



Austin Semiconductor, Inc.  
 8701 Cross Park Drive, Austin, TX 78754-4566

**Product Change Notification – PCN**  
 REVISED and RE-ISSUED

PCN/LTB ISSUE DATE	PCN #	PCN TYPE	LTB #	LTB DATE	DELIVERY FLEX (sched.)
7/5/05 Revision 9/28/2005	0526-1A	CLASS 1	0526-1A	1/27/06	12 Mths.
NEW MATERIAL SAMPLE AVAILABILITY					9/30/05
SAMPLE ORDER START DATE					7/15/05
NEW MATERIAL QUALIFICATION DATE					2/3/06
NEW MATERIAL FULL PRODUCTION DATE					2/6/06

Dear Valued Customer,

Austin Semiconductor, Inc. is re-notifying our valued customers, of a Class 1-Product Change Notification [PCN], to an Asynchronous SRAM grouping within its Hi-Reliability product family. This PCN effects both our Standard Product offering as well as devices supplied under the DSCC SMD 5962-89598. Our MT5C1009 and MT5C1008; 1Mb, 128K x 8, 5.0v, Asynchronous SRAM devices, offered in multiple speed and temperature ranges, as well as the devices supplied under the DSCC drawing 5892-89598 is undergoing a silicon die change revision. The Die base change will not alter the form, fit or overall function, nor will it negatively impact any of the specific device electrical specifications as listed on the products datasheet and or SMD.

Austin Semiconductor, Inc. is changing the silicon die base from a 4T-2R cell architecture to a 6T cell architecture, due to the current die going to End Of Life (EOL) status. The change in cell architecture will improve both the end products DC characteristics as well as certain AC functional attributes. This replacement die is the Industries most commonly used silicon for these product definitions today. A Key Attribute (AC and DC) summary follows the effected product listing on page 16.

Austin Semiconductor, Inc. will accept orders for our current die based product via a transitional, limited availability, Last Time Buy [LTB] through January 27, 2006 and will provide its Customer base with delivery flexibility for this LTB for up to 12 months after receipt of order [ARO]. Austin Semiconductor has secured a limited quantity of the original die vendors material to support this Transitional LTB. Additional delivery flexibility options are available under our DMS/Obsolescence program; Customer’s requiring extended Obsolescence management services should contact their Sales channel representative.

Austin Semiconductor is also accepting sample and or qualification orders for the new replacement material. We are preparing material for the most commonly purchased packages in expectations of our Customer’s requirements. Functional sample orders may be placed beginning July 15, 2005 for delivery beginning September 30, 2005, fully qualified sample deliverables to be available starting February 6, 2006.

The following MT5C1009, MT5C1008 and SMD 5962-89598xxMxx products will have an effective change over date of February 6, 2005 with new material work in process being manufactured with the new 6T silicon, with exception of material being manufactured in support of our customer’s LTB purchases. Austin Semiconductor, Inc., via its Quality/Manufacturing System, will track the new vs. previous material via Family ID marking on the backside of all effected product. Brand (mark) examples follow after the effected product listing on page 15.



























**Standard Military Drawing: 5962-89598**

**SMD # Detailed Description**

5962-8959837MXA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 25ns, Standard Power, 600mil DIP  
 5962-8959837MYA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 25ns, Standard Power, SOJ  
 5962-8959837MZA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 25ns, Standard Power, 400mil DIP  
 5962-8959837MUA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 25ns, Standard Power, 2-sided LCC  
 5962-8959837MTA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 25ns, Standard Power, Flat Pack  
 5962-8959837MMA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 25ns, Standard Power, 4-sided LCC  
 5962-8959837M7A 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 25ns, Standard Power, Formed Flat Pack (J-Lead)

