



INTEGRATED SILICON SOLUTION, INC.



DRAM

SRAM

EEPROM

Automotive

ICSI Products

MAY 2008
PRODUCT SELECTOR GUIDE



To our automotive customers,

ISSI is a committed supplier to the automotive industry and has been since we first addressed this market in 1999. In 2001, we enhanced our support of this market by creating the Automotive Business Unit. This business unit provides cross-functional support within ISSI to continually enhance the Automotive Infrastructure from the product-planning phase through the production phase of our products. We do this with our SRAM, DRAM, and EEPROM product families.

One of the primary problems automotive customers face is the commitment from a supplier for long-term product support. This is not an issue with ISSI. Our business model is built around the ability to provide our customers products over long product life-cycles as required by automotive applications. ISSI provides advanced memory solutions while keeping long-term product support on a solid track for the automotive market.

To ensure the quality required by the automotive market, we utilize a Total Quality Management System. Our production processes are controlled and fully documented in standard automotive PPAPs. ISSI is ISO 9001:2000 certified. Our subcontractors are fully QS9000/TS16949 certified and our automotive products meet AECQ100 qualification standards.

Strategically partnering with pure-play silicon foundries enables us to utilize a wide array of process technologies. Established infrastructures between ISSI's engineering team and foundries give access to advanced technology development for future products while giving flexibility to maximize available wafer fabrication capacity for existing products, a key role in ISSI's product strategy. The flexibility of ISSI's fabless business model and unique supply-chain management gives ISSI a competitive advantage in capacity, cost and technology.

ISSI offers three different grades of Automotive Products. These are -40°C to +85°C, -40°C to +105°C, and -40°C to +125°C. In fact, ISSI leads the industry in extended temperature SDRAMs. These products are designed and fully tested to meet the demanding requirements of automotive applications

ISSI is committed to providing the automotive market with the most cost-effective and highest quality products possible. The automotive industry can look to ISSI for a steady, long-term supply of automotive grade memory products.

Sanjiv Asthana
Senior Vice President, Worldwide Sales
Integrated Silicon Solution Inc.

SYNCHRONOUS SRAM

Pipelined and Flow-Thru Synchronous SRAM

Den	Org	Part No.	Vcc	VccQ	Speed (Mhz)	tKQ (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment ^(3,4,5,6,7)
2M	64Kx32	IS61LF6432A	3.3V	2.5V/3.3V	90	8.5	TQFP(100)	Prod	F
	64Kx36	IS61LF6436A	3.3V	2.5V/3.3V	90	8.5	TQFP(100)	Prod	F
	64Kx32	IS61LP6432A	3.3V	2.5V/3.3V	133	4	TQFP(100)	Prod	P
	64Kx36	IS61LP6436A	3.3V	2.5V/3.3V	166,133	3.5,4	TQFP(100)	Prod	P
4M	128Kx32	IS61LPS12832A					PBGA(119), TQFP(100)		
	128Kx36	IS61LPS12836A	3.3V	3.3V/2.5V	250	2.6	BGA(165)	Prod	P,SC
	256Kx18	IS61LPS25618A							
	128Kx36	IS61VPS12836A	2.5V	2.5V	250,200	2.6,3.1	PBGA(119), TQFP(100)	Prod	P,SC
	256Kx18	IS61VPS25618A					BGA(165)		
	128Kx36	IS61LPD12836A	3.3V	2.5V/3.3V	250	2.6	PBGA(119), TQFP(100)	Prod	P,DC
	256Kx18	IS61LPD25618A					BGA(165)		
	128Kx36	IS61VPD12836A	2.5V	2.5V	250	2.6	PBGA(119), TQFP(100)	Prod	P,DC
	256Kx18	IS61VPD25618A					BGA(165)		
	128Kx32	IS61LF12832A					PBGA(119), TQFP(100)		
	128Kx36	IS61LF12836A	3.3V	2.5V/3.3V	133,117	6.5,7.5	BGA(165)	Prod	F
	256Kx18	IS61LF25618A							
8M	128Kx36	IS61VF12836A	2.5V	2.5V	133,117	6.5,7.5	PBGA(119), TQFP(100)	Prod	F
	256Kx18	IS61VF25618A					BGA(165)		
	256Kx36	IS61LPS25636A	3.3V	3.3V/2.5V	250,166	2.6	PBGA(119), TQFP(100)	Prod	P,SC
	512Kx18	IS61LPS51218A					BGA(165)		
	256Kx36	IS61VPS25636A	2.5V	2.5V	250,200	2.6,3.1	PBGA(119), TQFP(100)	Prod	P,SC
	512Kx18	IS61VPS51218A					BGA(165)		
	256Kx36	IS61LPD25636A	3.3V	2.5V/3.3V	250	2.6	PBGA(119), TQFP(100)	Prod	P,DC
	512Kx18	IS61LPD51218A					BGA(165)		
	256Kx36	IS61VPD25636A	2.5V	2.5V	250	2.6	PBGA(119), TQFP(100)	Prod	P,DC
	512Kx18	IS61VPD51218A					BGA(165)		
	256Kx36	IS61LF25636A	3.3V	2.5V/3.3V	133	6.5	PBGA(119), TQFP(100)	Prod	F
	512Kx18	IS61LF51218A					BGA(165)		
18M	256Kx36	IS61VF25636A	2.5V	2.5V	133	6.5	PBGA(119), TQFP(100)	Prod	F
	512Kx18	IS61VF51218A					BGA(165)		
	256Kx72	IS61LPS25672A	3.3V	3.3V/2.5V	250	2.6	BGA(209)	Prod	P,SC
	512Kx36	IS61LPS51236A	3.3V	3.3V/2.5V	250	2.6	PBGA(119), TQFP(100)	Prod	P,SC
	1Mx18	IS61LPS102418A					BGA(165)		
	256Kx72	IS61VPS25672A	3.3V	3.3V/2.5V	250	2.6	BGA(209)	Prod	P,SC
	512Kx36	IS61VPS51236A	2.5V	2.5V	250	2.6	PBGA(119), TQFP(100)	Prod	P,SC
	1Mx18	IS61VPS102418A					BGA(165)		
	512Kx36	IS61LPD51236A	3.3V	2.5V/3.3V	250	2.6	TQFP(100)	Prod	P, DC
	1Mx18	IS61LPD102418A					BGA(165)		
	512Kx36	IS61VPD51236A	2.5V	2.5V	250	2.6	TQFP(100)	Prod	P,DC
	1Mx18	IS61VPD102418A					BGA(165)		
36M	256Kx72	IS61LF25672A							
	512Kx36	IS61LF51236A	3.3V	2.5V/3.3V	133	6.5	PBGA(119), TQFP(100)	Prod	F
	1Mx18	IS61LF102418A					BGA(165), BGA(209)		
	256Kx72	IS61VF25672A							
	512Kx36	IS61VF51236A	2.5V	2.5V	133	6.5	PBGA(119), TQFP(100)	Prod	F
	1Mx18	IS61VF102418A					BGA(165), BGA(209)		
	1Mx36	IS61LPS102436A	3.3V	3.3V/2.5V	166	3.5	TQFP(100), BGA(165)	Prod	
	2Mx18	IS61LPS204818A	3.3V	3.3V/2.5V	166	3.5	TQFP(100), BGA(165)	Prod	
	1Mx36	IS61VPS102436A	2.5V	2.5V	166	3.5	TQFP(100), BGA(165)	Prod	
	2Mx18	IS61VPS204818A	3.3V	2.5V	166	3.5	TQFP(100), BGA(165)	Prod	
	1Mx36	IS61LF102436A	3.3V	3.3V/2.5V	133	6.5	TQFP(100), BGA(165)	Prod	S
	2Mx18	IS61LF204818A	3.3V	3.3V/2.5V	133	6.5	TQFP(100), BGA(165)	Prod	S
	1Mx36	IS61VF102436A	2.5V	2.5V	133	6.5	TQFP(100), BGA(165)	Prod	S
	2Mx18	IS61VF204818A	2.5V	2.5V	133	6.5	TQFP(100), BGA(165)	Prod	S

Notes: 1. S = Sample 2. Prod = Production 3. CE = Chip Enable 4. P = Pipeline 5. F =Flow Through 6. SC = Single Cycle Deselect
7. DC = Double Cycle Deselect 8. Items in **bold** are recommended samples and commonly ordered products as defined by ISSI.

