



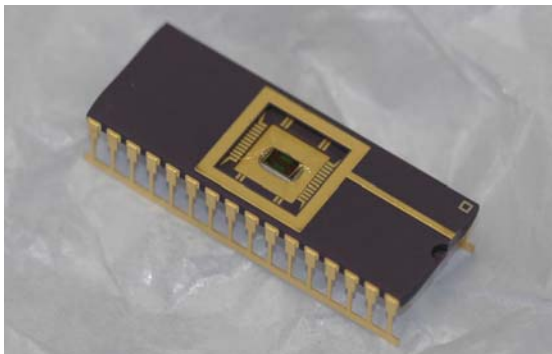
STANDARD HERMETIC / CERAMIC MEMORY PRODUCT SELECTOR GUIDE

Microcross Components (formerly Austin Semiconductor) has been supplying high-quality, technology solutions to the high reliability marketplace for over twenty-two years. Being fully QML certified and certified to AS9100:2009 and ISO 9001:2008, Microcross Components meets and exceeds the demands of the Military, Aerospace, Transportation, Industrial-Embedded and Medical Diagnostic markets.

Microcross was the first, non-OEM QML supplier to be certified by DSCC. The company has always striven for high quality standards, having achieved class 'V' for MIL-PRF-38535. Currently Microcross is pursuing Class 'K' for MIL-PRF-38534, for programs demanding space level processing.

Microcross is very open to customer's special requirements, and will work with customers with changes to standard specifications as they see fit to suit their application. At Microcross, specification revision control is key, and is controlled by our Quality organization. All manufacturing operations and qualification stress tests are performed at Microcross' Austin facility with only SEM and RGA done off site.

Most of our ceramic products are listed with DSCC. In fact, Microcross Components has over 1600 part numbers listed with DSCC, on various SMDs. Our standard package offerings include Ceramic 400/600 mil DIP, SOJ, 2-sided LCC, 4-sided LCC, ZIP, Gull-Wing, QFP, PGA, Flat Pack, Formed Lead Flat Pack and Metal Can. It is our goal to continue providing our customers with a full service solution, while upholding to our long-tenured reputation and tradition of strict quality and reliability standard.



PRODUCT LINE OVERVIEW:

MEMORY

- SRAM: Densities 256Kb to 16Mb
- SSRAM: Densities to 36Mb [SCD]
- DRAM: Densities 256Kb to 16Mb
- SDRAM: Densities 16Mb
- VRAM: Densities 1Mb
- EPROM: Densities 256Kb to 4Mb
- EEPROM: Densities 1Mb to 4Mb
- FLASH: Densities 1Mb to 64Mb
- nvSRAM
 - Monolithic: Densities 4MEG
 - MCM: 16MEG

LINEAR / MIXED SIGNAL / DIGITAL

- Voltage Regulators
- Operational Amps
- Voltage Comparators
- ADC and DAC devices
- Line Drive/Receivers
- Switches
- Multiplexers
- Supervisory Circuits

RADIATION TOLERANT PRODUCTS

- Linear
- Mixed-Signal
- Memory
- Interface
- Discrete
- Digital



QUALITY LEVELS AND PROGRAMS:

- DSCC QML
 - MIL-PRF-38534, Class H (Class K in Process)
 - MIL-PRF-38535, Class Q
 - MIL-PRF-38535, Class V (Assembly Only)
 - Laboratory Suitability (MIL-STD-883)
- SMD, M level and Q level
- NSTS 5300.4
- MIL-STD-883, paragraph 1.2.1
- Capabilities for Class S Manufacturing
- AS 9100:2009, ISO 9001:2008 Certified
- Customer specific, Source Control Drawing (SCD)



For more information regarding our products and services, please visit www.micross.com.