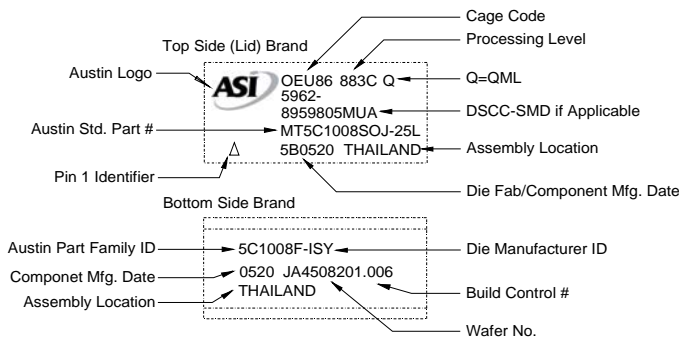
5962-8959838MXA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 20ns, Standard Power, 600mil DIP  
 5962-8959838MYA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 20ns, Standard Power, SOJ  
 5962-8959838MZA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 20ns, Standard Power, 400mil DIP  
 5962-8959838MUA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 20ns, Standard Power, 2-sided LCC  
 5962-8959838MTA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 20ns, Standard Power, Flat Pack  
 5962-8959838MMA 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 20ns, Standard Power, 4-sided LCC  
 5962-8959838M7A 1Mb SRAM, 128k x 8, 5.0v, (2) CE, 20ns, Standard Power, Formed Flat Pack (J-Lead)

5962-8959839MXA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Standard Power, 600mil DIP  
 5962-8959839MYA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Standard Power, SOJ  
 5962-8959839MZA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Standard Power, 400mil DIP  
 5962-8959839MUA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Standard Power, 2-sided LCC  
 5962-8959839MTA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Standard Power, Flat Pack  
 5962-8959839MMA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Standard Power, 4-sided LCC  
 5962-8959839M7A 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Standard Power, Formed Flat Pack (J-Lead)

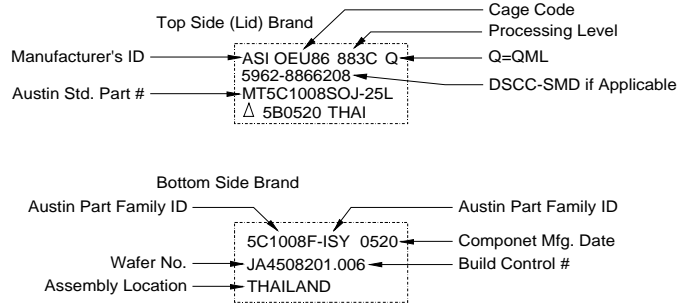
5962-8959840MXA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Low Power-Data Retention, 600mil DIP  
 5962-8959840MYA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Low Power-Data Retention, SOJ  
 5962-8959840MZA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Low Power-Data Retention, 400mil DIP  
 5962-8959840MUA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Low Power-Data Retention, 2-sided LCC  
 5962-8959840MTA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Low Power-Data Retention, Flat Pack  
 5962-8959840MMA 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Low Power-Data Retention, 4-sided LCC  
 5962-8959840M7A 1Mb SRAM, 128k x 8, 5.0v, (1) CE, 20ns, Low Power-Data Retention, Formed Flat Pack (J-Lead)

**Device Marking:**

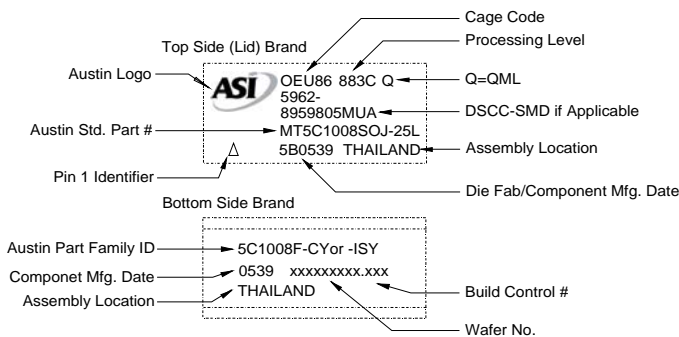
Example A w/ Graphic Logo  
Pre-PCN0526-1



