

Renesas LSIs

M5M29GB/T320VP-80

33,554,432-BIT (4,194,304-WORD BY 8-BIT / 2,097,152-WORD BY16-BIT)
CMOS 3.3V-ONLY, BLOCK ERASE FLASH MEMORY

DESCRIPTION

The Mobile FLASH M5M29GB/T320VP are 3.3V-only high speed 33,554,432-bit CMOS boot block Flash Memories with alternating BGO (Back Ground Operation) feature. The BGO feature of the device allows Program or Erase operations to be performed in one bank while the device simultaneously allows Read operations to be performed on the other bank. This BGO feature is suitable for mobile and personal computing, and communication products. The M5M29GB/T320VP are fabricated by CMOS technology for the peripheral circuits and DINOR(Divided bit line NOR) architecture for the memory cells, and are available in 48pin TSOP(I) .

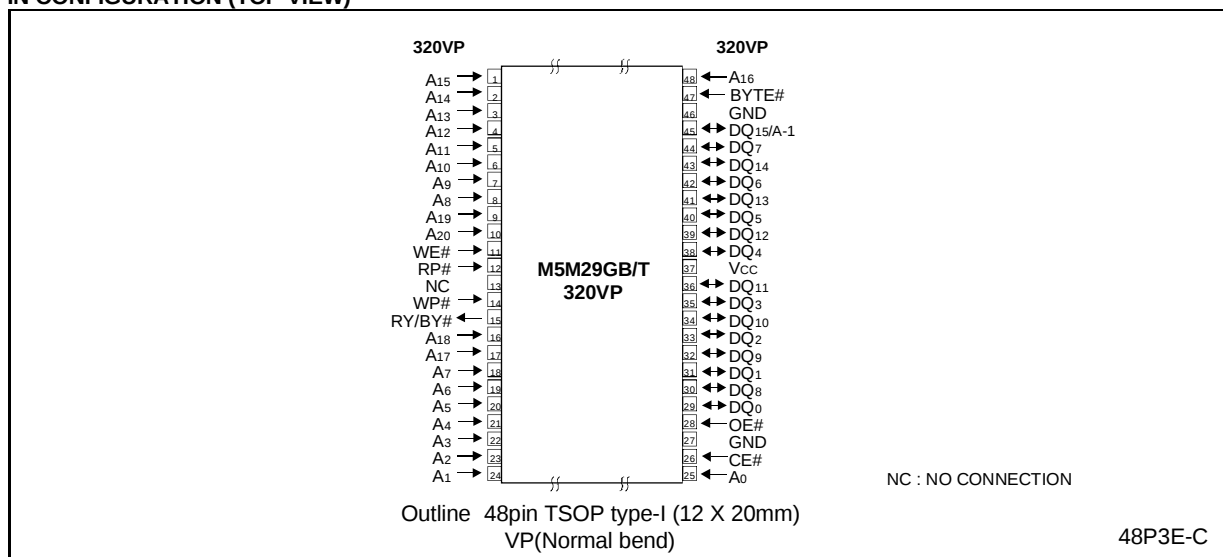
FEATURES

- Organization 2,097,152 word x 16bit
..... 4,194,304 word x 8 bit
- Supply voltage Vcc = 2.7 ~ 3.6V
- Access time 80ns (Vcc=3.0~3.6V)
..... 90ns (Vcc=2.7~3.6V)
- Power Dissipation
 - Read 72 mW (Max. at 5MHz)
 - (After Automatic Power saving) 0.33μW (typ.)
 - Program/Erase 126mW (Max.)
 - Standby 0.33μW (typ.)
- Deep power down mode 0.33μW (typ.)
 - Auto program for Bank(I) and Bank(II)
 - Program Time 4ms (typ.)
 - Program Unit
 - (Byte Program) 1word/1byte
 - (Page Program) 128word/256byte
- Auto program for Bank(III) and Bank(IV)
 - Program Time 4ms (typ.)
 - Program Unit 128word/256byte
- Auto Erase
 - Erase time 40 ms (typ.)
 - Erase Unit
 - Bank(I) Boot Block 4Kword/8Kbyte x 2
 - Parameter Block 4Kword/8Kbyte x 6
 - Main Block 32Kword/64Kbyte x 7
 - Bank(II) Main Block 32Kword/64Kbyte x 8
 - Bank(III) Main Block 32Kword/64Kbyte x 24
 - Bank(IV) Main Block 32Kword/64Kbyte x 24
- Program/Erases cycles 100Kcycles
- Boot Block
 - M5M29GB320VPBottom Boot
 - M5M29GT320VPTop Boot
- Other Functions
 - Soft Ware Command Control
 - Selective Block Lock
 - Status Register Read
 - Alternating Back Ground Program/Erase Operation
 - Between Bank(I) ,Bank(II),Bank(III) and Bank(IV)
- Package
 - 48-Lead, 12mm x 20mm TSOP (type-I)

APPLICATION

Code Strage
Digital Cellular Phone
Telecommunication
Mobile Computing Machine
PDA (Personal Digital Assistance)
Car Navigation System
Video Game Machine