PACKAGE TYPES / PIN COUNT

MEMORY TYPE	DENSITY (KBITS)	CONFIG.	FEATURES	PART #	SMD # 5962-	SPEED (ns)	PGA	CQFP	FP	LCC	DIP	CSOJ	ZIP	GULL WING
DRAM	256	256K x 1	5V, Fast Page Mode	A54C1259		100-150				EC/18				
DRAM	1,048	256K x 4	5V, Enhanced Page Mode	SMJ44C256	90617	80-150			HK/20	FQ/20	JD/20	HJ/20		
DRAM	1,048	1M x 1	5V, Enhanced Page Mode	SMJ4C1024		80-150			HK/20	FQ/20	JD/18	HJ/20		
DRAM	4,096	1M x 4	5V, Fast Page Mode	MT4C4001J	90847	70-120				ECN/20	C & CN/20			
DRAM	4,194	1M x 4	5V, Enhanced Page Mode	SMJ44400	90847	80-120			HR/20		JD/20			
DRAM	4,096	4M x 1	5V, Fast Page Mode	MT4C1004J	90622	70-120					CN/18			
DRAM	16,777	1M x16	5V, Enhanced Page Mode	SMJ416160	96743	70-80			HKD/50					
DRAM	16,777	1M x16	5V, Enhanced Page Mode	SMJ418160	96743	70-80			HKD/50					
DRAM	16,777	4M x 4	5V, Enhanced Page Mode	SMJ416400	92312	70-100			HKB/28	FNC/28			SV/24	
SDRAM	16,384	1M x16	3.3V, Bank Interleaving, Pipelined	SMJ626162	97545	12-20			HKD/50					
VRAM	1,024	256K x 4	5V, FPM, Dual Port, Block Write	MT42C256	89497	100-120				EC/28	C/28	DCJ/28		
VRAM	1,024	256K x 4	5V, FPM, Dual Port, Block Write	SMJ44C251B	89497	100-120				HMM/28	JDM/28	HJM/28	SVM/28	
SRAM	256	32K x 8	5V, Fast ASYNC Access, Low Power	A5/MT5C2568	88552	12-100			F/28	EC/28	C/28	DCJ/28		
SRAM	1,024	128K x 8	5V, /CE1, /CE2, /OE, Fast ASYNC Access, Low Power	MT5C1008	89598	12-70			F/32	EC & ECA/32	C & CW/32	DCJ & SOJ/32		
SRAM	1,024	128K x 8	5V, Single /CE, Fast ASYNC Access, Low Power	MT5C1009	89598, 96691	15-70			F/32	EC & ECA/32	C & CW/32	DCJ & SOJ/32		
SRAM	1,024	256K x 4	5V, /CE, /OE, Fast ASYNC Access, Low Power	MT5C1005	91612	15-20					C/28			
SRAM	1,024	1M x 1	5V, /CE, /OE, Fast ASYNC Access, Low Power	MT5C1001	92316	20-70			F/32			DCJ/32		
SRAM	4,096	128K x 32	5V, MCM, Byte Selectable Fast SRAM	AS85128K32	93187, 95595	15-45		P & PN/66	Q & Q1/68					
SRAM	4,096	128K x 32	3.3V, MCM, Byte Selectable, ASYNC Fast SRAM	AS85LC128K32		10-25		P/66	Q/68					
SRAM	4,096	512K x 8	5V, Revolutionary Pin-out	AS5C512K8	95600, 95613	12-55			F/36	EC/36		ECJ/36		
SRAM	4,096	512K x 8	3.3V, Low Power, High Speed	AS5LC512K8		12-20			F/36	EC/36				
SRAM	4,096	512K x 8	5V/CE/OE, Evolutionary Pin-out	AS5C4008	95600, 95613	12-45			F/32	EC/32	CW/32	ECJ/32		
SRAM	4,096	512K x 8	5V/CE/OE, Slow, Ultra Low Power	AS5C4009LL	95613	55-120					CW/32	ECJ/32		
SRAM	16,384	512K x 32	5V, MCM, High Speed, Low Power	AS85512K32	94611, 95624	17-55		P/66	Q, Q1, Q2 & BQFP/68					
