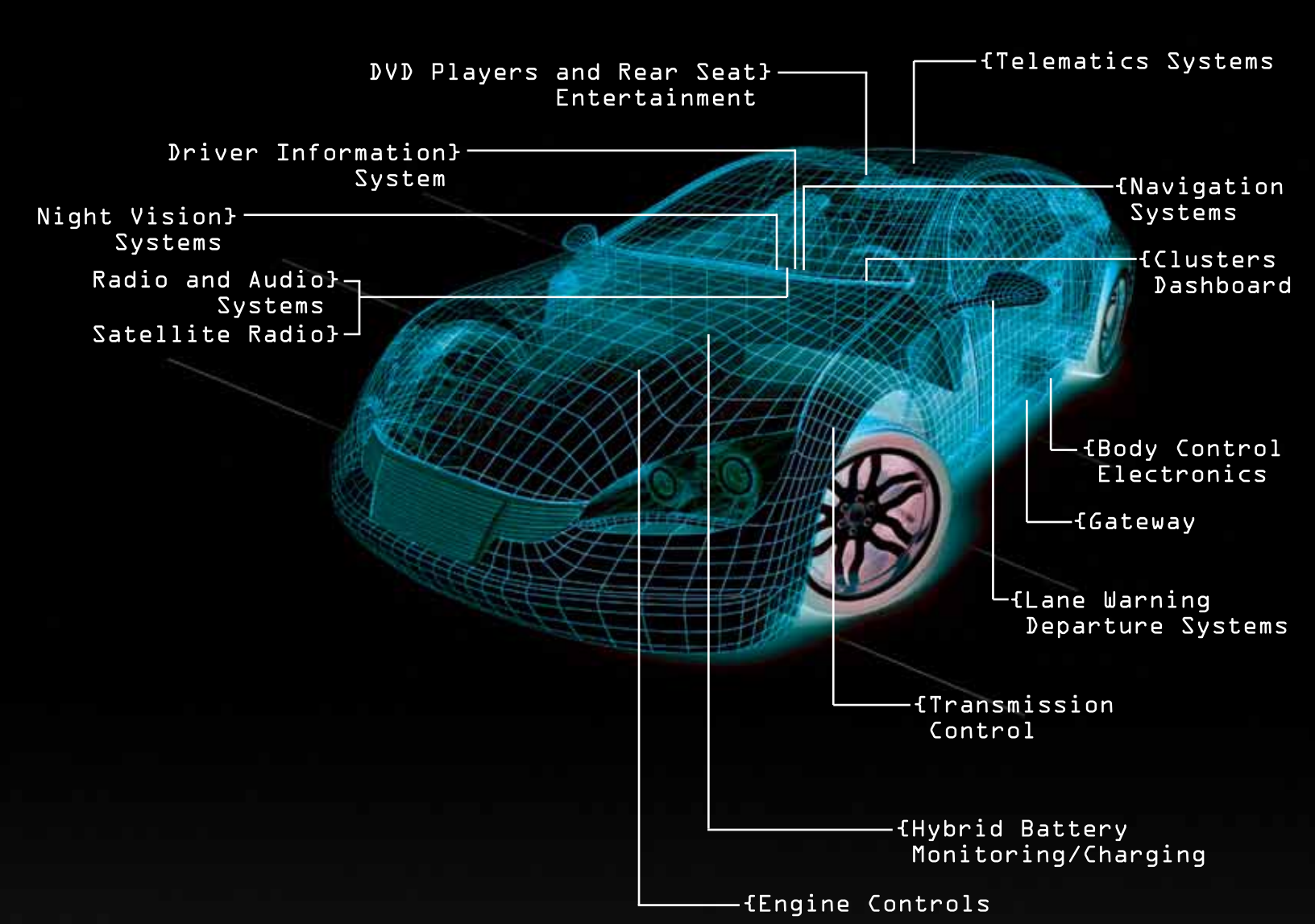

Driving Quality, Cost and Long-Term Support

AUTOMOTIVE PRODUCT SELECTOR GUIDE | NOVEMBER 2011

ISSI

Integrated Silicon Solution, Inc.

Automotive Market Support

Introduction

ISSI has been supporting the Automotive Market since 1999. In 2001, ISSI began to broaden its support of the market by introducing the Automotive Business Unit. The purpose of this business unit is to provide cross-functional unit support within ISSI to continually enhance the Automotive Infrastructure from the product-planning phase through the production phase of new products. We do this with our SRAM and DRAM product families.

Product Support

One of the primary problems automotive customers face is the commitment from a manufacturer for long-term product support. This is not an issue with ISSI. Our business model is built around the ability to work with our customers to deliver products that meet their needs for long periods of time.

Design cycles in the Automotive Market can be 3-4 years from inception to production. Then production will run another 5-6 years. The need for post-production support exists for several more years. ISSI is committed to provide our customers with long-term support necessary for the automotive production-planning phase.

ISSI works with customers to support three different grades of Automotive Products. These are -40°C to +85°C, -40°C to +105°C, and -40°C to +125°C. ISSI designs products to work at these temperatures and fully tests them as well. We do not subscribe to the 'product performance guaranteed by design' approach.

Quality Management System

We fully understand that when an end-customer spends a lot of money on their product, they don't want to see an inexpensive part cause their main means of transportation to be inoperable. ISSI is IS09001:2000 certified. At present, all of the subcontractors in our automotive production flow are fully ISO/TS 16949 certified. All new product entries meet or exceed the requirements set forth in the AEC-Q100 qualification standards. We don't just rely on certifications to ensure that our products meet the highest quality standards. Instead we have incorporated a quality system that is designed to insure that our products meet the highest standards of all of our customers. All phases of the production process are controlled and fully documented in standard automotive PPAPs.

Low Total Cost of Ownership

ISSI's concept of Long-Term Product Support, combined with the high reliability and strong service that we dedicate to this market, reduces the overall total cost of ownership. Commodity teams and design engineers will not need to re-qualify a new die revision every 6 months in order to keep their production lines operating. The quality and reliability testing that is done to qualify a device for production, as well as the testing that goes into each device before it is shipped into the Automotive application reduces field failures and line failures. We further reduce the total cost of ownership by working with each customer production team to ensure that product is delivered on time and in a manner that can be used by their production lines. We also work with our customers to provide ongoing cost reductions in their applications, thus reducing the total cost of ownership.

