



# Advanced MPF+

## 38 Series

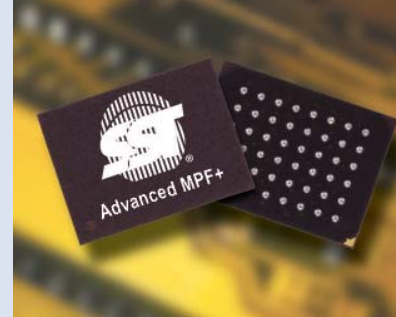
Product Brief

October 2010

### Product Description

Advanced MPF+ is a family of high-performance, parallel flash memories that feature data protection capabilities as well as fast program, erase and read times. These high-speed operations enable quick boot times and field updates, resulting in better end-user experiences. These capabilities also provide higher throughput in manufacturing lines that use in-system programming of the flash. The data protection features of the Advanced MPF+ family prevent unauthorized data changes, ensuring that content stored on the flash memory is secure.

The 38 Series Advanced MPF+ products are ideal for applications that need high performance or require integrity of data and services. Available in standard packages with compatible pinouts, this family of devices also offers all the benefits of SuperFlash® technology: high-performance, low power and reliability.



### Key Features

#### Page Read

- 25 ns/word (max) page read access time
- 4 word page read buffer

#### Write-Buffer Programming

- 2.5  $\mu$ s/word (max) programming time (full buffer)
- 16 word write buffer

#### Bypass Mode

- Reduce overhead of program and erase commands

#### Protection/Security

- 128-bit unique ID
- 256 word user programmable SEC ID area
- Individual block protection
- Irreversible block lock
- Boot-block options

#### SuperFlash Technology

- Endurance, 100,000 cycles (min)
- Greater than 100 years data retention
- Fast Sector Erase and Block Erase time: 25 ms (max)
- Low power

### Advanced MPF+ Benefits

**Page Read** – Short boot-up times and fast execute-in-place

**Write-Buffer Programming** – Fast field updates and in-system programming

**Bypass Mode** – Reduces overhead on program and erase commands

**Protection/Security** – Prevents unauthorized and accidental changes to data

**SuperFlash Technology** – High performance, superior reliability and low power



### Applications

- Set-top Boxes
- Digital TVs
- DSL/Cable Modems
- Digital Camcorders
- Multi-function Printers
- Digital Cameras
- WiFi/WiMAX
- Digital Video Recorders
- Servers
- Industrial

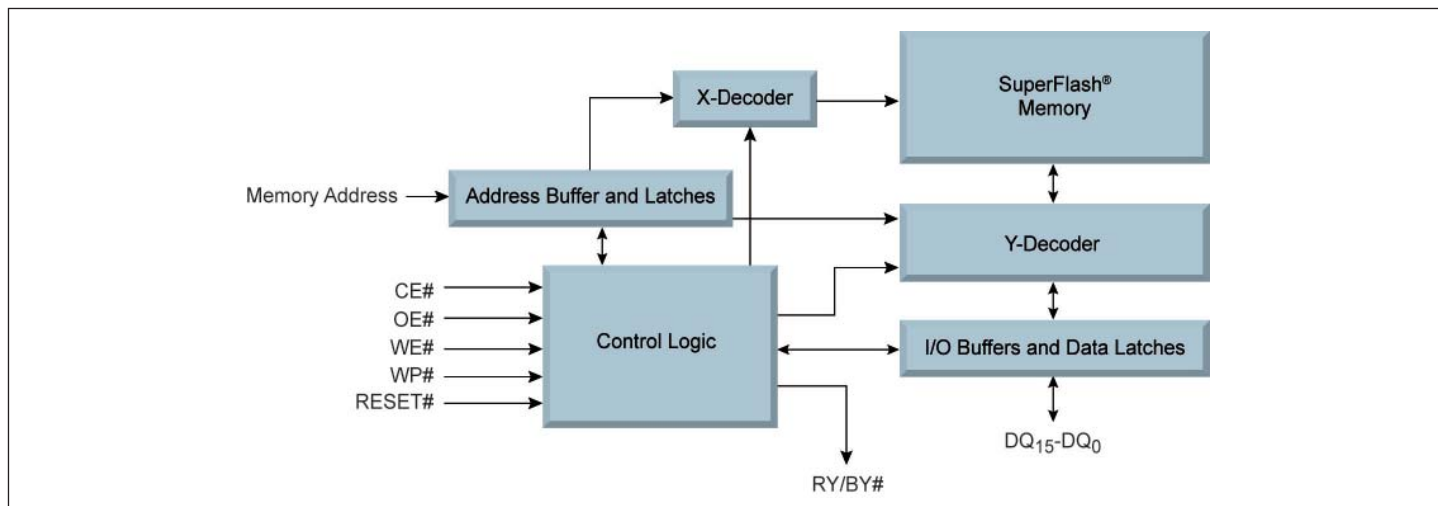
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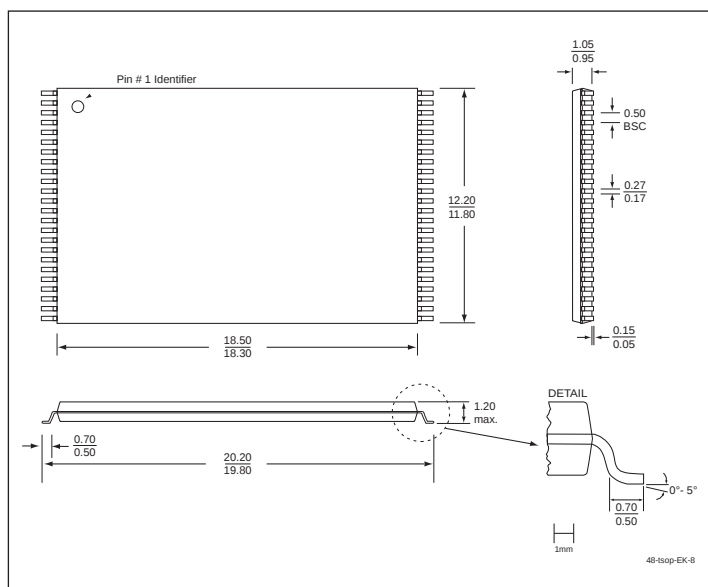
### 38 Series: Advanced MPF+

