VIAVI
CellAdvisor™

JD785A Base Station Analyzer

VIAVI Solutions

Spectrum Analyzer (standard)

Frequency	
Frequency range	9 kHz to 8 GHz
Frequency accuracy	± (Readout frequency x Internal 10MHz Frequency reference accuracy + RBW centering + 2 Hz + 0.5 x Horizontal resolution)

Internal 10 MHz Frequency Reference	
Accuracy	±0.05 ppm + aging (0 to 50°C) ±0.01 ppm, after 15 minutes of GPS Lock (0 to 50°C)
Aging	±0.5 ppm/year

Frequency Span	
Range	0 Hz (zero span) 10 Hz to 8 GHz
Resolution	1 Hz

Resolution Bandwidth (RBW)		
−3 dB bandwidth	1 Hz to 3 MHz	1-3-10 sequence
Accuracy	±10% (nominal)	

Video Bandwidth (VBW)		
−3 dB bandwidth	1 Hz to 3 MHz	1-3-10 sequence
Accuracy	±10% (nominal)	

Single Sideband (SSB) Phase Noise	
Fc 1 GHz, RBW 10 kHz, VBW 1 kHz, RMS detector	
Carrier Offset: 30 kHz 100 kHz 1 MHz	−100 dBc/Hz (−102 dBc/Hz, typical) −105 dBc/Hz (−112 dBc/Hz, typical) −115 dBc/Hz (−120 dBc/Hz, typical)

Measurement Range	
	DANL to +25 dBm
Input attenuator range	0 to 55 dB, 5 dB steps

Maximum Input Level	
Average continuous power	+25 dBm
DC voltage	±50 V DC

*All specifications are subject to change without notice.
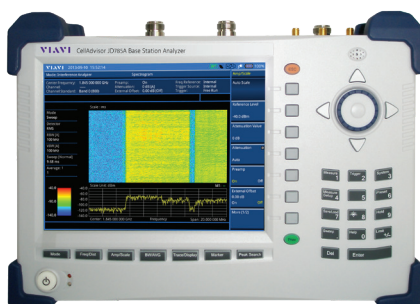
Spectrum Analyzer: 9 kHz to 8 GHz

Cable and Antenna Analyzer: 5 MHz to 6 GHz

Power Meter: 10 MHz to 8 GHz

Specification* Conditions

The JD785A specifications apply under these conditions:

- The instrument has been turned on for at least 15 minutes
- The instrument is operating within a valid calibration period
- Data with no tolerance are considered typical values
- Cable and antenna measurements apply after calibration to the OSL standard
- Typical and nominal values are defined as
  - Typical: expected performance of the instrument operating at 20 to 30°C after being at this temperature for 15 minutes
  - Nominal: a general, descriptive term or parameter

Displayed Average Noise Level (DANL)

1 Hz RBW, 1 Hz VBW, 50 Ω termination, 0 dB attenuation, RMS detector

Preamplifier Off	
10 MHz to 2.4 GHz	−140 dBm (−145 dBm, typical)
>2.4 GHz to 6 GHz	−136 dBm (−140 dBm, typical)
>6 GHz to 7 GHz	−134 dBm (−138 dBm, typical)
>7 GHz to 8 GHz	−128 dBm (−134 dBm, typical)
Preamplifier On	
10 MHz to 3 GHz	−160 dBm (−165 dBm, typical)
>3 GHz to 5 GHz	−158 dBm (−162 dBm, typical)
>5 GHz to 7 GHz	−155 dBm (−158 dBm, typical)
>7 GHz to 8 GHz	−150 dBm (−155 dBm, typical)

Display Range

Log scale and units (10 divisions displayed)	1 to 20 dB/division in 1 dB steps dBm, dBV, dBmV, dBμV
Linear scale and units (10 divisions displayed)	V, mV, mW, W
Detectors	Normal, positive peak, sample, negative peak, RMS
Number of traces	6
Trace functions	Clear/write, maximum hold, minimum hold, capture, load view on/off

Total Absolute Amplitude Accuracy

Preamplifier off, power level >−50 dBm, auto-coupled

1 MHz to 8 GHz	±1.3 dB (±0.5 dB typical)	20 to 30°C after 60-minute warm up
	Add ±1.0 dB	−10 to 55°C after 60-minute warm up

