

CACTUS TECHNOLOGIES  
Secure Digital® SDChip (SD)  
806 Series



The Cactus Technologies Secure Digital® SDChip (SD) - 806 Series is a low capacity solid-state flash memory product that complies with the Secure Digital Card Association (SDA) standard. Cactus SDChips provide up to 4GB (Class 6) of formatted storage capacity and are designed to be used in applications which require reliable, high performance solid state storage in a high shock & vibration environment.

## CACTUS SDCHIP FEATURES

- **INDUSTRY STANDARD SDA VERSION 1.1 AND 2.0 SUPPORT**
- **CARD CAPACITIES**
  - 128MB to 4GB
- **INTERFACE SUPPORTS**
  - SD Interface
  - SPI Mode
- **VOLTAGE RANGE**
  - 2.7V to 3.6V
- **TRACEABILITY ELECTRONIC CODE**
- **SOLID STATE DESIGN WITH NO MOVING PARTS**
- **INDUSTRY LEADING**
  - Data Reliability
  - Shock & Vibration
  - Operating Temp Range
  - Data Transfer Rates
- **ZERO DB NOISE**
- **4-MILLION HOUR MTBF**
- **5-YEAR WARRANTY**



### PERFORMANCE

#### Read Data Transfer Rate

up to 20MB/sec

#### Write Data Transfer Rate

up to 17MB/sec



### RELIABILITY

- Supports Wear Leveling
- Error Checking & Correction
- Less Than 1 Error in 10<sup>14</sup> Bits Read
- MTBF 4,000,000 Hours



### ENVIRONMENTAL & POWER

#### Operating Temperature Range

Standard -25°C to +85°C

Extended -45°C to +90°C



### POWER CONSUMPTION

|       |            |
|-------|------------|
|       | 3.3V ± 10% |
| Read  | 40mA       |
| Write | 75mA       |
| Sleep | 180uA      |



### SHOCK & VIBRATION

|           |                  |
|-----------|------------------|
| Shock     | 3000G            |
| Vibration | 30G peak-to-peak |

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**INDUSTRIAL GRADE SDCHIP**

|                               |                                |   |
|-------------------------------|--------------------------------|---|
| → INTERFACE                   | SD Version 1.1 and Version 2.0 |   |
| → INTERFACE TRANSFER RATE     | 25MB/sec                       |   |
| → POWER REQUIREMENT           | DC Input Voltage               | 3.3V ± 10%                                      |
|                               | Sleep                          | 180uA   |
|                               | Read                           | 40mA  |
| → ENVIRONMENTAL SPECIFICATION | Write                          | 75mA  |
|                               | Standard Temperature           | -25°C to +85°C                                  |
|                               | Extended Temperature           | -45°C to +90°C                                  |
|                               | Humidity                       | 8-95%, non-condensing                           |
|                               | Acoustic Noise                 | 0dB   |
|                               | Vibration                      | 30G peak to peak max.                           |
| → RELIABILITY AND MAINTENANCE | Shock                          | 3000G max.                                      |
|                               | Altitude                       | 100,000 feet max.                               |
|                               | Endurance                      | 2,000,000 erase cycles per block                |
| → CARD CAPACITY               | MTBF                           | 4,000,000 Hours                                 |
|                               | Data Reliability               | less than 1 Error in 10 <sup>15</sup> bits read |

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