SYNCHRONOUS SRAM (CONT'D)

No-Wait Synchronous SRAM (Compatible with Zero Bus Turnaround devices)

Den	Org	Part No.	Vcc	VccQ	Speed (Mhz)	tKQ (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment ^(3,4)
2M	64Kx32	IS61NLP6432A	3.3V	2.5V/3.3V	250,200	2.6,3.1	TQFP(100)	Prod	P
	64Kx36	IS61NLP6436A	3.3V	2.5V/3.3V	250,200	2.6,3.1	TQFP(100)	Prod	P
	128Kx18	IS61NLP12818A	3.3V	2.5V/3.3V	250,200	2.6,3.1	TQFP(100)	Prod	P
	64Kx36	IS61NVP6436A	2.5V	2.5V	250,200	2.6,3.1	TQFP(100)	Prod	P
	128Kx18	IS61NVP12818A	2.5V	2.5V	250,200	2.6,3.1	TQFP(100)	Prod	P
4M	128Kx32	IS61NLP12832B					PBGA(119),TQFP(100)		
	128Kx36	IS61NLP12836B	3.3V	2.5V/3.3V	250	2.6	BGA(165)	Prod	P
	256Kx18	IS61NLP25618A							
	128Kx36	IS61NVP12836B	2.5V	2.5V	250	2.6	PBGA(119),TQFP(100)	Prod	P
	256Kx18	IS61NVP25618A					BGA(165)		
	128Kx36	IS61NLF12836A	3.3V	2.5V/3.3V	117,133	7.5,6.5	TQFP(100)	Prod	F
	256Kx18	IS61NLF25618A					PBGA(119),BGA(165)		
	128Kx36	IS61NVF12836A	2.5V	2.5V	117,133	7.5,6.5	TQFP(100)	Prod	F
8M	256Kx18	IS61NVF25618A					PBGA(119),BGA(165)		
	256Kx36	IS61NLP25636A	3.3V	2.5V/3.3V	250	2.6	PBGA(119),TQFP(100)	Prod	P
	512Kx18	IS61NLP51218A					BGA(165)		
	256Kx36	IS61NVP25636A	2.5V	2.5V	250	2.6	PBGA(119),TQFP(100)	Prod	P
	512Kx18	IS61NVP51218A					BGA(165)		
	256Kx36	IS61NLF25636A	3.3V	2.5V/3.3V	133	6.5	TQFP(100)	Prod	F
	512Kx18	IS61NLF51218A					PBGA(119),BGA(165)		
	256Kx36	IS61NVF25636A	2.5V	2.5V	133	6.5	TQFP(100)	Prod	F
18M	512Kx18	IS61NVF51218A					PBGA(119),BGA(165)		
	256Kx72	IS61NVVP25672	1.8V	1.8V	250,200	2.6,3.2	BGA(209)	S=NOW	P
	512Kx36	IS61NVVP51236	1.8V	1.8V	250,200	2.6,3.2	PBGA(119)	S=NOW	P
	256Kx72	IS61NLP25672							
	512Kx36	IS61NLP51236	3.3V	2.5V/3.3V	250	2.6	BGA(209),TQFP(100)	Prod	P
	1Mx18	IS61NLP102418					BGA(165)		
	256Kx72	IS61NVP25672							
	512Kx36	IS61NVP51236	2.5V	2.5V	250	2.6	BGA(209),TQFP(100)	Prod	P
	1Mx18	IS61NVP102418					BGA(165)		
	256Kx72	IS61NLF25672							
	512Kx36	IS61NLF51236	3.3V	2.5V/3.3V	133	6.5	BGA(209),TQFP(100)	Prod	F
	1Mx18	IS61NLF102418					BGA(165)		
36M	256Kx72	IS61NVF25672							
	512Kx36	IS61NVF51236	2.5V	2.5V	133	6.5	BGA(209),TQFP(100)	Prod	F
	1Mx18	IS61NVF102418					BGA(165)		
	2Mx18	IS61NVP204818A	2.5V	2.5V	166	3.5	TQFP(100)	Prod	P
	1Mx36	IS61NVP102436A					BGA(165)		
36M	2Mx18	IS61NLP204818A	3.3V	3.3V/2.5V	166	3.5	TQFP(100)	Prod	P
	1Mx36	IS61NLP102436A					BGA(165)		

QUAD/DDR-II Synchronous SRAM

Family	Den	Org	Part No.	Burst Length	Speed (Mhz)	Status ⁽¹⁾⁽²⁾	Comment
QUAD	36Mb	1Mx36	IS61QDB41M36	4	250	Prod	
	36Mb	2Mx18	IS61QDB42M18	4	250	Prod	
	36Mb	1Mx36	IS61QDB21M36	2	250	Prod	
	36Mb	2Mx18	IS61QDB22M18	2	250	Prod	
DDR-II	36Mb	1Mx36	IS61DDB41M36	4	250	Prod	
	36Mb	2Mx18	IS61DDB42M18	4	250	Prod	
	36Mb	1Mx36	IS61DDB21M36	2	250	Prod	
	36Mb	2Mx18	IS61DDB22M18	2	250	Prod	

Notes:

1. S = Sample 2. Prod = Production 3. P = Pipeline 4. F =Flow Through 5. SC = Single Cycle Deselect
6. DC = Double Cycle Deselect
7. Items in **bold** are recommended samples and commonly ordered products as defined by ISSI

SYNCHRONOUS SRAM (CONT'D)

QUAD/DDR-II Synchronous SRAM

Family	Den	Org	Part No.	Burst Length	Speed (Mhz)	Status ⁽¹⁾⁽²⁾	Comment
QUAD	72Mb	2Mx36	IS61QDB42M36	4	300,250	S=NOW	
	72Mb	4Mx18	IS61QDB44M18	4	300,250	S=NOW	
	72Mb	2Mx36	IS61QDB22M36	2	300,250	S=NOW	
	72Mb	4Mx18	IS61QDB24M18	2	300,250	S=NOW	
DDR-II	72Mb	2Mx36	IS61DDB42M36	4	300	S=NOW	
	72Mb	4Mx18	IS61DDB44M18	4	300	S=NOW	
	72Mb	2Mx36	IS61DDB22M36	2	300	S=NOW	
	72Mb	4Mx18	IS61DDB24M18	2	300	S=NOW	

ASYNCHRONOUS SRAM

5V High-Speed Asynchronous SRAM

Den	Org	Part No.	Vcc	Speeds (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment
64K	8Kx8	IS61C64AL	5V	10	SOJ(28),TSOP1(28)	Prod	
256K	32Kx8	IS61C256AL	5V	10,12	SOJ(28),TSOP1(28)	Prod	
512K	32Kx16	IS61C3216AL	5V	12	SOJ(44),TSOP2(44)	Prod	
1M	64Kx16	IS61C6416AL	5V	12	SOJ(44),TSOP2(44)	Prod	
	128Kx8	IS61C1024AL	5V	12	SOJ(32.3),SOJ(32.4) TSOP1(32), sTSOP1(32)	Prod	
4M	512Kx8	IS61C5128AL	5V	10,12	SOJ(36),TSOP2(44)	Prod	
	512Kx8	IS61C5128AS	5V	25	SOP(32),sTSOP1(32),TSOP(32)	Prod	
	256Kx16	IS61C25616AL	5V	10	SOJ(44),TSOP2(44)	Prod	
	256Kx16	IS61C25616AS	5V	25	SOJ(44),TSOP2(44)	Prod	

Low Power Asynchronous SRAM

Den	Org	Part No.	Vcc	Speeds (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment
256K	32Kx8	IS62C256AL	5V	25,45	SOP(28),TSOP1(28)	Prod	
1M	128Kx8	IS62C1024AL	5.0V	35	SOP(32),TSOP1(32)	Prod	
8M	512Kx16	IS62C51216AL	5.0V	45	TSOP2(44), BGA(48)	S=Q2/08	x8 Avail. on req.