Conclusion

The ISSI Automotive Business Unit brings a maturity and commitment to the automotive market that gives customers the satisfaction of knowing that they made the right choice. We are committed to the automotive market and committed to work with our customers to provide them with the most cost-effective and highest quality products possible.

Automotive Memory Products

Automotive Synchronous SRAM

Den	Org	Part No.	Vcc	VccQ	Speed (Mhz)	tKQ (ns)	Pkg (#Pins)	Status[1][2]	Comment[3,4,5,6]
4M	128Kx32	IS64VPS12832A	2.5V	2.5V	200	3.1	TQFP(100), PBGA(165)	Prod	P/SC, copper[9]
	128Kx36	IS64VPS12836A	2.5V	2.5V	200	3.1	TQFP(100), PBGA(165)	Prod	P/SC, copper[9]
	256Kx18	IS64VPS25618A	2.5V	2.5V	200	3.1	TQFP(100)	Prod	P/SC, copper[9]
	128Kx32	IS64LPS12832A	3.3V	2.5V/3.3V	200	3.1	TQFP(100), PBGA(165)	Prod	P/SC, copper[9]
	128Kx36	IS64LPS12836A	3.3V	2.5V/3.3V	200	3.1	TQFP(100), PBGA(165)	Prod	P/SC, copper[9]
	256Kx18	IS64LPS25618A	3.3V	2.5V/3.3V	200	3.1	TQFP(100)	Prod	P/SC, copper[9]
	128Kx32	IS64LF12832A	3.3V	2.5V/3.3V	117	7.5	TQFP(100), PBGA(165)	Prod	F, copper[9]
	128Kx36	IS64LF12836A	3.3V	2.5V/3.3V	117	7.5	TQFP(100), PBGA(165)	Prod	F, copper[9]
	256Kx18	IS64LF25618A	3.3V	2.5V/3.3V	117	7.5	TQFP(100)	Prod	F, copper[9]
	128Kx32	IS64VF12832A	2.5V	2.5V	117	7.5	TQFP(100), PBGA(165)	Prod	F, copper[9]
	128Kx36	IS64VF12836A	2.5V	2.5V	117	7.5	TQFP(100), PBGA(165)	Prod	F, copper[9]
	256Kx18	IS64VF25618A	2.5V	2.5V	117	7.5	TQFP(100)	Prod	F, copper[9]
9M	512Kx18	IS64LF51218A	3.3V	2.5V/3.3V	117	7.5	TQFP(100), PBGA(165)	Prod	F, copper[9]
	256Kx36	IS64LF25636A	3.3V	2.5V/3.3V	117	7.5	TQFP(100), PBGA(165)	Prod	F, copper[9]
	256Kx36	IS64LPS25636A	3.3V	2.5V/3.3V	166	2.6	TQFP(100), PBGA(165)	Prod	P/SC, copper[9]

Automotive Asynchronous SRAM

Den	Org	Part No.	Vcc	Speeds (ns)	Pkg (#Pins)	Status[1][2]	Comment[6]
256K	32Kx8	IS65C256AL	5V	25,45	SOP(28),TSOP1(28)	Prod	copper[9]
	32Kx8	IS65LV256AL	3.3V	45	SOP(28),TSOP1(28)	Prod	copper[9]
512K	32Kx16	IS64WV3216BLL	2.5V-3.6V	15	TSOP2(44), mBGA(48)	Prod	copper[9]
1M	64Kx16	IS64C6416AL	4.5V-5.5V	**15**	SOJ(44),TSOP2(44)	Prod	copper[9]
	64Kx16	IS64WV6416BLL	2.5V-3.6V	15	TSOP2(44),mBGA(48)	Prod	copper[9]
	128Kx8	IS64C1024AL	5.0V	15	SOJ(32.4),TSOP1(32)	Prod	copper[9]
	128Kx8	IS64WV1024BLL	2.5V-3.6V	15	TSOP2(32),mBGA(48),sTSOP1(32)	Prod	copper[9]
	128Kx8	IS65WV1288BLL	2.5V-3.6V	55	TSOP1(32),sTSOP1(32)	Prod	copper[9]
	128Kx8	IS65C1024AL	5.0V	45	SOP(32),TSOP1(32)	Prod	copper[9]
2M	128Kx16	IS65WV12816ALL/BLL	1.65V-3.6V	55,**70**	TSOP2(44),mBGA(48)	Prod	copper[9]
	128Kx16	IS64WV12816DBLL	2.4V-3.6V	12	TSOP2(44),mBGA(48)	Prod	copper[9]
4M	512Kx8	IS64WV5128BLL/BLS	2.4V-3.6V	**10**	TSOP2(44),mBGA(36)	Prod	copper[9]
	512Kx8	IS64WV5128EDBLL	2.4V-3.6V	**10**	TSOP2(44),mBGA(36)	Prod	ECC[10], copper[9]
	256Kx16	IS64WV25616BLL/BLS	2.4V-3.6V	**10**	TSOP2(44),mBGA(48)	Prod	copper[9]
	256Kx16	IS64WV25616EDBLL	2.4V-3.6V	**10**	TSOP2(44),mBGA(48)	Prod	ECC[10], copper[9]
	256Kx16	IS65WV25616ALL/BLL	1.65V-3.3V	55,**70**	TSOP2(44),mBGA(48)	Prod	copper[9]
8M	512Kx16	IS64WV51216BLL	2.4V-3.3V	**10**	TSOP2(44),mBGA(48)	Prod	copper[9]
16M	1Mx16	IS64WV102416BLL	2.4V-3.6V	10	TSOP1(48),mBGA(48)	Prod	copper[9]
	2Mx8	IS64WV20488BLL	2.4V-3.6V	10	TSOP2(44),mBGA(48)	Prod	copper[9]

