Memory Products - Frequently Asked Questions

This application brief answer some frequently asked questions on some older, but still active, Dallas NV SRAM parts and discusses replacements for some obsolete parts. Issues covered included water washing, clarification of package options, ESD marking, part marking on the DS1213, replacements parts for the DS16xx-series NV SRAMs, and the status of the DS1258 and DS1658.

The Battery In My NV RAM Seems To Have Died, But It Has Never Been Used Before. What Could Be Wrong?

PowerCaps® and other devices that have batteries but no freshness seal option will discharge if they are stored in conductive foam.

What Is Difference Between The DIP Module, Low Profile, And PowerCap Module Versions Of The NVRAMs?

The PowerCap version is directly solderable to the board, after which the battery cap should be installed. The Low Profile requires a PLCC socket and must be installed after soldering.

What Is The Best Replacement For The DS16xx Parts And How Do I Make Them Work Like The Existing Parts?

The best replacement for the DS16xx is the DS12xx or DS13xx. The only real difference is that the DS16xx has the ability to lock out writes and/or reads to certain sections of the memory; this is also known as partitioning. This can be done with external gates by ANDing the address line for a section of the memory to the write and/or read enable and chip enable and using this new signal as the chip enable input. You will have to work out the polarities of the signals with inverters so that the chip enable signal will pass through, except when trying to write and/or read the specific memory block(s) addressed by specific higher level address lines.

There Is A Triangle Mark On My Package. Is This A Pin 1 Indicator?

The triangle in the corner of some devices is the ESD mark. It is on some devices and not on others, depending on the level of ESD sensitivity of the SRAMs that

were used in that particular module.

Can You Water-wash Smart Sockets?

These devices are not sealed and water baths will cause the battery to discharge.

Are The DS1258 And DS1658 Being Discontinued?

The DS1258 will continue to be offered, but the industrial temp version and DS1658 will be discontinued.

Why Is IOL Specified As A Minimum Value?

IOL is specified as a minimum value because of the heavy capacitive loading on the bus, fast edges required, and high speed. With 2mA minimum, only a short distance, typically, is possible for the bus.

Are DS16XX Partitionable NV SRAMs Shipped With Any Of The Memory Partitioned?

The DS16xx modules should ship from Dallas with all partition bits cleared (that is, no write-protected memory). One weak spot of this line of modules is that they are relatively sensitive to ESD. As a result, customers sometimes find partition bits set. If a customer is using a DS16xx product, they should implement the code to clear the partition bits in their system just in case some electrical event sets any of the bits.

I Ordered A DS1213B/C/D, But I Received A DS1213. Is This The Same Device?

Yes. The letter associated with the device (B/C/D) is printed on the circuit board, but not on the device number.