High Speed Low Power Asynchronous SRAM

Den	Org	Part No.	Vcc	Speed (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment
256K	32Kx8	IS61LV256AL	3.3V	10	SOJ(28),TSOP1(28)	Prod	
512K	32Kx16	IS61WV3216BLL	3.3V	12	TSOP2(44), mBGA(48)	Prod	
1M	64Kx16	IS61LV6416/L	3.3V	8,10,12	SOJ(44),TSOP2(44),mBGA(48)	Prod	
	64Kx16	IS61WV6416BLL	2.5V-3.6V	12	TSOP2(44),mBGA(48),SOJ(44)	Prod	
	128Kx8	IS63LV1024/L	3.3V	8,10,12	SOJ(32.3),SOJ(32.4),TSOP2(32), mBGA(36),sTSOP1(32)	Prod	Center Vcc & GND
	128Kx8	IS63WV1024BLL	2.5V-3.6V	12	TSOP2(32),mBGA(48) sTSOP1(32),SOJ(32.3)	Prod	
2M	128Kx16	IS61WV12816DALL/DBLL	1.65V-3.6V	8,10,12,20	TSOP2(44). BGA(48)	Prod	
	256Kx8	IS61LV2568L	3.3V	8,10	SOJ(36),TSOP2(44)	Prod	
3M	128Kx24	IS61LV12824	3.3V	8,10	PBGA(119),TQFP(100)	Prod	x24 Interface
4M	256Kx16	IS61WV25616ALL/BLL	1.65V-3.6V	8,10,20	TSOP2(44), mBGA(48)	Prod	
	512Kx8	IS61WV5128ALL/BLL	1.65V-3.6V	8,10,20	SOJ(36),TSOP2(44),mBGA(36)	Prod	
8M	512Kx16	IS61WV51216ALL/BLL	1.65V-3.3V	8,10,20	TSOP2(44),mBGA(48)	Prod	
	1Mx8	IS61WV10248ALL/BLL	1.65V-3.6V	8,10,20	TSOP2(44),mBGA(48)	Prod	
	256Kx32	IS61WV25632ALL/BLL	1.65V-3.6V	8,10,20	BGA(90)	S=NOW	

Notes: 1. S = Sample 2. Prod = Production 3. 2CS = 2 chip enable

ASYNCHRONOUS SRAM (CONT'D)

High Speed Low Power Asynchronous SRAM

Den	Org	Part No.	Vcc	Speed (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment
16M	1Mx16	IS61WV102416ALL/BLL	1.65V-3.6V	8,10,20	TSOP1(48),mBGA(48)	Prod	
	1Mx16	IS62WV102416ALL/BLL	1.65V-3.6V	25,35	TSOP1(48),mBGA(48)	Prod	Low Power
	2Mx8	IS61WV20488ALL/BLL	1.65V-3.6V	8,10,20	TSOP2(44),mBGA(48)	Prod	
	2Mx8	IS62WV20488ALL/BLL	1.65V-3.6V	25,35	TSOP2(44),mBGA(48)	Prod	Low Power
	512Kx32	IS61WV51232ALL/BLL	1.65V-3.6V	8,10,20	BGA(90)	Prod	

PowerSaver™ Low Power Asynchronous SRAM

Den	Org	Part No.	Vcc	Speeds (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment ⁽³⁾
256K	32Kx8	IS62LV256AL	3.3V	20,45	SOJ(28),SOP(28),TSOP1(28)	Prod	
1M	64Kx16	IS62WV6416ALL/BLL	1.7V-3.6V	45,55	TSOP2(44),mBGA(48)	Prod	
	128Kx8	IS62WV1288ALL/BLL	1.65V-3.6V	45,55	SOP(32), sTSOP1(32), TSOP1(32), mBGA(36)	Prod	
2M	128Kx16	IS62WV12816ALL/BLL	1.65V-3.6V	45,55,70	mBGA(48),TSOP2(44)	Prod	2CS Option Avail.
	256Kx8	IS62WV2568ALL/BLL	1.65V-3.6V	55,70	sTSOP1(32),TSOP1(32),mBGA(36)	Prod	
4M	256Kx16	IS62VW25616LL	1.65V-1.95V	70,85	µBGA(48),TSOP2(44)	Prod	
	256Kx16	IS62WV25616ALL/BLL	1.65V-3.6V	55,70	TSOP2(44), mBGA(48)	Prod	
	512Kx8	IS62WV5128ALL/BLL	1.65V-3.6V	55,70	sTSOP1(32),TSOP1(32), TSOP2(32), mBGA(36),SOP(32)	Prod	
8M	512Kx16	IS62WV51216ALL/BLL	1.65V-3.6V	45,55	mBGA(48),TSOP2(44)	Prod	
	1MX8	IS62WV10248BLL	2.5V-3.6V	55,70	mBGA(48)	Prod	

PSEUDO SRAM

Den	Org	Part No.	Vcc	Speed (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾⁽⁶⁾	Comment ⁽³⁾⁽⁴⁾
4M	256Kx16	IS66WV25616ALL/BLL	1.7V-3.6V	55	BGA(48),TSOP2(44)	S=NOW	L
8M	512Kx16	IS66WV51216ALL/BLL	1.7V-3.6V	55	BGA(48),TSOP2(44)	S=NOW	L
	256Kx32	IS66WV25632ALL/BLL	1.7V-3.6V	55	BGA(90)	S=Q2/08	L

*Contact SRAM Marketing for questions

Notes: 1. S = Sample 2. Prod = Production 3. 2CS = 2 chip enable

DYNAMIC RAM

3.3V EDO and Fast Page Mode DRAM

Den	Org	Type	Part No.	Vcc	Refsh	Ras (ns)	Pkg (#Pins)	Status ^(1,2,3,5)	Comment ^(4,6)
4M	256Kx16	EDO	IS41LV16256B	3.3V	512	35,60	SOJ(40),TSOP2(40/44)	NR	
	256Kx16	FP	IS41LV16257B	3.3V	512	35,60	SOJ(40),TSOP2(40/44)	NR	
16M	4Mx4	EDO	IS41LV44002B	3.3V	2K	50	SOJ(24/26), TSOP2(24)	Prod	
	1Mx16	EDO	IS41LV16100B	3.3V	1K	50,60	SOJ(42),TSOP2(44/50)	Prod	
	1Mx16	FP	IS41LV16105B	3.3V	1K	50,60	SOJ(42),TSOP2(44/50)	Prod	

