3458A DALLAS NON-VOLATILE RAM → FRAM

FRAM, which stands for Ferroelectric Random Access Memory.
It is a type of non-volatile memory that uses ferroelectric film as the capacitor to store data.

Non-volatile: FRAM retains data without power, making it similar to flash memory and EEPROM.
Speed: It offers fast read and write speeds, comparable to those of SRAM and DRAM.
Endurance: FRAM has a high endurance, with the ability to withstand many more read/write cycles compared to flash memory and EEPROM.
Low Power Consumption: It typically consumes less power than other non-volatile memory types, making it suitable for battery-powered and energy-efficient applications.
Data Integrity: The ferroelectric materials used in FRAM are highly reliable, ensuring data integrity over a large number of cycles.

3458A settings ram usage: Calibration correction factors, instrument settings, GPIB configuration, measurement states, display & output settings, temporary self-test & diagnostic information.

3**458A calibration ram usage:** Calibration constants, correction factors, range calibration data, environmental compensation data, more detailed self-test & diagnostic information.

3458A SETTINGS NVRAM:

NVRAM	DS1230/DS1235	28-pin DIP	256k nonvol SRAM	32kx8	
FRAM	FM18W08-SG	28-pin SOIC	256k FRAM	32kx8	

3458A CALIBRATION NVRAM:

NVRAM	DS1220	24-pin DIP	16k nonvol SRAM	2kx8	
FRAM	FM16W08-SG	28-pin SOIC	64k FRAM	8kx8	A11 & A12 low
FRAM	FM1608-120-PG	28-pin DIP	64k FRAM	8kx8	A11 & A12 low

NOTES:

Y = +/-10% VDD
AD = +/-10% VDD
AB = +/-5% VDD (5% = 4.75 to 5.25)

Y uses a battery reference to determine the power-valid trip-point during power cycles.
AB/AD uses a band gap reference.

Y has a reset timeout in low mS, AB/AD have a higher timeout of 125mS.
The "timeout" of 125 milliseconds (mS) refers to a specific feature related to how the memory transitions between active (volatile) and non-volatile states.
This means that when the power to the memory module is interrupted, there is a brief but sufficient period (125mS) during which the device manages the transition to ensure that all data is safely retained.

DS1220 has a 10 year retention
DS1230 has a 10 year retention
DS1235 has a 5 year retention
The number after the model number i.e. -200 means 200nS access time.

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