Reference Level

Setting range	−120 to +100 dBm
Setting Resolution Log scale Linear scale	0.1 dB 1% of reference level

Markers

Marker types	Normal, delta, delta pair, noise, frequency count marker
Number of markers	6
Marker functions	Peak, next peak, peak left, peak right, minimum search marker to center/start/stop

RF Input VSWR

1 MHz to 8 GHz	1.5:1 (typical)	Atten >20 dB

Second Harmonic Distortion

Mixer level	−25 dBm
50 MHz to 2.6 GHz	<−65 dBc (typical)
>2.6 GHz to 8 GHz	<−70 dBc (typical)

Third-Order Inter-Modulation (third-order intercept: TOI)

200 MHz to 3 GHz	+10 dBm (typical)
>3 GHz to 8 GHz	+12 dBm (typical)

Spurious

Inherent residual response	
Input terminated, 0 dB attenuation, preamplifier off, RBW at 10 kHz, Sweep mode	−90 dBm (nominal)
Exceptions	−85 dBm at 164.1 MHz, 2.57264, 3.2, and 4.5 GHz −80 dBm at 4.8/7.8 GHz −75 dBm at 85.6 MHz and 428 MHz −70 dBm at 256.8 MHz and 770.4 MHz
Input-related spurious	<−70 dBc (nominal)

Dynamic Range

2/3 (TOI-DANL) in 1 Hz RBW	>104 dB	at 2 GHz

Sweep Time

Range	0.4 ms to 1000 s 24 μs to 200 s	Span = 0 Hz (zero span)
Accuracy	±2%	Span = 0 Hz (zero span)
Mode	Continuous, single	

Gated Sweep

Trigger source	External, video, and GPS
Gate length	1 μs to 100 ms
Gate delay	0 to 100 ms

Trigger

Trigger source	Free run, video, external
Trigger Delay Range Resolution	0 to 200 s 6 μs

Measurements*

Channel power
Occupied bandwidth
Spectrum emission mask
Adjacent channel power
Spurious emissions
Field strength
AM/FM audio demodulation
Route map
PIM detection
Dual spectrum

* High-Power CW Signal Generator (Option 003) can be set up simultaneously.

Cable and Antenna Analyzer (standard)

Frequency	
Range	5 MHz to 6 GHz
Resolution	10 kHz
Accuracy	±1 ppm

Data Points
126, 251, 501, 1001, 2001

Measurement Speed	
Reflection/DTF	1.0 ms/point (typical)

Measurement Accuracy	
Corrected directivity	40 dB
Reflection uncertainty	±(0.3 + |20log (1+10-EP/20)|) (typical) EP = directivity − measured return loss

Output Power	
High	5 MHz to 5.5 GHz, 0 dBm (typical) 5.5 GHz to 6 GHz, −5 dBm (typical)
Low	5 MHz to 6 GHz, −30 dBm (typical)

Dynamic Range	
Reflection	60 dB

Maximum Input Level	
Average continuous power	+25 dBm (nominal)
DC voltage	±50 V DC
Interference Immunity On channel	+17 dBm at >1.4 MHz from carrier frequency (nominal)
On frequency	0 dBm within ±10 kHz from the carrier frequency (nominal)

Measurements	
Reflection (VSWR) VSWR range Return loss range Resolution	1 to 65 0 to 60 dB 0.01
Distance to Fault (DTF) Vertical VSWR range Vertical return loss range Vertical resolution Horizontal range	1 to 65 1 to 60 dB 0.01 0 to (# of data points − 1) x horizontal resolution Maximum = 1500 m (4921 ft)
Horizontal resolution	(1.5 x 108) x (V_p)/delta V_p = propagation velocity Delta = stop freq − start freq (Hz)
Cable Loss (1-Port) Range Resolution	0 to 30 dB 0.01 dB
1-Port Phase Range Resolution	−180 to +180° 0.01°
Smith Chart Resolution	0.01

RF Power Meter (standard)

General Parameters	
Display range	100 to +100 dBm
Offset range	0 to 60 dB
Resolution	0.01 dB or 0.1 x W (x = m, u, p)