Automotive Pseudo SRAM

Den	Org	Part No.	Vcc	Speed (ns)	Pkg (#Pins)	Status[1][2]	Comment
8M	512Kx16	IS67WV51216DBLL	2.5V-3.6V	55	BGA(48),TSOP2(44)	Prod	Standard Asynch
64M	4Mx16	IS67WVE4M16BLL	3.3V	**70**	TFBGA(48)	Prod	Asynch/Page

Notes: 1. S = Samples 2. Prod = Production 3. P = Pipeline 4. F = Flow Through 5. SC = Single Cycle Deselect
6. Available in automotive temperature grade of -40°C to +125°C 7. NR = Not recommended for new design
8. Available in automotive temperature grade of -40°C to +105°C 9. Available in copper leadframe 10. ECC = ECC based SRAM

Automotive Memory Products (Cont'd)

3.3V Synchronous Automotive DRAM

Den	Org	Part No.	Vcc	Refresh	Speed (MHz)	Pkg (#Pins)	Status[1,2]	Comment
16M	1Mx16	IS45S16100E	3.3V	2K	166,143	TSOP2(50), BGA(60)	Prod	A2[8]
64M	4Mx16	IS45S16400F	3.3V	4K	166,143	TSOP2(54), BGA(54)	Prod	A2[8], copper[9]
	4Mx16	IS45S16400J	3.3V	4K	166,143	TSOP2(54), BGA(54)	Prod	A2[8], copper[9]
	2Mx32	IS45S32200E	3.3V	4K	166,143	TSOP2(86), BGA(90)	Prod	A2[8]
128M	16Mx8	IS45S81600E	3.3V	4K	166,143	TSOP2(54)	Prod	A2[8], copper[9]
	16Mx8	IS45S81600F	3.3V	4K	166,143	TSOP2(54)	S=NOW	A2[8], copper[9]
	8Mx16	IS45S16800E	3.3V	4K	166,143	TSOP2(54), BGA(54)	Prod	A2[8], copper[9]
	8Mx16	IS45S16800F	3.3V	4K	166,143	TSOP2(54), BGA(54)	S=NOW	A2[8], copper[9]
	4Mx32	IS45S32400E	3.3V	4K	166,143	TSOP2(86), BGA(90)	Prod	
	4Mx32	IS45S32400F	3.3V	4K	166,143	TSOP2(86), BGA(90)	S=NOW	A2[8]
256M	32Mx8	IS45S83200D	3.3V	8K	166,143	TSOP2(54),BGA(54)	NR	A2[8], copper[9]
	32Mx8	IS45S83200G	3.3V	8K	166,143	TSOP2(54),BGA(54)	S=NOW	A2[8]
	16Mx16	IS45S16160D	3.3V	8K	166,143	TSOP2(54),BGA(54)	Prod	A2[8], copper[9]
	16Mx16	IS45S16160G	3.3V	8K	166,143	TSOP2(54),BGA(54)	S=NOW	A2[8], copper[9]
	8Mx32	IS45S32800D	3.3V	4K	166,143	TSOP2(86),BGA(90)	Prod	A2[8]
	8Mx32	IS45S32800G	3.3V	4K	166,143	BGA(90)	S=NOW	A2[8]
512M	32Mx16	IS45S16320B	3.3V	8K	143	TSOP2(54),BGA(54)	Prod	copper[9]
	32Mx16	IS45S16320D	3.3V	8K	166,143	TSOP2(54),BGA(54)	Prod	A2[8], copper[9]
	16Mx32	IS45S32160B	3.3V	8K	143	TSOP2(86),BGA(90)	Prod	
	16Mx32	IS45S32160D	3.3V	8K	166,143	BGA(90)	Prod	A2[8]

2.5V DDR (Double Data Rate) Synchronous Automotive DRAM

Den	Org	Part No.	Vcc	Refresh	Speed (Mhz)	Pkg (#Pins)	Status [1,2]	Comment
64M	4Mx16	IS46R16400B	2.5V	4K	200,166	TSOP2(66)	Prod	A2[8]
128M	4Mx32	IS46R32400D	2.5V	4K	200,166	BGA(144)	Prod	A2[8]
256M	32Mx8	IS46R83200B	2.5V	8K	166	TSOP2(66)	NR	
	32Mx8	IS46R83200D	2.5V	8K	200,166,133	TSOP2(66)	S=NOW	A2[8]
	16Mx16	IS46R16160B	2.5V	8K	200,166	TSOP2(66), BGA(60)	NR	
	16Mx16	IS46R16160D	2.5V	8K	200,166,133	TSOP2(66), BGA(60)	S=NOW	A2[8]
	8Mx32	IS46R32800B	2.5V	4K	200,166	BGA(144)	NR	
	8Mx32	IS46R32800D	2.5V	4K	200,166,133	BGA(144)	S=NOW	A2[8]
512M	64Mx8	IS46R86400D	2.5V	8K	200,166,133	TSOP2(66), BGA(60)	Prod	A2[8]
	32Mx16	IS46R16320D	2.5V	8K	200,166,133	TSOP2(66), BGA(60)	Prod	A2[8]
	16Mx32	IS46R32160D	2.5V	8K	200,166,133	BGA(144)	S=NOW	A2[8]

1.8V Mobile DDR (Double Data Rate) Synchronous Automotive DRAM

Den	Org	Part No.	Vcc	Refresh	Speed (Mhz)	Pkg (#Pins)	Status [1,2]	Comment
32M	2Mx16	IS46LR16200C	1.8V	4K	166,133	BGA(60)	Prod	A2[8]
	1Mx32	IS46LR32100C	1.8V	4K	166,133	BGA(90)	Prod	A2[8]
64M	4Mx16	IS46LR16400B	1.8V	4K	166,133	BGA(60)	S=NOW	A2[8]
	2Mx32	IS46LR32200B	1.8V	4K	166,133	BGA(90)	S=NOW	A2[8]
128M	8Mx16	IS46LR16800E	1.8V	4K	166,133	BGA(60)	NR	
	8Mx16	IS46LR16800F	1.8V	4K	166,133	BGA(60)	Prod	A2[8]
	4Mx32	IS46LR32400E	1.8V	4K	166,133	BGA(90)	NR	
	4Mx32	IS46LR32400F	1.8V	4K	166,133	BGA(90)	Prod	A2[8]
512M	32Mx16	IS46LR16320B	1.8V	8K	166,133	BGA(60)	Prod	A2[8]
	16Mx32	IS46LR32160B	1.8V	8K	166,133	BGA(90)	Prod	A2[8]