3.3V SDR (Single Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refsh	Speed (Mhz)	Pkg (#Pins)	Status ^(1,2,3,5)	Comment ^(4,6)
16M	1Mx16	SDR	IS42S16100C1	3.3V	2K	200,166,143	TSOP2(50), BGA(60)	NR	
	1Mx16	SDR	IS42S16100E	3.3V	2K	200,166,143	TSOP2(50), BGA(60)	Prod	KGD available
64M	4Mx16	SDR	IS42S16400D	3.3V	4K	166,143	TSOP2(54),BGA(60)	NR	
	4Mx16	SDR	IS42S16400E	3.3V	4K	166,143	TSOP2(54)	Prod	KGD available
	4Mx16	SDR	IS42S16400F	3.3V	4K	200,166,143	TSOP2(54)	Prod	KGD available
	2Mx32	SDR	IS42S32200C1	3.3V	4K	183,166,143	TSOP2(86), BGA(90)	Prod	
	2Mx32	SDR	IS42S32200E	3.3V	4K	200,166,143	TSOP2(86), BGA(90)	Prod	KGD available
	2Mx32	SDR	IS42S32200F	3.3V	4K	200,166,143	TSOP2(86), BGA(90)	Prod	KGD available
128M	16Mx8	SDR	IS42S81600B	3.3V	4K	166,143,133	TSOP2(54)	NR	
	16Mx8	SDR	IS42S81600D	3.3V	4K	166,143,133	TSOP2(54)	NR	
	16Mx8	SDR	IS42S81600E	3.3V	4K	200,166,143,133	TSOP2(54)	Prod	KGD available
	8Mx16	SDR	IS42S16800B	3.3V	4K	166,143,133	TSOP2(54)	NR	CAS = 2 support
	8Mx16	SDR	IS42S16800D	3.3V	4K	166,143,133	TSOP2(54), BGA(54)	NR	
	8Mx16	SDR	IS42S16800E	3.3V	4K	200,166,143,133	TSOP2(54), BGA(54)	Prod	KGD available
	4Mx32	SDR	IS42S32400B	3.3V	4K	166,143,125,100	TSOP2(86), BGA(90)	NR	
	4Mx32	SDR	IS42S32400D	3.3V	4K	166,143,125,100	TSOP2(86), BGA(90)	NR	
	4Mx32	SDR	IS42S32400E	3.3V	4K	166,143	TSOP2(86), BGA(90)	Prod	KGD available
	4Mx32	SDR	IS42S32400F	3.3V	4K	166,143	TSOP2(86), BGA(90)	Prod	KGD available
256M	32Mx8	SDR	IS42S83200B	3.3V	8K	166,143	TSOP2(54)	NR	
	32Mx8	SDR	IS42S83200D	3.3V	8K	166,143	TSOP2(54)	Prod	KGD available
	16Mx16	SDR	IS42S16160B	3.3V	8K	166,143	TSOP2(54), BGA(54)	NR	
	16Mx16	SDR	IS42S16160D	3.3V	8K	166,143	TSOP2(54), BGA(54)	Prod	KGD available
	8Mx32	SDR	IS42S32800B	3.3V	4K	166,143	TSOP2(86), BGA(90)	NR	
	8Mx32	SDR	IS42S32800D	3.3V	4K	166,143	TSOP2(86), BGA(90)	Prod	KGD available
512M	64Mx8	SDR	IS42S86400B	3.3V	8K	143,133	TSOP2(54)	Prod	KGD available
	32Mx16	SDR	IS42S16320B	3.3V	8K	143,133	TSOP2(54) BGA(54) ⁽⁶⁾	Prod	KGD available
	16Mx32	SDR	IS42S32160B	3.3V	8K	143,133	TSOP2(86),BGA(90)	Prod	KGD available, 11x13mm BGA
	16Mx32	SDR	IS42S32160C	3.3V	8K	133	BGA(90)	Prod	stacked die, 8x13mm BGA

PowerSaver™ / Mobile SDR Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refsh	Speed (Mhz)	Pkg (#Pins)	Status ^(1,2,3,5)	Comment ^(4,6)
16M	1Mx16	SDR	IS42VS16100C1	1.8V	2K	100	TSOP2(50)	NR	
	1Mx16	SDR	IS42VS16100E	1.8V	2K	133,100,83	TSOP2(50),BGA(60)	Prod	
	1Mx16	SDR	IS42R16100E	2.5V	2K	143,100	TSOP2(50)	Prod	
64M	4Mx16	SDR	IS42VS16400C1	1.8V	4K	100,83,66	TSOP2(54)	NR	
	4Mx16	SDR	IS42VS16400E	1.8V	4K	143,133	TSOP2(54)	Prod	KGD available
	2Mx32	SDR	IS42VS32200E	1.8V	4K	133,100	TSOP2(86),BGA(90)	Prod	KGD available
128M	8Mx16	LPSDR	IS42SM16800D	3.3V	4K	200,166,133,100	TSOP2(54),BGA(54)	S=Q3/08	KGD available
	8Mx16	LPSDR	IS42RM16800D	2.5V	4K	133,100	TSOP2(54),BGA(54)	S=Q3/08	KGD available

DYNAMIC RAM (CONT'D)

PowerSaver™ / Mobile SDR Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refsh	Speed (Mhz)	Pkg (#Pins)	Status ^(1,2,3,5)	Comment ^(4,6)
128M	8Mx16	LPSPDR	IS42VM16800E	1.8V	4K	133,100	TSOP2(54),BGA(54)	S=Q3/08	KGD available
	4Mx32	LPSPDR	IS42SM32400E	3.3V	4K	200,166,133,100	TSOP2(86),BGA(90)	S=Q3/08	KGD available
	4Mx32	LPSPDR	IS42RM32400E	2.5V	4K	133,100	TSOP2(86),BGA(90)	S=Q3/08	KGD available
	4Mx32	LPSPDR	IS42VM32400E	1.8V	4K	133,100	TSOP2(86),BGA(90)	S=Q3/08	KGD available
256M	16Mx16	LPSPDR	IS42SM16160D	3.3V	8K	166, 133, 100	TSOP2(54),BGA(54)	S=Q2/08	KGD available
	16Mx16	LPSPDR	IS42RM16160D	2.5V	8K	133, 100	TSOP2(54),BGA(54)	S=Q2/08	KGD available
	16Mx16	LPSPDR	IS42VM16160D	1.8V	8K	133, 100	TSOP2(54),BGA(54)	S=Q2/08	KGD available
	8Mx32	LPSPDR	IS42SM32800D	3.3V	4K	166, 133, 100	TSOP2(86),BGA(90)	S=Q2/08	KGD available
	8Mx32	LPSPDR	IS42RM32800D	2.5V	4K	133, 100	TSOP2(86),BGA(90)	S=Q2/08	KGD available
	8Mx32	LPSPDR	IS42VM32800D	1.8V	4K	133, 100	TSOP2(86),BGA(90)	S=Q2/08	KGD available
512M	32Mx16	LPSPDR	IS42SM16320B	3.3V	8K	166, 133, 100	TSOP2(54),BGA(54)	S=Q4/08	KGD available
	32Mx16	LPSPDR	IS42RM16320B	2.5V	8K	133, 100	TSOP2(54),BGA(54)	S=Q4/08	KGD available
	32Mx16	LPSPDR	IS42VM16320B	1.8V	8K	133, 100	TSOP2(54),BGA(54)	S=Q4/08	KGD available
	16Mx32	LPSPDR	IS42SM32160B	3.3V	8K	166, 133, 100	TSOP2(86),BGA(90)*	S=Q4/08	KGD available, 11x13mm BGA
	16Mx32	LPSPDR	IS42RM32160B	2.5V	8K	133, 100	TSOP2(86),BGA(90)*	S=Q4/08	KGD available, 11x13mm BGA
	16Mx32	LPSPDR	IS42VM32160B	1.8V	8K	133, 100	TSOP2(86),BGA(90)*	S=Q4/08	KGD available, 11x13mm BGA
	16Mx32	LPSPDR	IS42SM32160C	3.3V	8K	133, 100	TSOP2(86),BGA(90)*	S=Q3/08	KGD available, 8x13mm BGA
	16Mx32	LPSPDR	IS42RM32160C	2.5V	8K	133, 100	TSOP2(86),BGA(90)*	S=Q3/08	KGD available, 8x13mm BGA
	16Mx32	LPSPDR	IS42VM32160C	1.8V	8K	133, 100	TSOP2(86),BGA(90)*	S=Q3/08	KGD available, 8x13mm BGA

2.5V DDR (Double Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refsh	Speed (Mhz)	Pkg (#Pins)	Status ^(1,2,3,5)	Comment ^(4,6)
128M	8Mx16	DDR	IS43R16800C	2.5V	4K	200,166	TSOP2(66)	NR	
	8Mx16	DDR	IS43R16800D	2.5V	4K	250,200,166	BGA(60)	S=Q4/08	
	4Mx32	DDR	IS43R32400B	2.5V	4K	200,166,100	BGA(144)	NR	
	4Mx32	DDR	IS43R32400D	2.5V	4K	250,200,166	BGA(144)	S=Q4/08	
256M	32Mx8	DDR	IS43R83200B	2.5V	8K	200,166,133	TSOP2(66)	Prod	
	16Mx16	DDR	IS43R16160B	2.5V	8K	200,166,133	TSOP2(66)	Prod	
	8Mx32	DDR	IS43R32800B	2.5V	4K	200,166,133	BGA(144)	Prod	KGD available
512M	32Mx16	DDR	IS43R16320C	2.5V	8K	200,166	TSOP2(66)	S=Q2/08	