Internal RF Power Sensor	
Frequency range	10 MHz to 8 GHz
Span	1 kHz to 100 MHz
Dynamic range	−120 to +25 dBm
Maximum power	+25 dBm
Accuracy	Same as spectrum analyzer

External RF Power Sensors

Directional	JD731B	JD733A
Frequency range	300 MHz to 3.8 GHz	150 MHz to 3.5 GHz
Dynamic range	0.15 to 150 W (average) 4 to 400 W (peak)	0.1 to 50 W (average) 0.1 to 50 W (peak)
Connector type	Type-N female on both ends	
Measurement type	Forward/reverse average power, forward peak power, VSWR	
Accuracy	±(4% of reading + 0.05 W)[1,2]	

Terminating	JD732B	JD734B	JD736B
Frequency range	20 MHz to 3.8 GHz		
Dynamic range	−30 to +20 dBm		
Connector type	Type-N male		
Measurement type	Average	Peak	Average and peak
Accuracy	±7%[1]		

Optical Power Meter (Standard)

Optical Power Meter	
Display range	−100 to +100 dBm
Offset range	0 to 60 dB
Resolution	0.01 dB or 0.1 mW

External Optical Power Sensors

	MP-60A	MP-80A
Wavelength range	780 to 1650 nm	
Max permitted input level	+10 dBm	+23 dBm
Connector type	Type-N female on both ends	
Connector input	Universal 2.5 and 1.25 mm	
Accuracy	±5%	

1. CW condition at 25°C ±10°C
2. Forward power

2-Port Transmission Measurements (Option 001)

Frequency	
Frequency range	5 MHz to 6 GHz
Frequency resolution	10 kHz

Output Power	
High	5 MHz to 5.5 GHz, 0 dBm (typical) 5.5 GHz to 6 GHz, −5 dBm (typical)
Low	5 MHz to 6 GHz, −30 dBm (typical)

Measurement Speed	
Vector	1.6 ms/point (typical)
Scalar	3.4 ms/point (typical)

Dynamic Range		
Vector	5 MHz to 3 GHz, 80 dB >3 GHz to 6 GHz, 75 dB	at average 5 at average 5
Scalar	5 MHz to 4.5 GHz, >110 dB 4.5 GHz to 6 GHz, >105 dB	

Measurements	
Insertion Loss/Gain Range Resolution	−120 to 100 dB 0.01 dB
2-Port Phase Range Resolution	−180 to +180° 0.01°

Bias-Tee (Option 002)

Voltage	
Voltage range	+12 to +32 V
Voltage resolution	0.1 V

Power	
8 W Max	

CW Signal Generator (Option 003) / High Power CW Signal Generator (Option 007)

Frequency	
Frequency range	5 MHz to 6 GHz
Frequency reference	<±1 ppm maximum
Frequency resolution	10 kHz

Output Power	
Range (Option 003)	5 MHz to 5.5 GHz, −60 to 0 dBm >5.5 to 6 GHz, −60 to −5 dBm
Range (Option 003 & 007)	5 MHz to 3.5 GHz, −60 to +10 dBm 3.5 to 5.5 GHz, −60 to +5 dBm >5.5 to 6 GHz, −60 to −5 dBm
Step	1 dB
Accuracy	±1.5 dB (20 to 30°C)

E1 Analyzer (Option 004)

Electrical Interface	
Connectors RX/TX	RJ45 (120 Ω)
Output	0 dB, −6 dB (ITU-T Rec.G.703)
Line code	AMI, HDB3
Impedance	Term, monitor 120 Ω, bridge >1000 Ω

Input	
Term/bridge/monitor	0 to −20 dB Transmitter and Receiver
Framing	PCM-30, PCM-30 with CRC PCM-31, PCM-31 with CRC
Channel formats	Full E1
Test pattern	1-4, 1-8, ALL1, ALL0, 0101

Additional Functions	
Reference clock	Received or internal
Event log capability	Internal memory
Error insertion	1, 1E−3, 1E−4, 1E−5
Error rate count	CRC, Frame, Code, Bit

Measurements	
Monitoring	*BERT*

Indicators
  E1 signal
  Frame sync
  Pattern sync
  Code sync
  FAS RAI
  AIS
  HDB3
  Bit error[2]
	Indicators
	  E1 signal
	  Frame sync
	  Pattern sync
	  Code sync
	  FAS RAI
	  AIS
	  HDB3
	  Bit error[2]