Notes: 1. S = Samples 2. Prod = Production 3. P = Pipeline 4. F = Flow Through 5. SC = Single Cycle Deselect
6. Available in automotive temperature grade of -40°C to +125°C 7. NR = Not recommended for new design
8. Available in automotive temperature grade of -40°C to +105°C 9. Available in copper leadframe

Automotive Memory Products (Cont'd)

1.8V DDR2 (Double Data Rate) Synchronous Automotive DRAM

Den	Org	Part No.	Vcc	Refresh	Speed (MT/s)	Pkg (#Pins)	Status[1,2]	Comment
256M	32Mx8	IS46DR83200A	1.8V	8K	667,533,400	BGA(60)	Prod	A2[8]
	16Mx16	IS46DR16160A	1.8V	8K	667,533,400	BGA(84)	Prod	A2[8]
	8Mx32	IS46DR32801A	1.8V	8K	400	BGA(126)	Prod	A2[8]
512M	64Mx8	IS46DR86400B	1.8V	8K	800,667,533,400	BGA(60)	Prod	A2[8]
	32Mx16	IS46DR16320B	1.8V	8K	800,667,533,400	BGA(84)	Prod	A2[8]
1G	128Mx8	IS46DR81280A	1.8V	8K	800,667,533,400	BGA(60)	Prod	A2[8]
	64Mx16	IS46DR16640A	1.8V	8K	800,667,533,400	BGA(84)	Prod	A2[8]
2G	128Mx16	IS46DR16128	1.8V	8K	667,533,400	BGA(84)	Prod	A2[8]

Industrial 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]
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 128Kx36 256Kx18	IS61LPS12832A IS61LPS12836A IS61LPS25618A	3.3V	3.3V/2.5V	250	2.6	PBGA(119),TQFP(100) BGA(165)	Prod	P,SC
	128Kx36 256Kx18	IS61VPS12836A IS61VPS25618A	2.5V	2.5V	250,200	2.6,3.1	PBGA(119),TQFP(100) BGA(165)	Prod	P,SC
	128Kx36 256Kx18	IS61LPD12836A IS61LPD25618A	3.3V	2.5V/3.3V	250	2.6	PBGA(119),TQFP(100) BGA(165)	Prod	P,DC
	128Kx36 256Kx18	IS61VPD12836A IS61VPD25618A	2.5V	2.5V	250	2.6	PBGA(119),TQFP(100) BGA(165)	Prod	P,DC
	128Kx32 128Kx36 256Kx18	IS61LF12832A IS61LF12836A IS61LF25618A	3.3V	2.5V/3.3V	133,117	6.5,7.5	PBGA(119),TQFP(100) BGA(165)	Prod	F
	128Kx36 256Kx18	IS61VF12836A IS61VF25618A	2.5V	2.5V	133,117	6.5,7.5	PBGA(119),TQFP(100) BGA(165)	Prod	F
8M	256Kx32 256Kx36 512Kx18	IS61LPS25632A IS61LPS25636A IS61LPS51218A	3.3V	3.3V/2.5V	250,166	2.6	PBGA(119),TQFP(100) BGA(165)	Prod	P,SC
	256Kx36 512Kx18	IS61VPS25636A IS61VPS51218A	2.5V	2.5V	250,200	2.6,3.1	PBGA(119),TQFP(100) BGA(165)	Prod	P,SC
	256Kx36 512Kx18	IS61LPD25636A IS61LPD51218A	3.3V	2.5V/3.3V	250	2.6	PBGA(119),TQFP(100) BGA(165)	Prod	P,DC
	256Kx36 512Kx18	IS61VPD25636A IS61VPD51218A	2.5V	2.5V	250	2.6	PBGA(119),TQFP(100) BGA(165)	Prod	P,DC
	256Kx36 512Kx18	IS61LF25636A IS61LF51218A	3.3V	2.5V/3.3V	133	6.5	PBGA(119),TQFP(100) BGA(165)	Prod	F
	256Kx36 512Kx18	IS61VF25636A IS61VF51218A	2.5V	2.5V	133	6.5	PBGA(119),TQFP(100) BGA(165)	Prod	F

Notes: 1. S = Samples 2. Prod = Production 3. P = Pipeline 4. F = Flow Through 5. SC = Single Cycle Deselect
6. Available in automotive temperature grade of -40°C to +125°C 7. NR = Not recommended for new design
8. Available in automotive temperature grade of -40°C to +105°C 9. Available in copper leadframe

Industrial Synchronous SRAM (Cont'd)

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]
18M	256Kx72	IS61LPS25672A	3.3V	3.3V/2.5V	250	2.6	BGA(209)	Prod	P,SC
	512Kx36 1Mx18	IS61LPS51236A IS61LPS102418A	3.3V	3.3V/2.5V	250	2.6	PBGA(119),TQFP(100) BGA(165)	Prod	P,SC
	256Kx72	IS61VPS25672A	3.3V	3.3V/2.5V	250	2.6	BGA(209)	Prod	P,SC
	512Kx36 1Mx18	IS61VPS51236A IS61VPS102418A	2.5V	2.5V	250	2.6	PBGA(119),TQFP(100) BGA(165)	Prod	P,SC
	512Kx36 1Mx18	IS61LPD51236A IS61LPD102418A	3.3V	2.5V/3.3V	250	2.6	TQFP(100) BGA(165)	Prod	P, DC
	512Kx36 1Mx18	IS61VPD51236A IS61VPD102418A	2.5V	2.5V	250	2.6	TQFP(100) BGA(165)	Prod	P,DC
	256Kx72 512Kx36 1Mx18	IS61LF25672A IS61LF51236A IS61LF102418A	3.3V	2.5V/3.3V	133	6.5	PBGA(119),TQFP(100) BGA(165), BGA(209)	Prod	F
	256Kx72 512Kx36 1Mx18	IS61VF25672A IS61VF51236A IS61VF102418A	2.5V	2.5V	133	6.5	PBGA(119),TQFP(100) BGA(165), BGA(209)	Prod	F
36M	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

