Macronix
Process Change Notification (PCN)

MX29LV160C
(3V, 16Mb, Flash)

Date Issued : April 29th, 2005
Issued by : PM/ Memory SBU

S/N: F-PCN-0009

Dear Macronix Customer,

Macronix is introducing our 4th generation of 16Mb products. Macronix has shrunk the die size with optimized 0.15um technology in order to offer our customers the most advanced NOR flash products continuously.

In order to achieve better performance, reliability, and cost structure, Macronix is introducing the "C" revision of 16Mb Boot Sector Flash products on our advanced 0.15um technology.

This version is currently sampling and will go to mass production by May 2005.

LV160C are identical in form, fit and function to the 3rd generation Macronix products LV160B

Macronix requests that you kindly qualify the new version as quickly as possible in order for us to continue supporting you without interruption.

Thank you

Feature Comparison Table

Part No.	29LV160B	**29LV160C**
Process	0.15um	**0.15um optimized**
Location	Fab II - Hsinchu, Taiwan	Fab II - Hsinchu, Taiwan
Wafer	8 inch	8 inch
VCC range	2.7V ~ 3.6V	2.7V ~ 3.6V
Operation Temp	Industrial grade (-40℃ ~ 85℃)	Industrial grade (-40℃ ~ 85℃)
Configuration	x8/x16 selectable for 29LV160B	x8/x16 selectable for 29LV160C
Speed	70/90ns	**55R**/70/90ns
CFI mode	Yes	Yes
Package Type	44-SOP/48-TSOP/48-CSP for 29LV160B	44-SOP/48-TSOP/48-CSP for 29LV160C
CSP size	6 x 8 mm XB - 0.3mm / XE - 0.4mm Ball diameter	6 x 8 mm XB - 0.3mm / XE - 0.4mm Ball diameter

Spec Comparison Table

Test Condition Temp. = 25℃	3rd Generation			4th Generation			UNIT	Datasheet Spec.
	2.7V	3.0V	3.6V	2.7V	3.0V	3.6V		
ISB	0.04	0.04	0.06	0.23	0.29	0.38	uA	5
ICC1(1MHz)	0.74	0.87	1.08	0.39	0.51	0.74	mA	4
ICC1(5MHz)	3.66	4.28	5.56	1.88	2.36	3.32	mA	12
ICC2(Active)	5.35	8.2	14.69	6.90	8.41	8.44	mA	30
VIL	1	1.2	1.4	1.1	1.1	1.4	v	-0.625
VIH	1.5	1.6	1.9	1.3	1.7	2	v	0.7*Vcc/Vcc+0.3
VOL	0.1	0.1	0.1	0.4	0.3	0.3	v	0.45
VOH	2.3	2.7	3.4	2.4	2.8	3.6	v	0.85*Vcc
tACC	65	56	49	66	61	55	ns	70/90
tCE	66	58	50	64	59	53	ns	70/90
tOE	21	18	12	21	17	14	ns	30
Sector Erase Time (64K Bytes)	0.66	0.55	0.39	0.55	0.54	0.54	sec	15
Chip Erase time	11.7	9.45	7.25	10.77	10.43	9.78	sec	115
Byte Program Time	9.68	7.84	6	7.5	7.3	6.8	us	300
Word Program Time	14.72	11.92	9.12	12.3	11.8	11	us	360

Part Numbering Change

3rd Generation "B" (part number)	3rd Generation "B" (part number)
SOP/TSOP/CSP	TSOP/CSP - Lead Free
MX29LV160BTMC-70	MX29LV160BTTC-70G
MX29LV160BBMC-70	MX29LV160BBTC-70G
MX29LV160BTMC-90	MX29LV160BTTC-90G
MX29LV160BBMC-90	MX29LV160BBTC-90G
MX29LV160BTMI-70	MX29LV160BTTI-70G
MX29LV160BBMI-70	MX29LV160BBTI-70G
MX29LV160BTMI-90	MX29LV160BTTI-90G
MX29LV160BBMI-90	MX29LV160BBTI-90G
MX29LV160BTTC-70	MX29LV160BTXBC-70G
MX29LV160BBTC-70	MX29LV160BBXBC-70G
MX29LV160BTTC-90	MX29LV160BTXBC-90G
MX29LV160BBTC-90	MX29LV160BBXBC-90G
MX29LV160BTTI-70	MX29LV160BTXBI-70G
MX29LV160BBTI-70	MX29LV160BBXBI-70G
MX29LV160BTTI-90	MX29LV160BTXBI-90G
MX29LV160BBTI-90	MX29LV160BBXBI-90G
MX29LV160BTXBC-70	MX29LV160BTXEC-70G
MX29LV160BBXBC-70	MX29LV160BBXEC-70G
MX29LV160BTXBC-90	MX29LV160BTXEC-90G
MX29LV160BBXBC-90	MX29LV160BBXEC-90G
MX29LV160BTXBI-70	MX29LV160BTXEI-70G
MX29LV160BBXBI-70	MX29LV160BBXEI-70G
MX29LV160BTXBI-90	MX29LV160BTXEI-90G
MX29LV160BBXBI-90	MX29LV160BBXEI-90G
MX29LV160BTXEC-70	
MX29LV160BBXEC-70	
MX29LV160BTXEC-90	
MX29LV160BBXEC-90	
MX29LV160BTXEI-70	
MX29LV160BBXEI-70	
MX29LV160BTXEI-90	
MX29LV160BBXEI-90	