Error Count/Rate	*Error Count/Rate*
Frame error Code error Bit error[2]	CRC error[1] Frame error Code error Bit error[2]
Alarm Count	*Alarm Count*
FAS AIS	FAS AIS
Loss Count	*Loss Count*
Frame sync	
Pattern sync	Frame sync
Pattern sync	

1. When CRC-4 is set to On.
2. When PCM31 is set to On.

T1 Analyzer (Option 005)

Electrical Interface	
Connectors RX/TX	RJ45 (120 Ω)
Output	0 dB, −7.5 dB, −15 dB
Line code	AMI, B8ZS
Impedance	100 Ω or 1000 Ω (bridge)

Input	
Term/bridge/monitor	0 to −20 dB

Transmitter and Receiver	
Framing	D4, ESF
Channel formats	Full T1
Test pattern	1−8, 1−16, ALL1, ALL0, 0101 2E−24, QRSS, 2E−23, 2E−15, 2E−23 inverse, 2E−15 inverse

Additional Functions	
Reference clock	Received or internal
Event log capability	Internal memory
Error insertion	1, 1E−3, 1E−4, 1E−5
Alarm insertion	AIS, RAI
Error/alarm count	Bit RAI, AIS, BPV, BER
Loopback modes	Self, CSU, NIU, line, network

Measurements	
Monitoring/BERT/Loop Test	***RX Signal Level***

Indicators
   T1 signal
   Frame sync
   Pattern sync
   B8ZS
   Red alarm
   RAI (yellow alarm)
   AIS (blue alarm)
   BPV indicator
	Indicators
	   T1 signal
	   Frame sync
	   Pattern sync
	   B8ZS
	   Red alarm
	   RAI (yellow alarm)
	   AIS (blue alarm)
	   BPV indicator

Loss Count	V_{p-p}
Signal loss	V_{p-p} Max
Frame sync loss	V_{p-p} Min
Patten sync loss	dBd_{sx}
Alarm Count	
RAI	
AIS	
BPV	
Error Rate	
Bit error rate	
Bit error count	

GPS Receiver and Antenna (Option 010)

GPS Indicator		
Latitude, longitude, altitude		

High-Frequency Accuracy		
Spectrum, interference, and signal analyzer		
GPS lock	±10 ppb	
Hold over (for 3 days)	±50 ppb (0 to 50°C)	15 minutes after satellite locked
Connector	SMA, female	

Interference Analyzer (Option 011)

Measurements	
Spectrum analyzer	Sound indicator, AM/FM audio demodulation, interference ID, spectrum recorder
Spectrogram	Collect up to 72 hours of data
RSSI	Collect up to 72 hours of data
Interference finder	
Spectrum replayer	
Dual spectrogram	

Channel Scanner (Option 012)

Frequency Range	
	1 MHz to 8 GHz

Measurement Range	
	−110 to +25 dBm

Measurements	
Channel scanner	1 to 20 channels
Frequency scanner	1 to 20 frequencies
Custom scanner	1 to 20 channels or frequencies

Bluetooth® Connectivity (Option 013)

Personal Area Network (PAN)	
File Transfer Profile (FTP)	

Wi-Fi Connectivity (Option 016)

Interface type	USB LAN Card
Interface standard	IEEE 802.11 b/g/n
Chipset	RealTek, Ralink
USB wireless mode	Infrastructure mode
Web-based remote control	Internet Explorer, Chrome, Safari
Internet protocol version	IPv4, IPv6

GSM/GPRS/EDGE Signal Analyzer (Options 022 and 042)

General Parameters		
Frequency range	450 MHz to 500 MHz 820 MHz to 965 MHz 1.705 GHz to 1.995 GHz	
Input signal range	−40 to +20 dBm	
Burst power	±1.0 dB	
Frequency error	±10 Hz + reference-frequency accuracy	99% confidence level
GMSK modulation quality		
Phase RMS Accuracy Residual error Phase peak accuracy 8 PSK modulation quality	±1.0 degrees 0.7 degrees (typical) ±2.0 degrees	(0 < Phase RMS < 8) (0 < Phase peak < 30)
EVM Accuracy Residual error RF power vs. time	±1.5% 2.5% ±0.25 symbol	(2% < EVM < 8%)

