different
I _{DD0} (mA) , I _{pp0} (mA)	84, 5	70, 4	Different
I _{DD1} (mA)	103	84	Different
I _{DD2N} (mA)	64	45	Different
I _{DD2NT} (mA)	74	58	Different
I _{DD2P} (mA)	55	38	Different
I _{DD2Q} (mA)	60	42	Different
I _{DD3N} (mA)	85	62	Different
I _{DD3P} (mA)	70	51	Different
I _{DD4R} (mA)	263	193	Different
I _{DD4W/A/B} (mA)	215	141	Different
I _{DD6N} (mA)	53	53	Different
I _{DD6R} (mA)	20	20	Different
I _{DD6E} (mA)	170	90	Different
I _{DD7} (mA)	238	200	Different
Package	96b FBGA 7.5x13x1.2mm	96b FBGA 7.5x13x1.2mm	Same
Solder Ball material Composition	SACQ (92.45% Sn, 4% Ag, 0.5% Cu, 3% Bi, 0.05% Ni).	SACQ (92.45% Sn, 4% Ag, 0.5% Cu, 3% Bi, 0.05% Ni).	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same