Industrial 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),TSOP2(32)	Prod	
	256Kx16	IS61C25616AL	5V	10	SOJ(44),TSOP2(44)	Prod	
	256Kx16	IS61C25616AS	5V	25	SOJ(44),TSOP2(44)	Prod	

5V 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	5V	35	SOP(32),TSOP1(32)	Prod	
4M	512Kx8	IS62C5128BL	5V	45	SOP(32),sTSOP1(32),TSOP2(32)	Prod	
	256Kx16	IS62C25616BL	5V	45	TSOP2(44)	Prod	
8M	1Mx8	IS62C10248AL	5V	45,55	TSOP2(44), BGA(48)	Prod	
	512Kx16	IS62C51216AL	5V	45,55	TSOP2(44), BGA(48)	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

Available in Commercial (0°C to +70°C) and Industrial (-40°C to +85°C) temperature options.

Industrial Asynchronous SRAM (Cont'd)

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	IS61WV6416DBLL	1.65V-3.6V	8,10,12,20	TSOP2(44),mBGA(48),SOJ(44)	Prod	
	128Kx8	IS63WV1288DALL/DBLL	1.65V-3.6V	8,10,12,20	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	
	128Kx16	IS61WV12816EDBLL	2.4V-3.6V	8,10	TSOP2(44). BGA(48)	Prod	ECC Based SRAM
	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	
	256Kx16	IS61WV25616EDBLL	2.4V-3.6V	**8,10**	TSOP2(44), mBGA(48)	Prod	ECC Based SRAM
	512Kx8	IS61WV5128ALL/BLL	1.65V-3.6V	**8,10**,20	SOJ(36),TSOP2(44),mBGA(36)	Prod	
	512Kx8	IS61WV5128EDBLL	2.4V-3.6V	10	TSOP2(44),mBGA(36)	Prod	ECC Based SRAM
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)	Prod	
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	IS62WV6416DALL/DBLL	1.65V-3.6V	35,45,**55**	TSOP2(44),mBGA(48)	Prod	
	128Kx8	IS62WV1288DALL/DBLL	1.65V-3.6V	35,45,**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.
	128Kx16	IS62WV12816DALL/DBLL	1.8V-3.6V	35,45,**55**	mBGA(48),TSOP2(44)	Prod	2CS Option Avail.
	256Kx8	IS62WV2568ALL/BLL	1.65V-3.6V	45,55,**70**	sTSOP1(32),TSOP1(32),mBGA(36)	Prod	
	256Kx8	IS62WV2568DALL/DBLL	1.8V-3.6V	35,45,55	sTSOP1(32),TSOP1(32),mBGA(36)	Prod	
4M	256Kx16	IS62VV25616LL	1.65V-1.95V	70,**85**	µBGA(48),TSOP2(44)	Prod	
	256Kx16	IS62WV25616DALL/DBLL	1.65V-3.6V	45,55	TSOP2(44), mBGA(48)	Prod	
	512Kx8	IS62WV5128DALL/DBLL	1.65V-3.6V	45,55	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	IS62WV10248DALL/BLL	1.65V-3.6V	45,55	mBGA(48),TSOP2(44)	Prod	

Industrial Pseudo SRAM

Den	Org	Part No.	Vcc	Speed (ns)	Pkg (#Pins)	Status[1][2]	Comment
8M	512Kx16	IS66WV51216DALL	1.7V-1.95V	**70**	BGA(48),TSOP2(44)	Prod	Standard Asynch
	512Kx16	IS66WV51216DBLL	2.5V-3.6V	55, **70**	BGA(48),TSOP2(44)	Prod	Standard Asynch
16M	1Mx16	IS66WV1M16DALL/DBLL	1.7V-3.6V	70	TFBGA(48)	Prod	Standard Asynch
	1Mx16	IS66WVC1M16ALL	1.7V-1.95V	70	VFBGA(54)	Prod	CRAM 1.5
	1Mx16	IS66WVD1M16ALL	1.7V-1.95V	70	VFBGA(54)	Prod	CRAM 2.0
	1Mx16	IS66WVE1M16ALL	1.8V	70	TFBGA(48)	Prod	Asynch/Page
	1Mx16	IS66WVE1M16BLL	2.7V-3.6V	70	TFBGA(48)	Prod	Asynch/Page

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

Available in Commercial (0°C to +70°C) and Industrial (-40°C to +85°C) temperature options.

Industrial Pseudo SRAM (Cont'd)

Den	Org	Part No.	Vcc	Speed (ns)	Pkg (#Pins)	Status(1)(2)	Comment
32M	2Mx16	IS66WVC2M16ALL	1.8V	**70**	VFBGA(54)	Prod	CRAM 1.5
	2Mx16	IS66WVD2M16ALL	1.8V	**70**	VFBGA(54)	Prod	CRAM 2.0
	2Mx16	IS66WVE2M16ALL	1.8V	**70**	TFBGA(48)	Prod	Asynch/Page
	2Mx16	IS66WVE2M16BLL	3.3V	**70**	TFBGA(48)	Prod	Asynch/Page
64M	4Mx16	IS66WVC4M16ALL	1.8V	**70**	VFBGA(54)	Prod	CRAM 1.5
	4Mx16	IS66WVD4M16ALL	1.8V	**70**	VFBGA(54)	Prod	CRAM 2.0
	4Mx16	IS66WVE4M16ALL	1.8V	**70**	TFBGA(48)	Prod	Asynch/Page
	4Mx16	IS66WVE4M16BLL	3.3V	**70**	TFBGA(48)	Prod	Asynch/Page