Measurements					
Option 022					
Channel Power	Reference power	Frame average power	I/Q origin offset*	Occupied bandwidth	EVM RMS*
Channel power	Peak level at defined range	Burst power (Slot 0 to 7)	TSC	Spectrum emission mask	EVM Peak*
Spectral density	*Spurious Emissions*	TSC (Slot 0 to 7)	BSIC	Spurious emission mask	I/Q origin offset
Peak to average power	Peak frequency at defined range	*Constellation*	C/I*	Burst power	C/I*
Occupied Bandwidth	Peak level at defined range	Burst power	EVM RMS*	PvsT − Mask	
Occupied bandwidth	*Power vs. Time (slot)*	Modulation type	EVM Peak*	Frame average power	
Integrated power	Burst power	Frequency error	EVM 95th*	Frequency error	
Occupied power	Max/min point	Phase error RMS	*Auto Measure*	Phase error RMS	
Spectrum Emission mask	*Power vs. Time (frame)*	Phase error peak	Channel power	Phase error peak	

Option 042					
Channel/Frequency Scanner	Group (traffic, control)	(10 strongest)	*Modulation Analyzer*	Frame average power	Burst power
Channels or frequencies	BSIC (NCC, BCC)	Frame average power	Frame avg power trend	BSIC, frame no. and time	Modulation type
Absolute power	*Multipath Profile*	SNR, delay	C/I trend	C/I, frequency error	

Longitude, latitude, and satellite in all screens

* Measurements performed for 8PSK modulation signals (edge) only.

WCDMA/HSPA+ Signal Analyzer (Options 023 and 043)

General Parameters	
Frequency range	Band 1 to 14, 19 to 22, 25, 26
Input signal range	−40 to +20 dBm
RF channel power accuracy	±1.0 dB, ±0.7 dB (typical)
Occupied bandwidth accuracy	±100 kHz
Adjacent channel leakage ratio (ACLR)	<−56 dB, ±0.7 dB at 5 MHz offset, <−58 dB, ±0.8 dB at 10 MHz offset
WCDMA modulation	QPSK
HSPA+ modulations	QPSK, 16 QAM, 64 QAM

Frequency error	±10 Hz + reference-frequency accuracy	99% confidence level
EVM accuracy	±2.0%	2% ≤ EVM ≤ 20%
Residual EVM	2.5% (typical)	
Code domain power	±0.5 dB relative power ±1.5 dB absolute power	Code channel power >−25 dB Code channel power >−25 dB
CPICH power accuracy	±0.8 dB (typical)	

Measurements					
		Option 023			
Channel Power	Abs power at defined range	Peak CDE	Scramble code	Reference power	Frequency error
Channel power	Rel power at defined range	Frequency error	***Relative Code Domain Error***	Code utilization	EVM
Spectral density	*Multi-ACLR*	Frequency error	Abs/Rel code power	Code, spreading factor	Peak CDE
Peak to average power	Lowest reference power	Time offset	Code error	Allocation (channel type)	Carrier feed-through
Occupied Bandwidth	Highest reference power	Carrier feed-through	Individual code EVM, RCDE, and its constellation	EVM, modulation type	CPICH absolute power
Occupied bandwidth	Abs power at defined range	Scramble code	Channel power	Relative, absolute power	CPICH relative power
Integrated power	Rel power at defined range	*Code Domain Power*	Power bar graph (Abs/Rel/Delta power) CPICH, P-CCPCH, S-CCPCH, PICH, P-SCH, S-SCH	*Auto Measure*	Max inactive power
Occupied power	*Spurious Emissions*	Abs/Rel code power	Avg RCDE QPSK, 16 QAM, 64 QAM	Channel power	Scramble code
Spectrum Emission Mask	Peak frequency at defined range	Individual code EVM and its constellation	**Codogram**	Occupied bandwidth	*Power Statistics CCDF*
Reference power	Peak level at defined range	Channel power	Code utilization	Spectrum emission mask	
Peak level at defined range	**Constellation**	Power bar graph (Abs/Rel/Delta power) CPICH, P-CCPCH, S-CCPCH PICH, P-SCH, S-SCH	**RCSI**	ACLR	
ACLR	CPICH power	Max, avg active power	CPICH, P-CCPCH, S-CCPCH, PICH, P-SCH, S-SCH	Multi-ACLR	
Reference power	Rho, EVM	Max, avg inactive power	**CDP Table**	Spurious emission mask	

