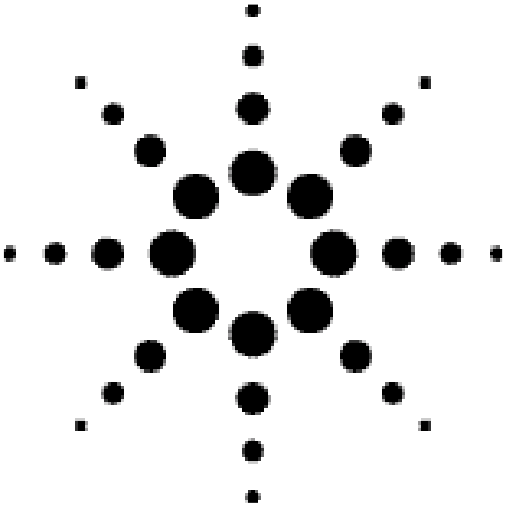

E4441A DVB QAM Coder (Discontinued - Support Information Only)

Data Sheet

Modulation
Modulation Types: 16, 32, 64, 128 and 256 QAM
Symbol Mapping: DVB compliant, user defined
Error Vector Magnitude: <1% typical[1]

[1]Valid when using internal clock with all impairments off and root raised cosine filter as supplied. Receive filter assumed to be a perfect match.

Channel Characteristics
Channel Filter Type: Root raised cosine, raised cosine, user defined.
Channel Filter Alpha: 0.15, 0.13
Symbol Rate (selectable)

Nominal Channel Bandwidth	Internal (Mbaud)	External (Mbaud)
8 MHz	6.890	5.2 to 7.0[3]
	6.872[2]	5.2 to 7.0[3]
	6.875[2]	5.2 to 7.0[3]
	6.900[2]	5.2 to 7.0[3]
6 MHz	5.274[2]	5.2 to 7.0[3]
4 MHz	3.445	2.6 to 3.5[3]
2 MHz	1.7225	1.3 to 1.75[3]

[2]Optional, see ordering information.
[3]Fully Variable.

Data Source
Data Source Type
Internal 223 - 1 PRBS
Internal Packetized 223 - 1 PRBS
Internal MPEG-2 Null Packets
Internal Arbitary Fixed Symbol
External 188 byte MPEG-2 Packet Input
External 204 byte MPEG-2 Packet Input

Agilent Technologies

Channel Coding
Channel Coding: As per ETS 300 429
Channel Coding Control
Randomization On/Off
Sync Inversion On/Off
Reed-Solomon Encoding On/Off
Byte Interleaving On/Off
Differential Encoding On/Off

Impairments
Gaussian Noise: On/off
Eb/No Range: +3 to +30 dB for 64 QAM[4]
Eb/No Accuracy: ±0.12 dB4
Crest Factor: >15 dB

Spurious Tone: On/off
Frequency Range: ±(1 kHz to 5.75 MHz)
Frequency Accuracy: ±0.1%
S/I Range: -6 to +45 dB
S/I Accuracy: ±0.3 dB to 3.5 MHz

Carrier Leakage: On/off
Magnitude Range: -80 to -10 dB wrt rms output
Magnitude Accuracy: ±0.2 dB
Angle Range: -180 to +180° C
Angle Accuracy: ±1 ° C to -40 dB wrt signal

I/Q Magnitude Imbalance: On/off
Range: ±2 dB
Accuracy: ±0.1 dB

I/Q Quadrature Imbalance[5]: On/off
Range: 80to 100 ° C typical

Inverted Spectrum: On/off

[4]Excluding residual EVM.
[5]Function of 8780A or 8782B vector signal generator. Not available with ESG-D digital signal generators.

I & Q Outputs
Level: 0.28 V rms (nominal) into 50 ohms[6]
Residual dc Offset: <300 µV
Connectors: BNC

[6]With 223 - 1 PRBS data source selected.

Symbol Clock Output
Type: TTL compatible
Connector: BNC

MPEG-2 Input[7]

Type: DVB-PI as per DVB document A010 Oct 1995
Connector: 25-pin sub-miniature D-connector

[7]Includes external clock input which can be used to clock either internal or external data.

Control
Local Control: Windows®-based graphical user interface controls ESG-D digital signal generator or 8780A/ 8782B vector signal generators and E4441A DVB QAM coder
Remote Control: -IB interface, SCPI control

General Specifications
Dimensions (mm): 125 H, 420 W, 390 D
Weight: 11 kg
Operating Temperature: 5 to 40 ° C
Storage Temperature: -40 to +70 ° C
Humidity: 80% relative humidity to 40 ° C
Power: 125 VA
EMC: CISPR11 Level A; EN55011, 1991. EN55082-1; 1992
Safety: IE950:1991