*Contact SRAM Marketing for questions

Industrial Dynamic RAM

3.3V EDO and Fast Page Mode DRAM

Den	Org	Type	Part No.	Vcc	Refresh	RAS (ns)	Pkg (#Pins)	Status(1,2,5)	Comment (3)
16M	4Mx4	EDO	IS41LV44002C	3.3V	2K	50	TSOP2(24/26)	Prod	
	4Mx4	FP	IS41LV44052C	3.3V	2K	50	TSOP2(24/26)	Prod	
	1Mx16	EDO	IS41LV16100C	3.3V	1K	50	SOJ(42),TSOP2(44/50)	Prod	
	1Mx16	FP	IS41LV16105C	3.3V	1K	50	SOJ(42),TSOP2(44/50)	Prod	

5V EDO and Fast Page Mode DRAM

Den	Org	Type	Part No.	Vcc	Refresh	RAS (ns)	Pkg (#Pins)	Status(1,2)	Comment (3)
16M	4Mx4	EDO	IS41C44002C	5V	2K	50	TSOP2(24/26)	S=NOW	
	4Mx4	FP	IS41C44052C	5V	2K	50	TSOP2(24/26)	S=NOW	
	1Mx16	EDO	IS41C16100C	5V	1K	50	SOJ(42),TSOP2(44/50)	S=NOW	
	1Mx16	FP	IS41C16105C	5V	1K	50	SOJ(42),TSOP2(44/50)	S=NOW	

3.3V SDR (Single Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refresh	Speed (Mhz)	Pkg (#Pins)	Status(1,2,5)	Comment (3)
16M	1Mx16	SDR	IS42S16100E	3.3V	2K	200,166,143	TSOP2(50), BGA(60)	Prod	
	1Mx16	SDR	IS42S16100F	3.3V	2K	200,166,143	TSOP2(50), BGA(60)	Prod	
64M	4Mx16	SDR	IS42S16400F	3.3V	4K	200,166,143	TSOP2(54), BGA(54)	Prod	
	4Mx16	SDR	IS42S16400J	3.3V	4K	200,166,143	TSOP2(54), BGA(54) BGA(60)	Prod	
	2Mx32	SDR	IS42S32200E	3.3V	4K	200,166,143	TSOP2(86), BGA(90)	Prod	
128M	16Mx8	SDR	IS42S81600E	3.3V	4K	200,166,143,133	TSOP2(54)	Prod	
	16Mx8	SDR	IS42S81600F	3.3V	4K	200,166,143	TSOP2(54)	S=NOW	
	8Mx16	SDR	IS42S16800E	3.3V	4K	200,166,143,133	TSOP2(54), BGA(54)	Prod	
	8Mx16	SDR	IS42S16800F	3.3V	4K	200,166,143	TSOP2(54), BGA(54)	S=NOW	
	4Mx32	SDR	IS42S32400E	3.3V	4K	166,143,133	TSOP2(86), BGA(90)	Prod	
	4Mx32	SDR	IS42S32400F	3.3V	4K	166,143,133	TSOP2(86), BGA(90)	S=NOW	
256M	32Mx8	SDR	IS42S83200D	3.3V	8K	166,143,133	TSOP2(54), BGA(54)	NR	
	32Mx8	SDR	IS42S83200G	3.3V	8K	166,143,133	TSOP2(54), BGA(54)	S=NOW	
	16Mx16	SDR	IS42S16160D	3.3V	8K	166, 143,133	TSOP2(54), BGA(54)	Prod	

Notes: 1. S = Sample 2. Prod = Production 3. Industrial temp: -40°C to +85°C 4. Do not support mobile features
5. NR = Not recommended for new design 6. KGD available for most products. Contact your ISSI sales channel.

3.3V SDR (Single Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refresh	Speed (Mhz)	Pkg (#Pins)	Status(1,2,5)	Comment(3)
256M	16Mx16	SDR	IS42S16160G	3.3V	8K	166, 143,133	TSOP2(54), BGA(54)	S=NOW	
	8Mx32	SDR	IS42S32800D	3.3V	4K	166,143,133	TSOP2(86), BGA(90)	Prod	
	8Mx32	SDR	IS42S32800G	3.3V	4K	166,143,133	BGA(90)	S=NOW	
512M	64Mx8	SDR	IS42S86400B	3.3V	8K	166,143,133	TSOP2(54)	Prod	
	64Mx8	SDR	IS42S86400D	3.3V	8K	166,143,133	TSOP2(54)	Prod	
	32Mx16	SDR	IS42S16320B	3.3V	8K	166,143,133	TSOP2(54), BGA(54)	Prod	
	32Mx16	SDR	IS42S16320D	3.3V	8K	166,143,133	TSOP2(54), BGA(54)	Prod	
	16Mx32	SDR	IS42S32160B	3.3V	8K	166,143,133	TSOP2(86),BGA(90)	Prod	11x13mm BGA
	16Mx32	SDR	IS42S32160C	3.3V	8K	166,133	BGA(90)	Prod	stacked die, 8x13mm BGA
	16Mx32	SDR	IS42S32160D	3.3V	8K	166,133	BGA(90)	Prod	8x13mm BGA