1.8V Mobile DDR (Double Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refsh	Speed (Mhz)	Pkg (#Pins)	Status ^(1,2,3,5)	Comment
128M	8Mx16	LPDDR	IS43LR16800D	1.8V	4K	200,166	BGA(60)	S=Q4/08	
	4Mx32	LPDDR	IS43LR32400D	1.8V	4K	200,166	BGA(90)	S=Q4/08	
256M	16Mx16	LPDDR	IS43LR16160D	1.8V	8K	200,166	BGA(60)	S=Q4/08	
	8Mx32	LPDDR	IS43LR32800D	1.8V	4K	200,166	BGA(90)	S=Q4/08	

1.8V DDR2 (Double Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refsh	Speed (Mhz)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment
256M	8Mx32	DDR2	IS43DR32800A	1.8V	8K	400, 333, 267, 200	BGA(126)	S=Q4/08	

Notes: 1. S = Sample 2. Prod = Production 3. NR = In production, but not recommended for new design
4. 2CS = 2 chip enable 5. EOL = End of Life 6. Contact Marketing for status

SMART CARDS

Two-Wire Serial EEPROM

Den	Org	Part No.	Vcc	Speed (Khz)	Pkg	Status ⁽¹⁾⁽²⁾	Comment
1K	128x8	IS24C01B	2.5V-5.5V	400	wafer, module	Prod	
2K	256x8	IS24C02B	2.5V-5.5V	400	wafer, module	Prod	
4K	512x8	IS24C04A	2.5V-5.5V	400	wafer, module	Prod	
8K	1024x8	IS24C08A	2.5V-5.5V	400	wafer, module	Prod	
16K	2Kx8	IS24C16A	2.5V-5.5V	400	wafer, module	Prod	
32K	4Kx8	IS24C32A	2.5V-5.5V	400	wafer, module	Prod	
64K	8Kx8	IS24C64A	2.5V-5.5V	400	wafer, module	Prod	
128K	16Kx8	IS24C128	2.5V-5.5V	400	wafer, module	Prod	
	16Kx8	IS24C128B	2.5V-5.5V	400	wafer, module	S=NOW	
256K	32Kx8	IS24C256B	2.5V-5.5V	400	wafer, module	S=Q3/08	

Secure Serial Smart Card

Den	Org	Part No.	Vcc	Speed	Pkg	Status ⁽¹⁾⁽²⁾	Comment
2K	256x8 EEPROM	IS23SC4442	2.7V-5.5V	N / A	wafer,module	Prod	
8K	1Kx8 EEPROM	IS23SC4428	4.5V-5.5V	N / A	wafer,module	Prod	
16K	2Kx8 EEPROM	IS23SC1604	4.5V-5.5V	N / A	wafer,module	Prod	

MCU Based Smart Card

Den	Org	Part No.	Vcc	Speed	Pkg	Status ⁽¹⁾⁽²⁾	Comment
8K	8 bit MCU w/8K byte EEPROM	IS23SC4408	3V-5V	N / A	wafer,module	Prod	16KB ROM
16K	8 bit MCU w/16K byte EEPROM	IS23SC4416	3V-5V	N / A	wafer,module	S=NOW	48KB ROM
64K	8 bit MCU w/56K byte EEPROM	IS23SC4456	3V-5V	N / A	wafer,module	S=Q4/08	64KB OTP ROM

Contactless Smart Card IC

Den	Org	Part No.	Speed	Pkg	Status ⁽¹⁾⁽²⁾	Comment
1K	1K byte EEPROM	IS23SC4439	13.56MHz	wafer,module	Prod	ISO/IEC14443 TypeA

Notes: 1. S = Sample 2. Prod = Production 3. NR = Not recommended for new design

EEPROM

Microwire Serial EEPROM

Den	Org	Part No.	Vcc	Speed (Mhz)	Pkg (8 Pins) ⁽¹⁾	Status ⁽²⁾⁽³⁾	Comment
1K	128x8/64x16	IS93C46D	1.8V-5.5V	3	SOIC, TSSOP, PDIP, DFN	Prod	
2K	256x8/128x16	IS93C56A	1.8V-5.5V	3	SOIC, TSSOP, PDIP, DFN	Prod	
4K	512x8/256x16	IS93C66A	1.8V-5.5V	3	SOIC, TSSOP, PDIP, DFN	Prod	
8K	1Kx8/512x16	IS93C76A	1.8V-5.5V	3	SOIC, TSSOP, PDIP	Prod	
16K	2Kx8/1Kx16	IS93C86A	1.8V-5.5V	3	SOIC, TSSOP, PDIP	Prod	

Two-Wire Serial EEPROM

Den	Org	Part No.	Vcc	Speed (Khz)	Pkg (8 Pins) ⁽¹⁾	Status ⁽²⁾⁽³⁾	Comment ^(4,5,6)
1K	128x8	IS24C01B	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP, CSP	Prod	
2K	256x8	IS24C02A	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP, DFN, CSP	Prod	16 byte page
	256x8	IS24C02B	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, DFN, CSP	Prod	8 byte page
	256x8	IS24C02C	1.7V-3.6V	400	SOIC, TSSOP, PDIP, MSOP, DFN	Prod	RSWP
	256x8	IS24C02D	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP, DFN	Prod	PWP
	256x8	IS34C02	1.8V-5.5V	1000	SOIC, TSSOP, MSOP	Prod	PWP
	256x8	IS34C02B	1.7V-3.6V	400	TSSOP, DFN	Prod	RSWP
4K	512x8	IS24C04A	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP, DFN	Prod	
8K	1024x8	IS24C08A	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP, DFN, CSP	Prod	
16K	2Kx8	IS24C16A	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP, DFN, CSP	Prod	
32K	4Kx8	IS24C32A	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP, DFN	Prod	
	4Kx8	IS24C32C	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP, DFN	S=NOW	
64K	8Kx8	IS24C64A	1.8V-5.5V	1000	SOIC, TSSOP, PDIP, MSOP	Prod	
128K	16Kx8	IS24C128	2.5V-5.5V	1000	SOIC, PDIP	Prod	NR
	16Kx8	IS24C128B	1.8V-5.5V	1000	SOIC, TSSOP, PDIP	S=NOW	
256K	32Kx8	IS24C256B	1.8V-5.5V	1000	SOIC, TSSOP	S=Q3/08	

SPI (Serial Peripheral Interface) EEPROM

Den	Org	Part No.	Vcc	Speed(Mhz)	Pkg (8 Pins) ⁽¹⁾	Status ⁽²⁾⁽³⁾	Comment ⁽⁶⁾
1K	128x8	IS25C01	1.8V-5.5V	10	SOIC, TSSOP, PDIP	Prod	
2K	256x8	IS25C02	1.8V-5.5V	10	SOIC, TSSOP, PDIP	Prod	
4K	512x8	IS25C04	1.8V-5.5V	10	SOIC, TSSOP, PDIP	Prod	
8K	1Kx8	IS25C08	1.8V-5.5V	10	SOIC, TSSOP, PDIP, DFN	Prod	
16K	2Kx8	IS25C16	1.8V-5.5V	10	SOIC, TSSOP, PDIP, DFN	Prod	
32K	4Kx8	IS25C32A	1.8V-5.5V	10	SOIC, TSSOP, PDIP	Prod	NR
	4Kx8	IS25C32B	1.8V-5.5V	10	SOIC, TSSOP, PDIP	S=NOW	
64K	8Kx8	IS25C64A	1.8V-5.5V	10	SOIC, TSSOP, PDIP	Prod	
128K	16Kx8	IS25C128A	1.8V-5.5V	10	SOIC, TSSOP, PDIP	S=NOW	
256K	32Kx8	IS25C256A	1.8V-5.5V	10	SOIC, TSSOP	S=Q3/08	

Notes:

1. Contact factory for package availability.
2. S = Sample
3. Prod = Production
4. PWP = Permanent Write-Protection
5. RSWP = Reversible Software Write Protection
6. NR = Not recommended for new design

