

AS4C128M16D3A-12BIN vs AS4C128M16D3LC-12BIN Comparison

Part Number & result Parameter	AS4C128M16D3A-12BIN/TR	AS4C128M16D3LC-12BIN/TR	Comparison Result
Product Description	DDR3 SDRAM	DDR3L SDRAM	Same
Process Technology	30nm	25nm	
Capacity	2Gb (128M x 16)	2Gb (128M x 16)	Same
Memory Organization	16Mwords, x16bits, x8 banks	16Mwords, x16bits, x8 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = 1.35V (1.283V to 1.45V)	V _{DD} & V _{DDQ} = 1.35V (1.283V to 1.45V)	Same
DDR3 Compatibility	DDR3 SDRAM	DDR3 Backward Compatible V _{DD} & V _{DDQ} = 1.5±0.075	Same
Operating Temperature	Industrial (-40°C to 95°C)	Industrial (-40°C to 95°C)	Same
Clock Frequency	800MHz	800MHz	Same
Data Rate (MT/s)	1600	1600	Same
CAS Latency	11	11	Same
tRCD & tRP (ns)	13.75	13.75	Same
Average Refresh Period	8192 cycles/64ms upto 85C	8192 cycles/64ms upto 85C	Same
I/O Capacitance	Comparable		Same
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
IDD Spec conditions	-40C to 95C	-40C to 95C	Same
I_{DD0} (mA)	70	70	Same
I_{DD1} (mA)	80	80	Same
I_{DD2P0} (mA)	15	15	Same
I_{DD2P1} (mA)	22	22	Same
I_{DD2N} (mA)	35	35	Same
I_{DD2Q} (mA)	35	35	Same
I_{DD3P} (mA)	35	35	Same
I_{DD3N} (mA)	55	55	Same
I_{DD4R} (mA)	155	155	Same
I_{DD4W} (mA)	160	160	Same
I_{DD5B} (mA)	145	145	Same
I_{DD6} (mA)	15	15	Same
I_{DD6ET} (mA)	20	20	Same
I_{DD7} (mA)	240	240	Same
I_{DD8} (mA)	14	14	Same
Package 96b FBGA	(8mm x 13mm x 1.0mm) BallArray (mm): 12x 6.4 x 0.8	(7.5mm x 13mm x 1.0mm) Ball Array (mm): 12x 6.4 x 0.8	Comparable