PowerSaver™ / Mobile SDR Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refresh	Speed (Mhz)	Pkg (#Pins)	Status (1,2,5)	Comment(3)
16M	1Mx16	LPSDR	IS42VM16100G	1.8V	4K	166,133	BGA(60)	Prod	
32M	2Mx16	LPSDR	IS42SM16200C	3.3V	4K	166,133	BGA(54)	Prod	
	2Mx16	LPSDR	IS42RM16200C	2.5V	4K	166,133	BGA(54)	Prod	
	2Mx16	LPSDR	IS42VM16200C	1.8V	4K	166,133	BGA(54)	Prod	
	1Mx32	LPSDR	IS42SM32100C	3.3V	4K	166,133	BGA(90)	Prod	
	1Mx32	LPSDR	IS42RM32100C	2.5V	4K	166,133	BGA(90)	Prod	
	1Mx32	LPSDR	IS42VM32100C	1.8V	4K	166,133	BGA(90)	Prod	
64M	4Mx16	LPSDR	IS42VM16400K	1.8V	4K	166,133	BGA(54)	Prod	
	4Mx16	LPSDR	IS42RM16400K	2.5V	4K	166,133	BGA(54)	Prod	
	4Mx16	LPSDR	IS42SM16400K	3.3V	4K	166,133	BGA(54)	Prod	
	2Mx32	LPSDR	IS42VM32200K	1.8V	4K	166,133	BGA(90)	Prod	
	2Mx32	LPSDR	IS42RM32200K	2.5V	4K	166,133	BGA(90)	Prod	
	2Mx32	LPSDR	IS42SM32200K	3.3V	4K	166,133	BGA(90)	Prod	
128M	8Mx16	LPSDR	IS42SM16800G	3.3V	4K	166,133	BGA(54)	Prod	
	8Mx16	LPSDR	IS42RM16800G	2.5V	4K	166,133	BGA(54)	Prod	
	8Mx16	LPSDR	IS42VM16800G	1.8V	4K	166,133	BGA(54)	Prod	
	4Mx32	LPSDR	IS42SM32400G	3.3V	4K	166,133	BGA(90)	Prod	
	4Mx32	LPSDR	IS42RM32400G	2.5V	4K	166,133	BGA(90)	Prod	
	4Mx32	LPSDR	IS42VM32400G	1.8V	4K	166,133	BGA(90)	Prod	
256M	16Mx16	LPSDR	IS42SM16160D	3.3V	8K	143	TSOP2(54),BGA(54)	Prod	
	16Mx16	LPSDR	IS42RM16160D	2.5V	8K	143	TSOP2(54),BGA(54)	Prod	
	16Mx16	LPSDR	IS42VM16160D	1.8V	8K	125	TSOP2(54),BGA(54)	Prod	
	16Mx16	LPSDR	IS42VM16160E	1.8V	8K	166,133	BGA(54)	S=NOW	
	16Mx16	LPSDR	IS42RM16160E	2.5V	8K	166,133	BGA(54)	S=NOW	
	16Mx16	LPSDR	IS42SM16160E	3.3V	8K	166,133	BGA(54)	S=NOW	
	8Mx32	LPSDR	IS42SM32800D	3.3V	4K	133	TSOP2(86),BGA(90)	Prod	
	8Mx32	LPSDR	IS42RM32800D	2.5V	4K	133	TSOP2(86),BGA(90)	Prod	
	8Mx32	LPSDR	IS42VM32800D	1.8V	4K	100	TSOP2(86),BGA(90)	Prod	
	8Mx32	LPSDR	IS42VM32800E	1.8V	4K	166,133	BGA(90)	S=NOW	
	8Mx32	LPSDR	IS42RM32800E	2.5V	4K	166,133	BGA(90)	S=NOW	
	8Mx32	LPSDR	IS42SM32800E	3.3V	4K	166,133	BGA(90)	S=NOW	

Notes: 1. S = Sample 2. Prod = Production 3. Industrial temp: -40°C to +85°C 4. Do not support mobile features
5. NR = Not recommended for new design 6. KGD available for most products. Contact your ISSI sales channel.

Industrial Dynamic RAM (Cont'd)

PowerSaver™ / Mobile SDR Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refresh	Speed (Mhz)	Pkg (#Pins)	Status (1,2,5)	Comment (3)
512M	32Mx16	LPSDR	IS42VM16320D	1.8V	8K	166,133	BGA(54)	Prod	8x13mm BGA
	16Mx32	LPSDR	IS42SM32160C	3.3V	8K	133	BGA(90)	Prod	8x13mm BGA
	16Mx32	LPSDR	IS42RM32160C	2.5V	8K	133	BGA(90)	Prod	8x13mm BGA
	16Mx32	LPSDR	IS42VM32160D	1.8V	8K	166,133	BGA(90)	Prod	8x13mm BGA

2.5V DDR (Double Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refresh	Speed (Mhz)	Pkg (#Pins)	Status (1,2,5)	Comment (3)
64M	4Mx16	DDR	IS43R16400B	2.5V	4K	200,166,133	TSOP2(66)	Prod	
128M	8Mx16	DDR	IS43R16800CC	2.5V	4K	200,166	TSOP2(66)	NR	
	8Mx16	DDR	IS43R16800E	2.5V	4K	200,166	TSOP2(66)	S=NOW	
	4Mx32	DDR	IS43R32400D	2.5V	4K	250,200,166	BGA(144)	Prod	
256M	32Mx8	DDR	IS43R83200B	2.5V	8K	200,166	TSOP2(66)	NR	
	32Mx8	DDR	IS43R83200D	2.5V	8K	200,166,133	TSOP2(66)	S=NOW	
	16Mx16	DDR	IS43R16160B	2.5V	8K	200,166	TSOP2(66), BGA(60)	NR	
	16Mx16	DDR	IS43R16160D	2.5V	8K	200,166,133	TSOP2(66), BGA(60)	S=NOW	
	8Mx32	DDR	IS43R32800B	2.5V	4K	200,166	BGA(144)	NR	
	8Mx32	DDR	IS43R32800D	2.5V	4K	200,166,133	BGA(144)	S=NOW	
512M	64Mx8	DDR	IS43R86400D	2.5V	8K	200,166,133	TSOP2(66), BGA(60)	Prod	
	32Mx16	DDR	IS43R16320D	2.5V	8K	200,166,133	TSOP2(66), BGA(60)	Prod	
	16Mx32	DDR	IS43R32160D	2.5V	8K	200,166,133	BGA(144)	S=NOW	

1.8V Mobile DDR (Double Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refresh	Speed (Mhz)	Pkg (#Pins)	Status (1,2)	Comment (3)
32M	2Mx16	MDDR	IS43LR16200C	1.8V	4K	166,143	BGA(60)	Prod	
	1Mx32	MDDR	IS43LR32100C	1.8V	4K	166,143	BGA(90)	Prod	
64M	4Mx16	MDDR	IS43LR16400B	1.8V	4K	166,143	BGA(60)	Prod	
	2Mx32	MDDR	IS43LR32200B	1.8V	4K	166,143	BGA(90)	Prod	
128M	8Mx16	MDDR	IS43LR16800F	1.8V	4K	166,133	BGA(60)	Prod	
	4Mx32	MDDR	IS43LR32400F	1.8V	4K	166,133	BGA(90)	Prod	
256M	16Mx16	MDDR	IS43LR16160F	1.8V	8K	200,166,133	BGA(60)	S=NOW	
	8Mx32	MDDR	IS43LR32800F	1.8V	4K	200,166,133	BGA(90)	S=NOW	
512M	32Mx16	MDDR	IS43LR16320B	1.8V	8K	166,133	BGA(60)	Prod	
	16Mx32	MDDR	IS43LR32160B	1.8V	8K	166,133	BGA(90)	Prod	
1G	64Mx16	MDDR	IS43LR16640A	1.8V	8K	200,166,133	BGA(60)	S=Q2/12	