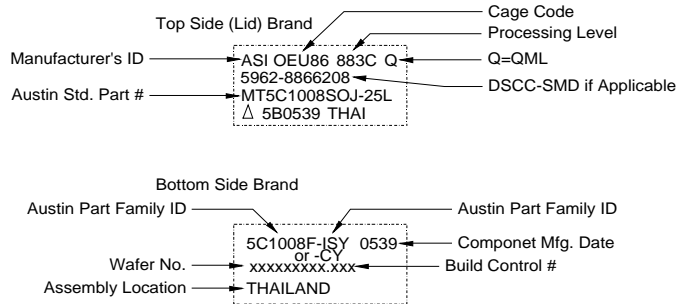
Example B wo/Graphic Logo  
Space Optimized,Pre-PCN0526-1



Example C w/ Graphic Logo  
Post-PCN0526-1



Example D wo/Graphic Logo  
Space Optimized,Post-PCN0526-1



## Austin Semiconductor 128Kx8 SRAM DIE comparisons:

Electrical Characteristics(TYP)	Condition	OLD Die(avg) <sup>1</sup>	New Die Rev(Avg) <sup>1</sup>
TAA	Vcc=4.5V,125C	13ns	<b>10.5ns</b>
TACE	Vc=4.5V,125C	13.5ns	<b>11ns</b>
TAOE	Vcc=4.5V,125C	3.5ns	<b>3.2ns</b>
HIGH VCC Functionality	all Temps	5.7-6.0V max	<b>&gt;7.0V</b>
LOW VCC Functionality	all Temps	3.8V	<b>3.4V</b>
TPWE	Vcc=4.5V,125C	7.0ns	<b>6.0ns</b>
VIL/VIH Noise immunity	-55C	good	<b>excellent</b>
VOL(IOL=8mA)	Vcc=4.5V,125C	220mV	<b>160mV</b>
VOH(IOH=-4mA)	Vcc=4.5V125C	<b>3.4V</b>	2.7V
VDR	-55C	1.5V	<b>.8V</b>
ICCDR(2V)	125C	.55mA	<b>.12mA</b>
ICCDR(3V)	125C	.85mA	<b>.20mA</b>
CMOS Std-By(5.5V)	125C	2.7mA	<b>.35mA</b>
ICCA(f=fmax) -15	-55C, Vcc=5.5V	135mA	<b>45mA</b>
ICCtl Stdby (f=fmax)	-55C, Vcc=5.5V	28mA	<b>3.5mA</b>

Technology / DIE Characteristics	Old Die	New Die Rev
Die Size(mils2)	145x185	<b>141x144</b>
Memory Cell type	4T-2R	<b>True 6-T</b>
Poly Load Resistor	200 Gig Ohms	<b>NONE</b>
Technology Min feature	.45um	<b>.25um</b>
Fab Process	DMDP	<b>DMSP</b>
Fab Location	Singapore	<b>Minn,MN USA</b>
DSCC Certified FAB	<b>YES</b>	<b>YES</b>
Die Cost\$\$\$	same	same
Production Cycle	EOL	<b>Mature</b>
Package Types	same	same
FASTEST Speed Grade	-15	<b>-12</b>
Cell Stability	yield loss	<b>Strongest</b>
TEST Time	2X	<b>1X</b>
Normalized Mfg cost	1.2X	<b>1.0X</b>

note 1: This is typical data of average characteristics of 1 lot

Complete “NEW” die revision, qualification & characterization data, as well as physical die comparisons, can be provided upon customer request. Please contact your Austin Account Manager who can facilitate a discussion with Jeff Kendziorski. Jeff is Austin’s Engineering Manager and is available for in-depth technical discussions on any particular product aspect requiring further clarification, including 6T vs. 4T-2R SRAM memory cell architecture differences, technology roadmaps and Austin’s technical capabilities.

Regards,



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