Measurements

Option 043					
Channel Scanner (up to 6)	Scramble code	Abs/Rel code power	Max, avg inactive power	Amplifier capacity	CPICH power, Ec/Io
Frequencies or channels	Ec/Io, CPICH power, delay	Individual code EVM	Frequency error	Peak amplifier capacity	
Channel power, scramble code, CPICH power, Ec/Io	**Multipath Profile**	Channel power	Time offset, Rho	Average amplifier capacity	
Scramble Scanner (up to 6)	Channel, multipath power	Scramble code	Carrier feed-through	Code, peak utilization	
Channel power	Ec/Io, delay	CPICH, P-CCPCH, S-CCPCH, PICH, P-SCH, S-SCH	(Composite) EVM	Average utilization	
CPICH dominance	*Code Domain Power*	Max, avg active power	CPICH EVM, P-CCPCH EVM	*Route Map*	

Longitude, latitude, and satellite in all screens

cdmaOne/cdma2000® Signal Analyzer (Options 020 and 040)

General Parameters		
Frequency range	Band 0 to 10	
Input signal level	−40 to +20 dBm	
RF channel power accuracy	±1.0 dB (typical)	
CDMA compatibility	cdmaOne and cdma2000	
Frequency error	±10 Hz + ref freq accuracy	99% confidence level
Rho accuracy	±0.005	0.9 < Rho < 1.0
Residual Rho	>0.995 (typical)	
PN offset	1 x 64 chips	
Code domain power	±0.5 dB relative power ±1.5 dB absolute power	Code channel power >−25 dB Code channel power >−25 dB
Pilot power accuracy	±1.0 dB (typical)	
Time offset	±1.0 µs, ±0.5 µs (typical)	External trigger

Measurements					

Option 020					
Channel Power	**ACPR**	Peak level at defined range	Channel power	Reference power	Rho
Channel power	Reference power	**Constellation**	Power bar graph (Abs/Rel)	Code utilization	Frequency error
Spectral density	Abs power at defined range	Pilot power	Pilot, Paging, Sync, Q-Paging	Code, spreading factor	Time offset
Peak to average power	Rel power at defined range	Rho	Max, avg active power	Allocation (channel type)	Carrier feed-through
Occupied Bandwidth	**Multi-ACPR**	EVM	Max, avg inactive power	Relative, absolute power	Pilot power
Occupied bandwidth	Lowest reference power	Frequency error	PN offset	**Auto Measure**	Max inactive power
Integrated power	Highest reference power	Time offset	**Codogram**	Channel power	PN offset
Occupied power	Abs power at defined range	Carrier feed-through	Code utilization	Occupied bandwidth	**Power Statistics CCDF**
Spectrum Emission Mask	Rel power at defined range	PN offset	**RCSI**	Spectrum emission mask	
Reference power	**Spurious Emissions**	**Code Domain Power**	Pilot, Paging, Sync, Q-Paging	ACPR	
Peak level at defined range	Peak freq at defined range	Abs/Rel code power	**CDP Table**	Multi-ACPR	

Option 040					
Channel Scanner (up to 6)	Pilot dominance	Ec/Io, delay	Max, avg active power	Peak amplifier capacity	Ec/Io
Frequencies or channels	PN offset	**Code Domain Power**	Max, avg inactive power	Average amplifier capacity	
Channel power, PN offset	Ec/Io, pilot power, delay	Abs/Rel code power	Frequency error	Code utilization	
Pilot power, Ec/Io	**Multipath Profile**	Channel power	Time offset, Rho, EVM	Average utilization	
PN Scanner (up to 6)	Channel power	PN offset	Carrier feed-through	*Route Map*	
Channel power	Multipath power	Pilot, Paging, Sync, Q-Paging power	Amplifier capacity	Pilot power	

Longitude, latitude, and satellite in all screens

EV-DO Signal Analyzer (Options 021 and 041)

