

AS4C8M16SA-xTxN vs A3V28S40JTP-60 Comparison

Part Number & result Parameter	AS4C8M16SA-6TCN AS4C8M16SA-6TIN	AS4C8M16SA-7TCN	A3V28S40JTP-60	Comparison Result
Product Description	SDRAM	SDRAM	SDRAM	Same
Process Technology	63nm	63nm	63nm	Same
Capacity	128Mb (8M x 16)	128Mb (8M x 16)	128Mb (8M x 16)	Same
Memory Organization	2M, x16 bits, x4 banks	2M, x16 bits, x4 banks	2M,x16bits, x4 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = +3.3V ± 0.3V	V _{DD} & V _{DDQ} = +3.3V ± 0.3V	V _{DD} & V _{DDQ} = +3.3V ± 0.3V	Same
Operating Temperature	Industrial (-40°C to 85°C) Commercial(0°C to 70°C)	Commercial(0°C to 70°C)	Commercial(0°C to 70°C)	
Clock Frequency	166MHz	143MHz	166MHz	Same
Clock Cycle time (ns)	6	7	6	Same
CAS Latency	3	3	3	Same
tRCD & tRP (ns)	18	21	18	Same
Average Refresh Period	4096 cycles/64ms	4096 cycles/64ms	4096 cycles/64ms	Same
I/O Capacitance	CIO: 4pf to 6pf	CIO: 4pf to 6pf	CIO: 3.5pf to 5.5pf	
Pin to Pin Compatible	Pin to Pin Compatible			Same
AC/DC Characteristics	Same	Same	Same	Meet JEDEC
IDD Specification				
IDD Spec conditions	VDD/Q = 3.3V ±0.3V	VDD/Q = 3.3V ±0.3V	VDD/Q = 3.3V ±0.3V	
I _{DD1} (mA)	50	45	80	Alliance better
I _{DD2N} (mA)	20	20	30	Alliance better
I _{DD2NS} (mA)	18	18	25	Alliance better
I _{DD2P} (mA)	2	2	10	Alliance better
I _{DD2PS} (mA)	2	2	5	Alliance better
I _{DD3N} (mA)	35	35	45	Alliance better
I _{DD3NS} (mA)	35	35	35	Same
I _{DD4} (mA)	62	60	100	Alliance better
I _{DD5} (mA)	70	65	115	Alliance better
I _{DD6} (mA)	2	2	5	Alliance better
Package	54p TSOP II (400mils)	54p TSOP II (400mils)	54p TSOP II (400mils)	Same
Package Material	Pb & Halogen Free	Pb & Halogen Free	Pb & Halogen Free	Same