| Device      | Density | Voltage  | Access Speed (ns) | Temperature | Hardware Block Protection               | Packages          |
|-------------|---------|----------|-------------------|-------------|-----------------------------------------|-------------------|
| SST38VF6401 | 64 Mbit | 2.7-3.6V | 90                | C/I         | Bottom boot-block uniform (32 Kword)    | TSOP-48, TFBGA-48 |
| SST38VF6402 | 64 Mbit | 2.7-3.6V | 90                | C/I         | Top boot-block uniform (32 Kword)       | TSOP-48, TFBGA-48 |
| SST38VF6403 | 64 Mbit | 2.7-3.6V | 90                | C/I         | Bottom boot-block non-uniform (8 Kword) | TSOP-48, TFBGA-48 |
| SST38VF6404 | 64 Mbit | 2.7-3.6V | 90                | C/I         | Top boot-block non-uniform (8 Kword)    | TSOP-48, TFBGA-48 |

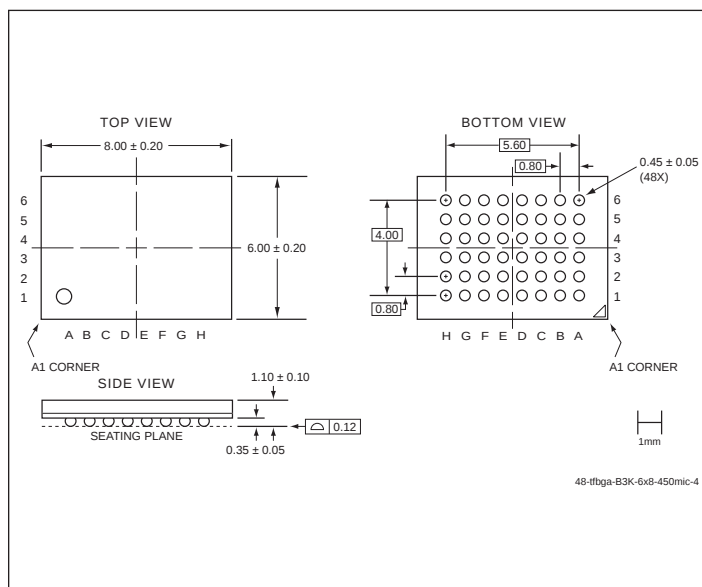
### Functional Block Diagram



### Package Diagram TSOP-48 (EK)



### Package Diagram TFBGA-48 (B3K)



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