AUTOMOTIVE MEMORY PRODUCTS

Automotive Synchronous SRAM

Den	Org	Part No. ⁽⁶⁾	Vcc	VccQ	Speed (Mhz)	tKQ (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment ^(3,4,5)
4M	128Kx32	IS64VPS12832A	2.5V	2.5V	200	3.1	TQFP(100)	Prod	P/SC
	128Kx36	IS64VPS12836A	2.5V	2.5V	200	3.1	TQFP(100)	Prod	P/SC
	256Kx18	IS64VPS25618A	2.5V	2.5V	200	3.1	TQFP(100)	Prod	P/SC
	128Kx32	IS64LPS12832A	3.3V	2.5V/3.3V	200	3.1	TQFP(100)	Prod	P/SC
	128Kx36	IS64LPS12836A	3.3V	2.5V/3.3V	200	3.1	TQFP(100)	Prod	P/SC
	256Kx18	IS64LPS25618A	3.3V	2.5V/3.3V	200	3.1	TQFP(100)	Prod	P/SC
	128Kx32	IS64LF12832A	3.3V	2.5V/3.3V	117	7.5	TQFP(100)	Prod	F
	128Kx36	IS64LF12836A	3.3V	2.5V/3.3V	117	7.5	TQFP(100)	Prod	F
	256Kx18	IS64LF25618A	3.3V	2.5V/3.3V	117	7.5	TQFP(100)	Prod	F
	128Kx32	IS64VF12832A	2.5V	2.5V	117	7.5	TQFP(100)	Prod	F
	128Kx36	IS64VF12836A	2.5V	2.5V	117	7.5	TQFP(100)	Prod	F
	256Kx18	IS64VF25618A	2.5V	2.5V	117	7.5	TQFP(100)	Prod	F
8M	256Kx36	IS64LPS25636A	3.3V	3.3V/2.5V	166	2.6	TQFP(100)	Prod	

Automotive Asynchronous SRAM

Den	Org	Part No. ⁽⁶⁾	Vcc	Speeds (ns)	Pkg (#Pins)	Status ⁽¹⁾⁽²⁾	Comment
256K	32Kx8	IS65C256AL	5V	25,45	SOP(28),TSOP1(28)	Prod	
	32Kx8	IS65LV256AL	3.3V	45	SOP(28),TSOP1(28)	Prod	
512K	32Kx16	IS64WV3216BLL	2.5V-3.6V	15	TSOP2(44), mBGA(48)	Prod	
1M	64Kx16	IS64C6416AL	4.5V-5.5V	15	SOJ(44),TSOP2(44)	Prod	
	64Kx16	IS64WV6416BLL	2.5V-3.6V	15	TSOP2(44),mBGA(48)	Prod	
	128Kx8	IS64C1024AL	5.0V	15	SOJ(32.4),TSOP1(32)	Prod	
	128Kx8	IS64WV1024BLL	2.5V-3.6V	15	TSOP2(32),mBGA(48),sTSOP1(32)	Prod	
	128Kx8	IS65C1024AL	5.0V	45	SOP(32),TSOP1(32)	Prod	
	128Kx16	IS65WV12816ALL/BLL	1.65V-3.6V	55,70	TSOP2(44),mBGA(48)	Prod	
2M	128Kx16	IS64WV12816DBLL	2.4V-3.6V	12	TSOP2(44),mBGA(48)	Prod	
	512Kx8	IS64WV5128BLL/BLS	2.4V-3.6V	10	TSOP2(44),mBGA(36)	Prod	
4M	256Kx16	IS64WV25616BLL	2.4V-3.6V	10	TSOP2(44),mBGA(48)	Prod	
	256Kx16	IS65WV25616ALL/BLL	1.65V-3.3V	55,70	TSOP2(44),mBGA(48)	Prod	
	512Kx16	IS64WV51216BLL	2.4V-3.3V	10	TSOP2(44),mBGA(48)	Prod	
8M	1Mx16	IS64WV102416BLL	2.4V-3.6V	10	TSOP1(48),mBGA(48)	Prod	
16M	2Mx8	IS64WV20488	2.4V-3.6V	10	TSOP2(44),mBGA(48)	Prod	

3.3V Synchronous Automotive DRAM

Den	Org	Part No.	Vcc	Speed (MHz)	Pkg (#Pins)	Status ^(1,2,7)	Comment ⁽⁸⁾
16M	1Mx16	IS45S16100C1	3.3V	143	TSOP2(50), BGA(60)	NR	
	1Mx16	IS45S16100E	3.3V	200,166,143	TSOP2(50)	Prod	A2 available
64M	4Mx16	IS45S16400E	3.3V	166,143	TSOP2(54)	Prod	A2 available
	2Mx32	IS45S32200C1	3.3V	143	TSOP2(86), BGA(90)	NR	
	2Mx32	IS45S32200E	3.3V	166,143	TSOP2(86), BGA(90)	Prod	A2 available
128M	16Mx8	IS45S81600B	3.3V	143	TSOP2(54)	NR	
	16Mx8	IS45S81600E	3.3V	166,143,133	TSOP2(54)	S=Q2/08	A2 available
	8Mx16	IS45S16800B	3.3V	143	TSOP2(54)	NR	
	8Mx16	IS45S16800E	3.3V	166, 143, 133	TSOP2(54), BGA(54)	S=Q2/08	A2 available
	4Mx32	IS45S32400B	3.3V	166,143	TSOP2(86), BGA(90)	NR	
	4Mx32	IS45S32400E	3.3V	166, 143, 133	TSOP2(86), BGA(90)	S=Q2/08	A2 available
	256M	32Mx8	IS45S83200D	3.3V	166,143	TSOP2(54)	S=Q2/08
256M	16Mx16	IS45S16160D	3.3V	166,143	TSOP2(54),BGA(54)	S=Q2/08	A2 available
	8Mx32	IS45S32800D	3.3V	166,143	TSOP2(86),BGA(90)	S=Q2/08	A2 available
	512M	32Mx16	IS45S16320B	3.3V	133	TSOP2(54)	S=Q2/08
512M	16Mx32	IS45S32160B	3.3V	143,133	TSOP2(86),BGA(90)	S=Q3/08	A2 available
	16Mx32	IS45S32160C	3.3V	133	BGA(90)	S=Q3/08	

Notes: 1. S = Samples 2. Prod = Production 3. P = Pipeline 4. F = Flow Through 5. SC = Single Cycle Deselect

6. Avail. in auto. temp. grade of -40°C to +125°C 7. NR = Not recommended for new design 8. Avail. in auto. temp. grade of -40°C to +105°C

AUTOMOTIVE MEMORY PRODUCTS (CONT'D)