1.8V DDR2 (Double Data Rate) Synchronous DRAM

Den	Org	Type	Part No.	Vcc	Refresh	Speed (MT/s)	Pkg (#Pins)	Status (1,2,5)	Comment (3)
256M	32Mx8	DDR2	IS43DR83200A	1.8V	8K	800,667,533,400	BGA(60)	Prod	
	16Mx16	DDR2	IS43DR16160A	1.8V	8K	800,667,533,400	BGA(84)	Prod	
	8Mx32	DDR2	IS43DR32801A	1.8V	8K	533,400	BGA(126)	Prod	Reduced Page
512M	64Mx8	DDR2	IS43DR86400B	1.8V	8K	800,667,533,400	BGA(60)	Prod	
	32Mx16	DDR2	IS43DR16320B	1.8V	8K	800,667,533,400	BGA(84)	Prod	
1G	128Mx8	DDR2	IS43DR81280A	1.8V	8K	800,667,533,400	BGA(60)	Prod	
	64Mx16	DDR2	IS43DR16640A	1.8V	8K	800,667,533,400	BGA(84)	Prod	
2G	128Mx16	DDR2	IS43DR16128	1.8V	8K	667,533,400	BGA(84)	Prod	Stacked die, 10.5x13.5mm BGA

Notes: 1. S = Sample 2. Prod = Production 3. Industrial temp: -40°C to +85°C 4. Support mobile features
5. NR = Not recommended for new design 6. KGD available for most products. Contact your ISSI sales channel.

Ordering Information for ISSI SRAM Devices

IS 61 WV 12816 DBLL – 10 T L I – TR

- **ISSI prefix**
- **Product Family**
- **Operating Voltage Range/Product Type**
- **Density/Configuration**
- **Die Rev/Voltage Range**
- **Speed (ns or MHz)**
- **Package Code**
- **Solder Type**
- **Temperature Grade**
- **Packing Option**

SRAM Product Family
61/63 = High Speed
62 = Low Power
64 = Automotive High Speed
65 = Automotive Low Power
66 = Pseudo SRAM
67 = Automotive PSRAM

Density/Configuration
Example:
25636 = 256Kx36
51216 = 512Kx16
1M36 = 1Mx36

Die Rev/Voltage Range
Die Rev
Blank-Z

Voltage Range (WV)
ALL = 1.65V to 2.2V
BLL = 2.5V to 3.6V

Operating Voltage Range/ Product Type
Asynchronous SRAM
C = 5V
LV = 3.3V
WV = Wide Voltage Range

Synchronous SRAM
P = Pipeline, F = Flowthrough
NLP/NLF/NVP/NVF = No-Wait Option
LP/LF: Vcc = 3.3V, VccQ = 3.3V/2.5V
VP/VF: Vcc = 2.5V, VccQ = 2.5V
QD = QUAD, DD = DDR-II Common I/O: Vcc = 1.8V , VccQ = 1.8V/1.5V

Packing Option
Blank = Tray or Tube
TR = Tape & Reel

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

Solder Type
Blank = SnPb
L = Lead-free (RoHS Compliant)

Package Code
B, B1, B2, B3 = BGA
CT = Copper TSOP
H = sTSOP
J = 300-mil SOJ
K = 400-mil SOJ
LQ = LQFP
M, M3, = BGA
Q = SOP
T/T2 = TSOP
TQ = TQFP
U = SOP

Speed (ns or MHz)
Example:
8 = 8ns
200 = 200MHz

Ordering Information for ISSI DRAM Devices

IS 45 S 16 160 D – 7 B L A2 – TR

- ISSI prefix
- Product Family
- Operating Voltage Range/Product Type
- Bus Width
- No. of Words
- Die rev.
- Speed
- Package Code
- Solder type
- Temperature Grade
- Packing option

DRAM Product Family
41 = Asynchronous
42 = SDR Commercial/Industrial grade
43 = DDR & DDR2 Commercial/Industrial grade
45 = SDR Automotive grade
46 = DDR & DDR2 Automotive grade
49 = RLDRAM

Operating Voltage Range/Product Type
Asynchronous: Fast Page and EDO
C = 5V
LV = 3.3V

Synchronous
S = 3.3V SDR
SM = 3.3V mobile SDR
RM = 2.5V mobile SDR
VM = 1.8V mobile SDR
VS = 1.8V SDR
R = 2.5V DDR or 2.5V SDR
LR =1.8V mobile DDR
DR =1.8V DDR2

Bus Width
8 = x8
16 = x16
32 = x32

Number of Words
100 = 1M
200 = 2M
…
160 = 16M
320 = 32M

Die revision
Blank-Z

Package Code
B = BGA
CT = Copper TSOP
T = TSOP

Speed (clock cycle time)
-4 = Up to 250Mhz
-5 = Up to 200Mhz
-6 = Up to 166Mhz
-7 = Up to 143Mhz
-75E = Up to 133Mhz @ CL = 2

DDR2 only
-5B = DDR2-400B (up to 200Mhz @ CL = 3)
-37C = DDR2-533C (up to 266Mhz @ CL = 4)
-3D = DDR2-667D (up to 333Mhz @ CL = 5)
-25E = DDR2-800E (up to 400Mhz @ CL = 6)
-25D = DDR2-800D (up to 400Mhz @ CL = 5)

Packing Option
Blank = trays
TR = Tape & Reel

Solder Type
Blank = SnPb
N = NiPdAu plating (RoHS Compliant)
L = 100% matte Sn for non-BGA (RoHS Compliant)
L = SnAgCu for BGA (RoHS Compliant)

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

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