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

AS4C32M16SA-7TCN & AS4C32M16SB-7TCN Comparison

(512Mb – 32M x 16, 3.3V SDRAM rev.A vs rev.B Comparison)

Part Number & result / Parameter	AS4C32M16SA-7TCN / TIN	AS4C32M16SB-7TCN / TIN	**Comparison**
Fab Process Technology	63nm	**38nm**	Rev.B better
Capacity	512M (32M x 16)	512M (32M x 16)	Same
Memory Organization	8Mwords, x16bits, x4 banks	32Mwords, x16bits, x8 banks	Same
Operating Power Supply	3.3V ±0.3	3.3V ±0.3	Same
Operating Temperature	Commercial (0°C to 70°C) Industrial (-40 ~ 85°C)	Commercial (0°C to 70°C) Industrial (-40 ~ 85°C)	Same
Capacitance (Max)	Input = 6pf I/O = 6pf	Input = **5.5pf** I/O = 6pf	Comparable
Clock Frequency	143MHz	143MHz Max (166Mhz)	Rev B better (-6 available)
tAC3 (CAS Latency =3)	5.4ns	5.4ns	Same
tRAS	45ns	42ns	Comparable
tRC	≥65ns	≥63ns	Comparable
AC/DC Characteristics	Same	Same	Comparable
IDD Specification			
I_{DD1} (mA)	240	**110**	Rev.B better
I_{DD2N} (mA)	58	**40**	Rev.B better
I_{DD2NS} (mA)	48	**36**	Rev.B better
I_{DD2P} (mA)	**7**	8	Comparable
I_{DD2PS} (mA)	**5**	8	Comparable
I_{DD3N} (mA)	75	**60**	Rev.B better
I_{DD4} (mA)	170	**120**	Rev.B better
I_{DD5} (mA)	160	**150**	Comparable
I_{DD6} (mA)	**6**	8	Rev.A better
Package	54-pin 400 mil TSOP II package	54-pin 400 mil TSOP II package	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same
Reliability Quality	Passed all Reliability stress assessments per JEDEC	Passed all Reliability stress assessments per JEDEC	Same
Quality Compliance	ROHS & REACH Compliance	ROHS & REACH Compliance	Same