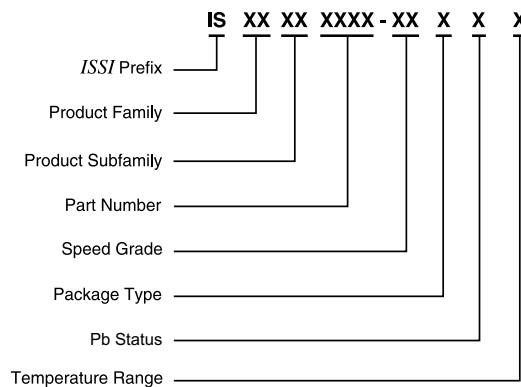
Automotive Serial EEPROM

Den	Org	Type	Part No. ⁽³⁾	Vcc	Speed	Pkg (8 Pins)	Status ⁽¹⁾⁽²⁾	Comment
1K	128x8	I ² C	IS24C01B	2.5V-5.5V	400 KHz	SOIC, TSSOP	Prod	
	128x8	SPI	IS25C01	2.5V-5.5V	10 MHz	SOIC, TSSOP	Prod	
	128x8/64x16	Microwire	IS93C46D	2.5V-5.5V	3 MHz	SOIC, TSSOP	Prod	
2K	256x8	I ² C	IS24C02B	2.5V-5.5V	400 KHz	SOIC, TSSOP	Prod	
	256x8	SPI	IS25C02	2.5V-5.5V	10 MHz	SOIC, TSSOP	Prod	
	256x8/128x16	Microwire	IS93C56A	2.5V-5.5V	3 MHz	SOIC, TSSOP	Prod	
4K	512x8	I ² C	IS24C04A	2.5V-5.5V	400 KHz	SOIC, TSSOP	Prod	
	512x8	SPI	IS25C04	2.5V-5.5V	10 MHz	SOIC, TSSOP	Prod	
	512x8/256x16	Microwire	IS93C66A	2.5V-5.5V	3 MHz	SOIC, TSSOP	Prod	
8K	1Kx8	I ² C	IS24C08A	2.5V-5.5V	400 KHz	SOIC, TSSOP	Prod	
	1Kx8	SPI	IS25C08	2.5V-5.5V	10 MHz	SOIC, TSSOP	Prod	
	1Kx8/512x16	Microwire	IS93C76A	2.5V-5.5V	3 MHz	SOIC, TSSOP	Prod	
16K	2Kx8	I ² C	IS24C16A	2.5V-5.5V	400 KHz	SOIC, TSSOP	Prod	
	2Kx8	SPI	IS25C16	2.5V-5.5V	10 MHz	SOIC, TSSOP	Prod	
	2Kx8/1Kx16	Microwire	IS93C86A	2.5V-5.5V	3 MHz	SOIC, TSSOP	Prod	
32K	4Kx8	I ² C	IS24C32C	2.5V-5.5V	400 KHz	SOIC, TSSOP	S=NOW	
	4Kx8	SPI	IS25C32B	2.5V-5.5V	10 MHz	SOIC, TSSOP	S=NOW	
64K	8Kx8	I ² C	IS24C64A	2.5V-5.5V	400 KHz	SOIC, TSSOP	Prod	
	8Kx8	SPI	IS25C64A	2.5V-5.5V	10 MHz	SOIC, TSSOP	Prod	
128K	16Kx8	I ² C	IS24C128B	2.5V-5.5V	400 KHz	SOIC, TSSOP	S=NOW	
	16Kx8	SPI	IS25C128A	2.5V-5.5V	10 MHz	SOIC, TSSOP	S=NOW	
256K	32Kx8	I ² C	IS24C256B	2.5V-5.5V	400 KHz	SOIC, TSSOP	S=Q3/08	
	32Kx8	SPI	IS25C256A	2.5V-5.5V	10 MHz	SOIC, TSSOP	S=Q3/08	

Notes:

1. S = Samples 2. Prod = Production 3. Available in automotive temperature grade of -40°C to +125°C.

ORDERING INFORMATION FOR ISSI DEVICES



Product Family:

- 2X = Secure Serial EEPROM/ Smart Card IC's
- 4X = DRAM
- 5X = Search Processor
- 6X = SRAM
- 9X = Microwire EEPROM

Pb Status:

- Blank = Normal
- L = Pb Free

Temperature Range:

- Blank = Commercial (0°C to +70°C)
- I = Industrial (-40°C to +85°C)
- A = Automotive (0°C to +70°C)
- A1 = Automotive (-40°C to +85°C)
- A2 = Automotive (-40°C to +105°C)
- A3 = Automotive (-40°C to +125°C)

Package Type:

- | | | | |
|--------------------------|---|------------------|-------------------------|
| A = mBGA | K = 400-mil Plastic SOJ | PQ = PQFP | U = 330-mil Plastic SOP |
| B = PBGA or mBGA | LQ = LQFP | Q = 450-mil SOP | V = TSOP |
| D = DFN | M = μBGA (6x8mm, 7.2x8.7mm or 9mm x 11mm) | QF = QFN | X = Unpackaged Die |
| G = JEDEC SOIC (Rotated) | P = 300-mil Plastic DIP (8-pin) | S = 120-mil MSOP | Z = TSSOP |
| GR = JEDEC SOIC | PL = PLCC | T = TSOP | |
| H = STSOP | | TQ = TQFP | |
| J = 300-mil Plastic SOJ | | | |

ICSI SYNCHRONOUS SRAM

Flow Through Synchronous SRAM

Den	Org	Part No.	Vcc(VccQ)	Speeds (ns)	Pkg (#Pins)	Status ^(1,2,3)	Comment
8M	256K x 32	IC61SF25632D	3.3V	6.5, 7.5, 8.5, 9.5,	TQ (100), B (119)	EOL	2CE
8M	256K x 32	IC61SF25632T	3.3V	6.5, 7.5, 8.5, 9.5,	TQ (100)	EOL	3CE
8M	256K x 36	IC61SF25636D	3.3V	6.5, 7.5, 8.5, 9.5,	TQ (100)	EOL	2CE
8M	256K x 36	IC61SF25636T	3.3V	6.5, 7.5, 8.5, 9.5,	TQ (100)	EOL	3CE
8M	512K x 18	IC61SF51218D	3.3V	6.5, 7.5, 8.5, 9.5,	TQ (100), B (119)	EOL	2CE
8M	512K x 18	IC61SF51218T	3.3V	6.5, 7.5, 8.5, 9.5,	TQ (100)	EOL	3CE

Pipeline Synchronous SRAM

Den	Org	Part No.	Vcc(VccQ)	Speeds (ns)	Pkg (#Pins)	Status ⁽³⁾	Comment
8M	256K x 32	IC61S25632D	3.3V	250,200,166,133(MHz)	TQ (100)	EOL	2CE
8M	256K x 32	IC61S25632T	3.3V	250,200,166,133(MHz)	TQ (100)	EOL	3CE
8M	256K x 36	IC61S25636D	3.3V	250,200,166,133(MHz)	TQ (100), B (119)	EOL	2CE
8M	256K x 36	IC61S25636T	3.3V	250,200,166,133(MHz)	TQ (100)	EOL	3CE
8M	512K x 18	IC61S51218D	3.3V	250,200,166,133(MHz)	TQ (100)	EOL	2CE
8M	512K x 18	IC61S51218T	3.3V	250,200,166,133(MHz)	TQ (100)	EOL	3CE

ICSI ASYNCHRONOUS SRAM

Low-Speed Asynchronous SRAM

Den	Org	Part No.	Vcc(VccQ)	Speeds (ns)	Pkg (#Pins)	Status ⁽³⁾	Comment
1M	128K x 8	IC62C1024	5V	45,70	T (32)	EOL	
1M	128K x 8	IC62C1024A	5V	45,55,70	Q,T (32)	EOL	
1M	128K x 8	IC62C1024AL	5V	45,55,70	Q,T (32)	EOL	
1M	128K x 8	IC62C1024L	5V	45,55,70	Q,T (32)	EOL	

High Speed Asynchronous SRAM

Den	Org	Part No.	Vcc(VccQ)	Speeds (ns)	Pkg (#Pins)	Status ^(1,2,3)	Comment
256K	32K x 8	IC61LV256	3.3V	8, 10, 12, 15	J,JG,T,TG (28)	EOL	
256K	32K x 8	IC61C256AH	5V	10,12,15,20	J,JG,T,TG,U,UG (28)	EOL	
1M	64K x 16	IC61LV6416	3.3V	8, 10, 12, 15	K,KG,T,TG (44)	Prod	
1M	128K x 8	IC61C1024	5V	12, 15, 20	K,T, (32)	EOL	
1M	128K x 8	IC61C1024L	5V	15, 20	K,T (32)	EOL	
1M	128K x 8	IC63LV1024	3.3V	8, 10, 12, 15	J,K,KG,T,TG (32)	Prod	
2M	128K x 16	IC61LV12816	3.3V	10, 12, 15	T,TG (44)	Prod	
4M	256K x 16	IC61LV25616	3.3V	8, 10, 12, 15	K (44), T,TG (48), B(48),	Prod	
4M	512K x 8	IC61LV5128	3.3V	8, 10, 12, 15	K (36), T,TG (44)	Prod	