SRAM	16,384	512K x 32	3.3V, MCM, /CE, /OE, High Speed, Low Power	AS85LC512K32		10-20		P/66	Q & Q1/68					
nvSRAM	4,096	512K x 8	3.3V, Non-volatile SRAM	AS6nvLC512K8		20-45								DCG/44
nvSRAM	4,096	256K x 16	3.3V, Non-volatile SRAM	AS6nvLC256K16		20-45								DCG/44
nvSRAM	16,384	512K x 32	5V, Non-volatile SRAM Module	AS8nvC512K32		20-45			Q & OB/68					
nvSRAM	16,384	512K x 32	3.3V, Non-volatile SRAM Module	AS8nvLC512K32		20-45			Q & OB/68					
UVEPROM	256	32K x 8	5V, UV Erasable ROM	AS27C256	86063	55-300				ECA/32	J/28			
UVEPROM	512	64K x 8	5V UV Erasable ROM	SMJ27C512	87648	12-25				ECA/32	J/28			
UVEPROM	1,024	128K x 8	5V, UV Erasable ROM	SMJ/AS27C010A	89614	120-200				ECA/32	J/32			
UVEPROM	4,096	512K x8	5V, UV Erasable ROM	SMJ27C040	91752	12-15					J/32			
EEPROM	1,048	128K x 8	5V, Byte Alterable	AS28C010	38267	12-25			F/32		CW/32			
EEPROM	1,048	128K x 8	5V, 128 Byte Page Mode, Rad-Tol	AS58C1001	38267	150-250			F & SF/32			DCJ/32		
EEPROM	1,048	128K x 8	3.3V, 128 Byte Page Mode, Rad-Tol	AS58LC1001		250-300			F & SF/32			DCJ/32		
EEPROM	4,096	128K x 32	5V, Byte Selectable, Page Mode	AS8E128K32	94585	150-300		P & PN/66	Q & Q3/68					
EEPROM	4,096	128K x 32	5V, Radiation Tolerant, w/ Shielded Package, >100K RADS	AS8ER128K32	94585	150-250			SQ, SQB, Q & OB/68					
EEPROM	4,096	128K x 32	3.3V, Radiation Tolerant, w/ Shielded Package, >100K RADS	AS8ERLC128K32		250-300			SQ, SQB, Q & OB/68					
FLASH	1,024	128K x 8	5V, CE/OE, Even Sector	AS29F010	96690	60-150			F/32		CW/32	SOJ/32		DCG/32
FLASH	1,024	128K x 8	5V, Even Sector, Legacy Product	SMJ28F010B	90899	120-200				FE/32	JDD/32			
FLASH	4,096	512K x 8	5V, CE/OE, Erase Suspend/Resume	AS29F040	96692	55-150			F/32	ECA/32	CW/32			DCG/32
FLASH	4,096	128K x 32	5V, MCM, Even Sector, Byte Selectable	AS8F128K32	94716	60-150			Q & Q1/68					
FLASH	16,384	512K x 32	5V MCM, Even Sector, Byte Selectable	AS8F512K32	94612	70-150		P/66	Q & Q1/68					
FLASH	32,768	1M x 32	5V, MCM, Even Sector, Byte Selectable	AS8F1M32		90-150			QT/68					
FLASH	32,768	1M x 32	3.3V, Boot Sector, Bottom = B	AS8FLC1M32B	09205	70-120		P/66	Q/68					
FLASH	65,528	2M x 32	5V, Uniform Sector	AS8F2M32		90-150			QT/68					
FLASH	65,528	2M x 32	3.3V, Boot Sector, Bottom=B, Top=C	AS8FLC2M32B	08245	70-120		P/66	Q/68					
SRAM & FLASH	10,240	640K x 16	5V, Mixed MCM, 128Kx16 SRAM & 512Kx16 FLASH	AS8SF384K32		35			QT/68					