4th Generation "C" (part number)	4th Generation "C" (part number)
SOP/TSOP/CSP	TSOP/CSP - Lead Free
MX29LV160CTMC-70	MX29LV160CTTC-70G
MX29LV160CBMC-70	MX29LV160CBTC-70G
MX29LV160CTMC-90	MX29LV160CTTC-90G
MX29LV160CBMC-90	MX29LV160CBTC-90G
MX29LV160CTMI-70	MX29LV160CTTI-70G
MX29LV160CBMI-70	MX29LV160CBTI-70G
MX29LV160CTMI-90	MX29LV160CTTI-90G
MX29LV160CBMI-90	MX29LV160CBTI-90G
MX29LV160CTTC-70	MX29LV160CTXBC-70G
MX29LV160CBTC-70	MX29LV160CBXBC-70G
MX29LV160CTTC-90	MX29LV160CTXBC-90G
MX29LV160CBTC-90	MX29LV160CBXBC-90G
MX29LV160CTTI-70	MX29LV160CTXBI-70G
MX29LV160CBTI-70	MX29LV160CBXBI-70G
MX29LV160CTTI-90	MX29LV160CTXBI-90G
MX29LV160CBTI-90	MX29LV160CBXBI-90G
MX29LV160CTXBC-70	MX29LV160CTXEC-70G
MX29LV160CBXBC-70	MX29LV160CBXEC-70G
MX29LV160CTXBC-90	MX29LV160CTXEC-90G
MX29LV160CBXBC-90	MX29LV160CBXEC-90G
MX29LV160CTXBI-70	MX29LV160CTXEI-70G
MX29LV160CBXBI-70	MX29LV160CBXEI-70G
MX29LV160CTXBI-90	MX29LV160CTXEI-90G
MX29LV160CBXBI-90	MX29LV160CBXEI-90G
MX29LV160CTXEC-70	MX29LV160CBTC-55Q
MX29LV160CBXEC-70	MX29LV160CBTI-55Q
MX29LV160CTXEC-90	MX29LV160CBXBC-55Q
MX29LV160CBXEC-90	MX29LV160CBXBI-55Q
MX29LV160CTXEI-70	MX29LV160CBXEC-55Q
MX29LV160CBXEI-70	MX29LV160CBXEI-55Q
MX29LV160CTXEI-90	MX29LV160CTTC-55Q
MX29LV160CBXEI-90	MX29LV160CTTI-55Q
MX29LV160CBMC-55R	MX29LV160CTXBC-55Q
MX29LV160CBMI-55R	MX29LV160CTXBI-55Q
MX29LV160CBTC-55R	MX29LV160CTXEC-55Q
MX29LV160CBTI-55R	MX29LV160CTXEI-55Q
MX29LV160CBXBC-55R	
MX29LV160CBXBI-55R	
MX29LV160CBXEC-55R	
MX29LV160CBXEI-55R	
MX29LV160CTMC-55R	
MX29LV160CTMI-55R	
MX29LV160CTTC-55R	
MX29LV160CTTI-55R	
MX29LV160CTXBC-55R	
MX29LV160CTXBI-55R	
MX29LV160CTXEC-55R	
MX29LV160CTXEI-55R	

Conversion Schedule

➢New version samples available from	20th of Apr. 2005
➢New version material **starts** mass production from	10th of May 2005

Macronix Recommendations:

➢Macronix requests that you qualify the new "C" version as quickly as possible in order for us to continue supporting you without interruption

➢The (0.15um) MX29LV160**C** provides full backward compatibility to the current (0.15um) MX29LV160B

- ✓ Datasheets are available on our website (www.macronix.com)