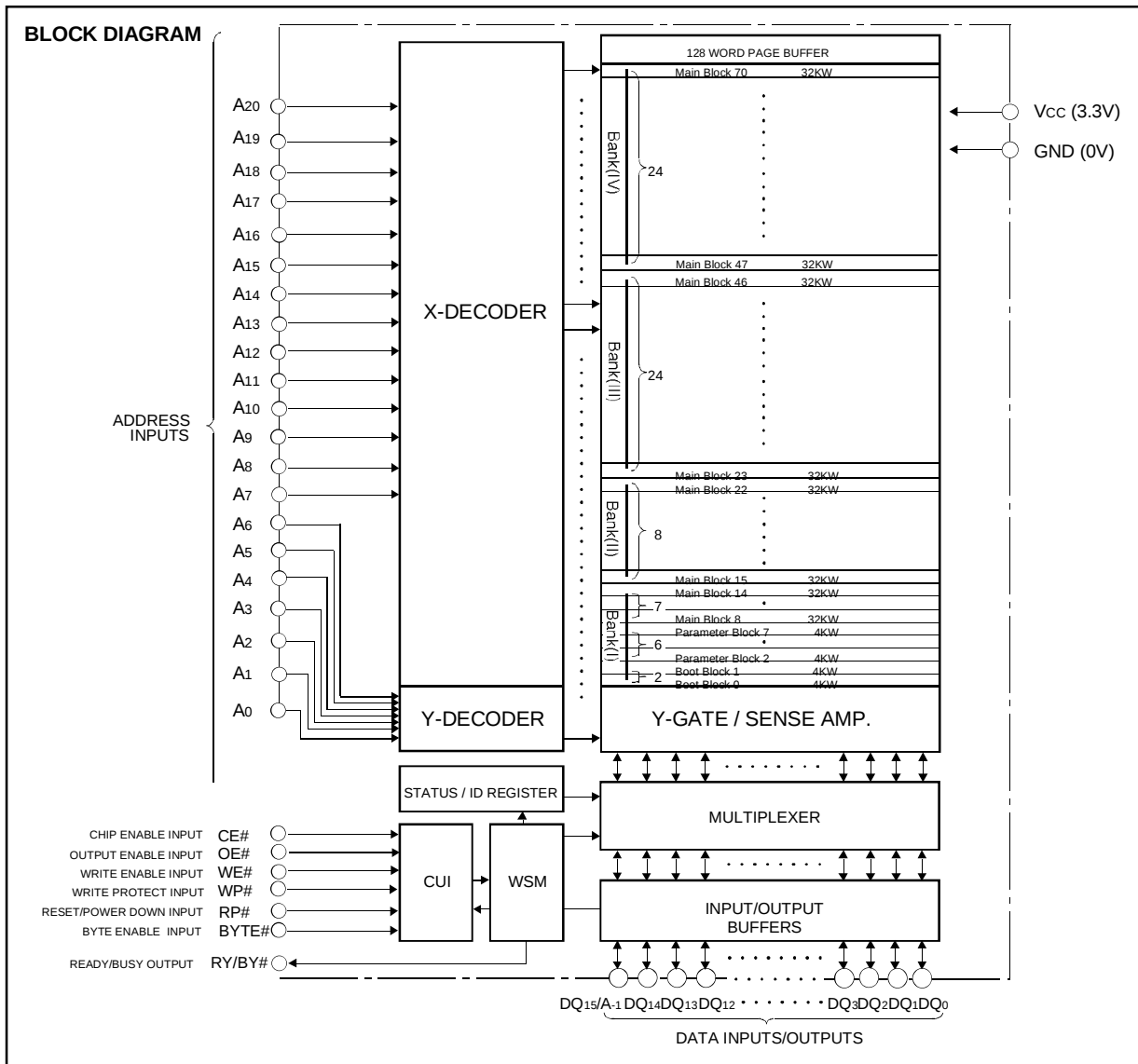
PIN CONFIGURATION (TOP VIEW)



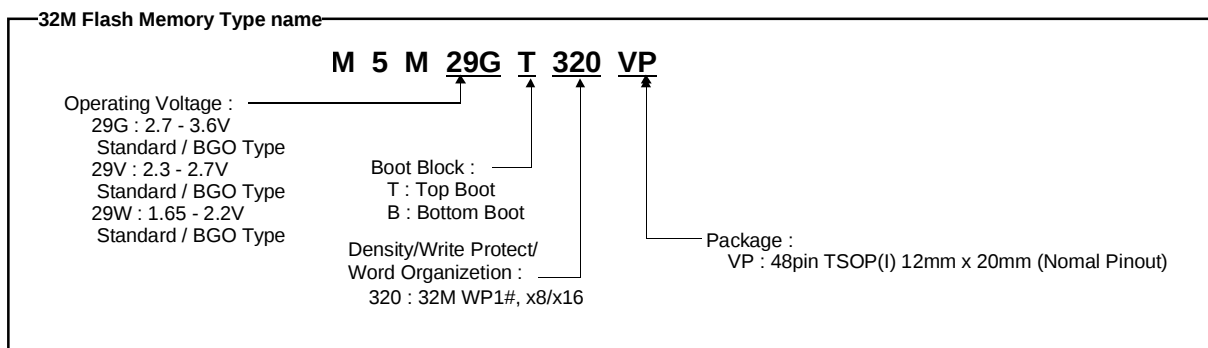
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M5M29GB/T320VP (8/16 bit version)



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CMOS 3.3V-ONLY, BLOCK ERASE FLASH MEMORY

Renesas Technology Corp.

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