

Equipment Required:

The tests performed in this subparagraph require a Vector Signal Analyzer (VSA), or an equivalent Signal Analyzer, with the following characteristics:

A minimum capability of displaying a standard “Eye Diagram” as described in Appendix A, as well as providing a computed measurements summary which includes a computed Center Frequency, or Carrier Offset from Center Frequency, and a Modulation Frequency Deviation. Examples: HP89441A, or the HP89600 series.

For §2.4.2.1 through §2.4.2.4, configure the Vector Signal Analyzer equipment for Digital Demodulation Mode according to [Table 2-71](#).

Notes:

1. *Equipment parameter labels, menus, setup options, and units may vary from one manufacturer to another, and parameter labels are usually abbreviated. In [Table 2-71](#), text enclosed in brackets is not displayed on the HP89441A display. The bracketed text is added to clarify the functional terms and setting values for those not using the HP89441A.*
2. *The use of the word “symbol,” when directly associated with the HP89441A, means a single data bit, instead of an 8-bit byte.*

Table 2-71: Digital Demodulation Mode Configuration

VECTOR SIGNAL ANALYZER PARAMETER SETTINGS	
Parameter Item/Function	Parameter Setting Value
Preset	(press to Preset Equipment)
Instrument Mode	Digital Demodulation
Instrument Mode / demodulation setup / demod[ulation] format	[2 FSK]
Instrument Mode / demodulation setup / symbol rate	1.014667 MHz
Instrument Mode / demodulation setup / result [message] length	420 sym[bols]
Instrument Mode / demodulation setup / meas[urement] filter	root raised cosine Low Pass
Instrument Mode / demodulation setup / ref[erence] filter	raised cosine
Instrument Mode / demodulation setup / [filter] alpha	0.5
Instrument Mode / demodulation setup / normalize	off
Frequency / center frequency	978 MHz
Frequency / frequency span	[preferably] 5 MHz
Range / ch[annel] 1 [signal] range	-50 dBm
Time / result [message] length	420 sym[bols]
Time / sync search	on
Time / sync pattern	“EACDDA4E2” Hexidecimal (per §2.2.3.1.1)
Time / points/symbol	4
Average / average	on
Average / num[ber of] averages	10
Average / average type	rms expo[nential]
Trigger / trigger type	IF ch[annel]1
Trigger / IF level	0.0001 V[olts]
Trace A – Measurement Data	FSK measured time
Trace A – Data Format	part real (I)
Trace A – RefLvl/Scale / Y per div[ision]	78.125 kHz
Trace C – Measurement Data	FSK measured time
Trace C – Data Format	eye diagram I
Trace C – Data Format / more format setup / eye length	1
Trace C – RefLvl/Scale / Y per div[ision]	70 kHz
Trace D – Measurement Data	symbol table/error summary