ICSI DRAM

SDRAM

Den	Org	Part No.	Vcc(VccQ)	Speeds (ns)	Pkg (#Pins)	Status ^(1,2,3)	Comment
16M	1MX16	IC42S16100	3.3V	5,6,7	T/TG(50),B/BG(60)	Prod	
64M	2MX32	IC42S32200	3.3V	6,7	T/TG(86),B/BG(90)	Prod	
64M	4MX16	IC42S16400	3.3V	6,7	T/ TG(54),B/BG(60)	Prod	
64M	4MX16	IC42S16400A	3.3V	6,7	T/ TG(54)	EOL	
128M	4MX32	IC42S32400	3.3V	6,7	T/TG(86),B/BG(90)	Prod	
128M	8MX16	IC42S16800	3.3V	6,7	T/TG(54)	Prod	
128M	16MX8	IC42S81600	3.3V	6,7	T/TG(54)	Prod	

Notes: 1. S = Samples 2. Prod = Production 3. EOL = End of Life

ICSI DRAM

EDO DRAM

Den	Org	Part No.	Vcc(VccQ)	Speeds (ns)	Pkg (#Pins)	Status ^(2,4)	Comment
4M	256KX16	IC41LV16256	3.3V	35,50	T/TG(40/44), K/KG(40)	EOL	
16M	1MX16	IC41LV16100S	3.3V	50	K/KG(42), T/TG(44/50)	Prod	
16M	4MX4	IC41LV44002	3.3V	50	TG(24/26)	Prod	
16M	4MX4	IC41LV44004	3.3V	50	TG(24/26)	Prod	

FPM DRAM

Den	Org	Part No.	Vcc(VccQ)	Speeds (ns)	Pkg (#Pins)	Status ^(2,4)	Comment
4M	256KX16	IC41LV16257	3.3V	35,50	T/TG(40/44), K/KG(40)	EOL	
16M	1MX16	IC41LV16105	3.3V	50	K/KG(42), T/TG(44//50)	Prod	
16M	1MX16	IC41LV16105S	3.3V	50	K/KG(42), T/TG(44//50)	Prod	
16M	4MX4	IC41LV44052	3.3V	50	TG(24/26)	Prod	
16M	4MX4	IC41LV44054	3.3V	50	TG(24/26)	Prod	

ICSI Logic

USB2.0 Flash Card Reader Family

Part	Function	CF	SM/xD/ NAND/ MLC	SD/MMC	MMC4.0	MS/MS-Duo MS-Pro	Code Storage	ISP	Other Embed Functions	Status (1,2)
IC1230-F128LQ(G)	USB2.0 Card Reader	V	V	SD2.0	8bits	V	32KB Embed Flash	USB1.1/2.0 & I ² C	Power switch; Resistors	Prod

USB2.0 Flash Card Reader Family

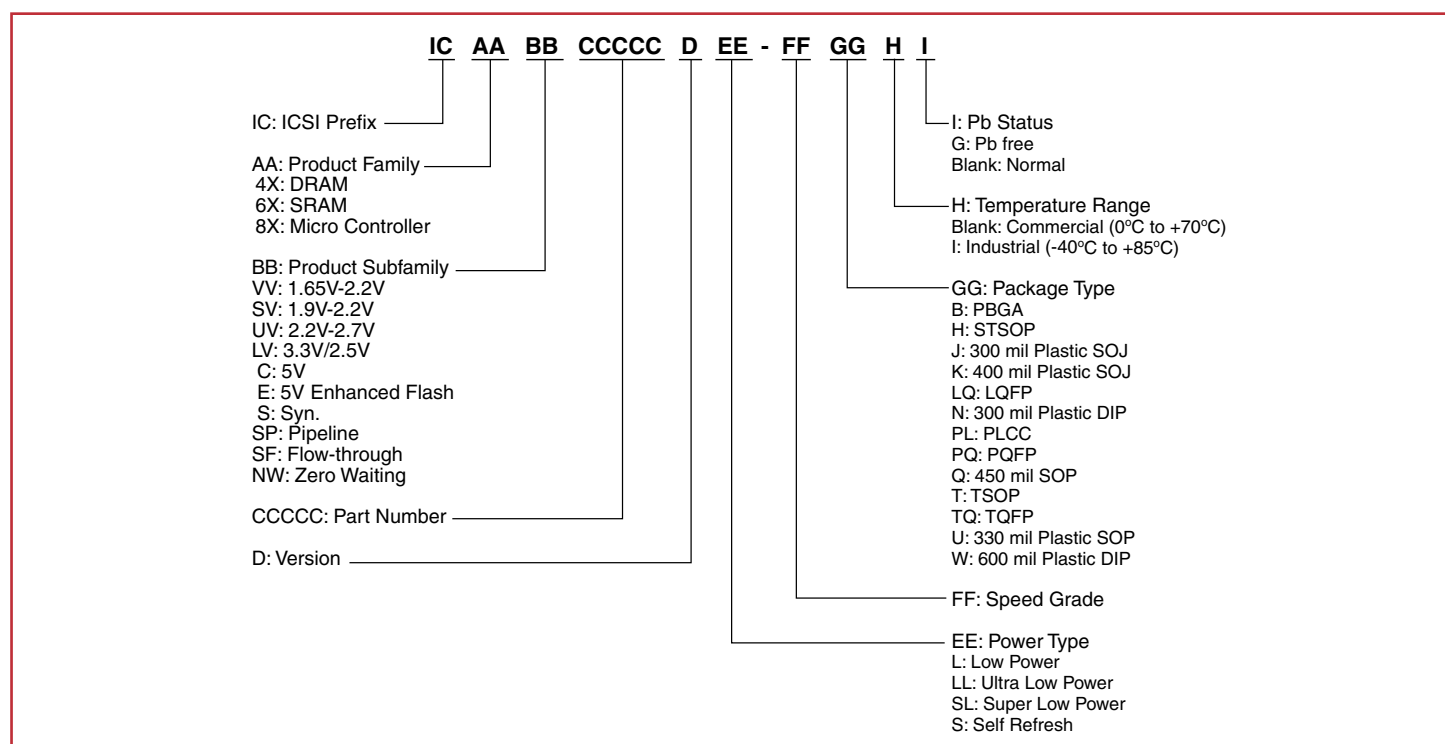
Part	Function	CF	xD/ SM	SD/ MMC 1	SD/ MMC 2	MS/MS-Duo/ MS-Pro/ M2	Code Storage	ISP	Other Embed Functions	Status (1,2)
IC1230-M128LQ(G)	USB2.0 Card Reader	V	V	SD2.0/ MMC4.2		V	32KB Mask Rom	Support external Flash upgrade	Power switch	Prod
IC1233-M48LQ(G)	USB2.0 Card Reader			SD2.0/ MMC4.2		V	24KB Mask Rom		Build-in Regulator; Power switch	Prod
IC1233D-M48LQ(G)	USB2.0 Card Reader			SD2.0/ MMC4.2	4bits		24KB Mask Rom		Build-in Regulator; Power switch	Prod
IC1235D-M64LQ(G)	USB2.0 Card Reader			SD2.0/ MMC4.2	4bits	V	24KB Mask Rom		Build-in Regulator; Power switch	Prod
IC1237D-100LQ(G)	USB2.0 Card Reader			SD2.0/ MMC4.2	4bits	V	24KB Mask Rom	Support External Flash upgrade	Build-in Regulator; Power switch	Prod

Multi-Function Card Reader

Part	Function	CF	xD/ SM	SD/ MMC 1	SD/ MMC 2	MS/MS-Duo/ MS-Pro/ M2	Code Storage	ISP	Other Embed Functions	Status (1,2)
IC1233S-M48LQ(G)	USB2.0 Card Reader w/SIM			4bits		V	24KB Mask Rom		Build-in Regulator; Power switch	Prod
IC1235S-M64LQ(G)	USB2.0 Card Reader w/SIM			4bits	4bits	V	24KB Mask Rom		Build-in Regulator; Power switch	Prod

Notes: 1. S = Samples 2. Prod = Production 3. In USB1.1 products, Embedded flash & Mask ROM version are not pin to pin compatible.
4. EOL = End of Life

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