SELECTOR GUIDE

MEMORY PRODUCT NOMENCLATURE

PREFIX CODES

AS = ASI / Micross
 MT=ASI / Micross / Micron*
 SMJ/SM=ASI / Micross / TI**

NOTES:

*The MT product line was acquired from Micron Technology. In most cases, these industry established part numbers have been retained, but in no way does this indicate or guarantee a die source.

**The SMJ/SM product line was acquired from Texas Instruments. In most cases, these industry established part numbers have been retained, but in no way does this indicate or guarantee a die source. Nomenclature is provided in separate documentation.

***See individual datasheets for exact part number and option combinations offered.

EXAMPLE: AS5C1008C-35L/883C

DEVICE NUMBER

AS 5C 1008 C -35 L/883C

ACCESS TIME

-5 = 5 or 50 ns
 -6 = 6 or 60 ns
 -7 = 7 or 70 ns
 -8 = 8 or 80 ns
 -9 = 9 or 90 ns
 -10 = 10 or 100 ns
 -12 = 12 or 120 ns
 -15 = 15 or 150 ns
 -17 = 17 ns
 -20 = 20 or 200 ns
 -25 = 25 or 250 ns
 -30 = 30 or 300 ns
 -35 = 35 ns
 -45 = 45 ns
 -55 = 55 ns
 -60 = 60 ns
 -70 = 70 ns
 -75 = 7.5 ns or 75 ns
 -85 = 85 ns
 -90 = 90 ns
 -100 = 100 ns
 -120 = 120 ns
 -150 = 150 ns

PRODUCT TYPE/DESCRIPTION

DRAM

4C (5V, FPM)
 41 & 44 (5V, EPM)

SDRAM

4SD (3.3V, SDR)
 4DDR (2.5V/1.8V, Double Data Rate)
 4DDR2 (2.5V/1.8V, Double Data Rate II)
 4MDDR (1.8V, Mobile DDR)

62 (3.3V, Pipelined)

SRAM

5C (5V)
 5LC (3.3V)
 8S (5V, Multi-chip Module)
 8SLC (3.3V, Multi-chip Module)

SSRAM

5SP = Pipelined
 5SS = Flow-thru

VRAM

42C
 44C

EEPROM

58C (Hitachi Die)
 58LC (3.3V)
 28C (Byte Alterable)
 8E (Multi-chip Module)
 8ER (Multi-chip Module, Rad-Tol)
 8ERLC (3.3V, Multi-chip Module, Rad Tol)

UVEEPROM

27C

FLASH

29F (AMD compatible)
 29LV (3.3V)
 28F
 8F (Multi-chip Module)
 8FLC (3.3V, Multi-chip Module)

VRAM

6nvLC (3.3V)
 8nvC (5V)
 8nvLC (3.3V)

PACKAGE CODES

BG, BG1, BGM1 =
 FBGA
 C = DIP

CN = Narrow DIP
 CW = Wide DIP
 CZ, SV, SVM = ZIP
 DCJ = SOJ (Formed)
 DCG = FP Gullwing (Formed)

DG = TSOPII
 DJ = PSQJ
 EC, FE, HMM = LCC
 ECA = 450 x 550 LCC
 ECG = Gullwing LCC
 ECJ = SOJ (Attached)
 ECN = Narrow LCC
 ECW = Wide LCC
 F, FN, HKD, HR, HK = Flat pack

FNC = LCC
 J, JD, JDD, JDM = Side Brazed DIP
 P = PGA
 PBG, PBG1 = PBGA
 Q = CQFP (Gullwing)
 QB = CQFP (w/ Tie Bar)
 QJ = CQFP (J-lead)
 Q1 = CQFP (w/ special lead)
 Q2, Q3, SQ = CQFP
 SQB = CQFP (Rad Tol)
 QT = CQFP (Thin)
 QW = CQFP (1.56" sq.)
 RG = TSOPI
 SF = Flat pack (Radiation Tolerant)
 SOJ, HJM = SOJ

OPTIONS/PROCESSING

AT = -40°C to +125°C
 CT = 0°C to +70°C
 IT = -40°C to +85°C
 ET = -40°C to +105°C
 M or XT = -55°C to +125°C
 L = 2V Data Retention
 LL = Ultra Low Power
 E = Epi Die
 Q = QML
 883C = MIL-STD-883 (previously listed as "M")
 SPACE = MIL-STD-883, Method 5004, Class Equivalent
 MIL = MIL-STD-883 equivalent processing compliant to paragraph 1.2.2 -55°C to +125°C