

4287A Security Features

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Assistance with test and measurements needs and information on finding a local Agilent office is available on the internet at, <http://www.agilent.com/find/assist>. If you do not have access to the internet, please contact your field engineer.

Note: In any correspondence or telephone conversation, refer to the signal generator by its model number and full serial number. With this information, the Agilent representative can determine whether your unit is still within its warranty period.

Product Declassification and Security

Model Number(s): 4287A

Product Name: RF LCR Meter

Product Family Name: N/A

This document describes instrument security features and the steps to declassify an instrument through memory sanitization or removal. For additional information [please go to www.agilent.com/find/ad](http://www.agilent.com/find/ad) and click on the security instrument tab.

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Terms and Definitions

Definitions:

Clearing – Clearing is the process of eradicating the data on media before reusing the media so that the data can no longer be retrieved using the standard interfaces on the instrument. Clearing is typically used when the instrument is to remain in an environment with an acceptable level of protection.

Sanitization – Sanitization is the process of removing or eradicating stored data so that the data cannot be recovered using any known technology. Instrument sanitization is typically required when an instrument is moved from a secure to a non-secure environment such as when it is returned to the factory for calibration. (The instrument is declassified) Agilent memory sanitization procedures are designed for customers who need to meet the requirements specified by the US Defense Security Service (DSS). These requirements are outlined in the “Clearing and Sanitization Matrix” issued by the Cognizant Security Agency (CSA) and referenced in National Industrial Security Program Operating Manual (NISPOM) DoD 5220.22M ISL 01L-1 section 8-301.

Security Erase – Refers to either the clearing or sanitization features of Agilent instruments.

Instrument declassification – A term that refers to procedures that must be undertaken before an instrument can be removed from a secure environment such as is the case when the instrument is returned for calibration. Declassification procedures will include memory sanitization and or memory removal. Agilent declassification procedures are designed to meet the requirements specified by the DSS NISPOM security document (DoD 5220.22M chapter 8)

Instrument Memory

This section contains information on the types of memory available in your instrument. It explains the size of memory, how it is used, its location, volatility, and the sanitization procedure.

Summary of instrument memory - base instrument

Memory Type and Size	Writable During Normal Operation?	Data Retained When Powered Off?	Purpose/Contents	Data Input Method	Location in Instrument and Remarks	Sanitization Procedure
Main Memory (RAM) 64 MB or 256MB	Yes	No	Windows Operating system memory	Operating system (not user)	Digital mother board	Cycle power
Video memory (RAM) 1 MB	Yes	No	Windows Operating system memory	Operating system (not user)	LCD interface card	Cycle power
Media Storage (Built-in Hard Disk) 10 GB, 20 GB, or 40 GB	Yes	Yes	Windows Operating system boot device, factory correction data, and users file including saved traces data, settings, or images.	User-saved data	As an A27 assembly in the instrument, connected to Digital mother board.	Remove
Non-volatile memory (Flash) 1MB	No	Yes	Product serial number, options, correction constants, offsets, DAC values	Adjustment program performed by Agilent factory personnel or by calibration labs	Analog interface board	N/A

Memory Clearing, Sanitization and/or Removal Procedures

This section explains how to clear, sanitize, and remove memory from you instrument for all memory that can be written to during normal operation and for which the clearing and sanitization procedure is more than trivial such as rebooting your instrument.

<Memory type>

Description and purpose	Main Memory (RAM) 64 MB (or 256 MB) for Windows Operating system memory
Size	64 MB (for Serial Prefix JP1KG, JP2KG, and MY432) 256 MB (for Serial Prefix MY433 and later)
Memory clearing	Power rebooting. This is a volatile memory.
Memory sanitization	Power rebooting. This is a volatile memory.
Memory removal	This memory can not be removed without damaging the instrument
Write protecting	N/A
Memory validation	N/A
Remarks	

Description and purpose	Video memory (RAM) 1 MB for Windows Operating system memory
Size	1 MB
Memory clearing	Power rebooting. This is a volatile memory.
Memory sanitization	Power rebooting. This is a volatile memory.
Memory removal	This memory can not be removed without damaging the instrument
Write protecting	N/A
Memory validation	N/A
Remarks	None

Description and purpose	Media Storage (Built-in Hard Disk) for Windows Operating system boot device, factory correction data, and users file including saved traces data, settings, or images.
Size	10 GB, 20 GB, or 40 GB depending on the shipping time
Memory clearing	N/A
Memory sanitization	N/A
Memory removal	The hard disk drive needs to be removed and replaced with a new or unused hard disk drive part as per the service manual. See E4991A Service Manual for more detail information on the procedure as well as the replacement parts.
Write protecting	N/A
Memory validation	N/A
Remarks	

Description and purpose	Non-volatile memory (Flash) for Product serial number, options, correction constants, offsets, DAC values
Size	1 MB
Memory clearing	Adjustment program performed by Agilent factory personnel or by calibration labs only.
Memory sanitization	Adjustment program performed by Agilent factory personnel or by calibration labs only.
Memory removal	This memory can not be removed without damaging the instrument

Write protecting	N/A
Memory validation	N/A
Remarks	

User and Remote Interface Security Measures

Remote Access Interfaces

The user is responsible for providing security for the I/O ports for remote access by controlling physical access to the I/O ports. The I/O ports must be controlled because they provide access to all user settings, user states and the display image.

The I/O ports include RS-232, GPIB and LAN.

The LAN port provides the following services, which can be selectively disabled:

http

ftp

sockets

telnet

There is also a 'ping' service, which presently cannot be selectively disabled. The concern here might be that it is possible to discover IP addresses of connected instruments in order to query their setups over the net or break into the code.