General Parameters

Frequency range	Band 0 to 10	
Input signal level	−40 to +20 dBm	
RF channel power accuracy	±1.0 dB (typical)	
EV-DO compatibility	Rev 0, Rev A and Rev B	
Frequency error	±10 Hz + ref freq accuracy	99% confidence level
Rho accuracy	±0.005	0.9 < Rho < 1.0
Residual Rho	>0.995 (typical)	
PN offset	1 x 64 chips	
Code domain power	±0.5 dB relative power ±1.5 dB absolute power	Code channel power >−25 dB Code channel power >−25 dB
Pilot power accuracy	±1.0 dB (typical)	
Time offset	±1.0 µs, ±0.5 µs (typical)	External trigger

Measurements

Option 021

Channel Power	Multi-ACPR	Rho, EVM, Peak CDE	Code Domain Power (pilot and MAC 64/128)	MAC Codogram	ACPR
Channel power	Lowest reference power	Frequency error	Pilot/MAC channel power	Code utilization	Pilot, MAC, data power
Spectral density	Highest reference power	Time offset	Slot average power	RCSI	On/off ratio
Peak to average power	Abs power at defined range	Carrier feed-through	Max active I/Q power	Slot, pilot, MAC, data	PvsT mask (idle slot) or PvsT mask (active slot)
Occupied Bandwidth	Rel power at defined range	PN offset	Avg active I/Q power	MAC CDP table	Frequency error
Occupied bandwidth	Spurious Emissions	Pilot, MAC, data power	Max inactive I/Q power	Reference power	Time offset
Integrated power	Peak frequency at defined range	Pilot, MAC, data EVM	Avg inactive I/Q power	Code utilization	Carrier feed-through
Occupied power	Peak level at defined range	Constellation (pilot, MAC 64/128, and data)	PN offset	Code, spreading factor	Pilot, MAC, data Rho
Spectrum Emission Mask	Power vs. Time (idle and active slot)	Channel power	Code Domain Power (data)	Allocation (channel type)	Max inactive I/Q power
Reference power	Slot average power	Rho, EVM, peak CDE	Data channel power	Relative, absolute power	PN offset
Peak level at defined range	On/off ratio	Frequency error	Slot average power	Auto Measure	Power Statistics CCDF
ACPR	Idle activity	Time offset	Max, avg active power	Channel power	
Reference power	Pilot, MAC, data power	Carrier feed-through	Max, avg inactive power	Occupied bandwidth	
Abs power at defined range	Constellation (composite 64/128)	PN offset	PN offset	Spectrum emission mask	

Option 041

Channel scanner (up to 6)	Channel power	Channel power	PN offset	Time offset	Peak utilization
Frequencies or channels	Pilot dominance	Multipath power	Pilot, MAC, data power	Carrier feed-through	Average utilization
PN offset	PN offset	Ec/Io, delay	Pilot, MAC, data Rho	Max active I/Q power	Route Map
Pilot, MAC, data power	Ec/Io, pilot power, delay	Code Domain Power	(Composite) EVM	Avg active I/Q power	Pilot power
PN Scanner (up to 6)	Multipath Profile	Slot average power	Frequency error	Code utilization	Ec/Io

Longitude, latitude, and satellite in all screens

*Measurement is performed in Data Constellation only.

TD-SCDMA Signal Analyzer (Options 025 and 045)

General Parameters		
Frequency range	1.785 GHz to 2.22 GHz	
Input signal level	−40 to +25 dBm	
Channel power (RRC) accuracy	±1.0 dB (typical)	
Modulations	QPSK, 8 PSK, 16 QAM, 64 QAM	
Frequency error	±10 Hz + ref freq accuracy	99% confidence level
Residual EVM (RMS)	2.0% (typical)	P-CCPCH slot and 1 channel
Time error (Tau)	±1.0 µs (typical)	External trigger
Spreading factor	Auto (DL, UL), 1, 2, 4, 8, 16	

Measurements					
Option 025					
Channel Power	***Multi-ACLR***	UpPTS power	Frequency error	Avg Active Code Power	Spectrum emission mask
Channel power	Lowest reference power	On/off slot ratio	I/Q origin offset	Ave Inactive Code Power	ACLR
Spectral density	Highest reference power	Slot PAR	Time offset	***Code Error***	Multi-ACLR
Peak to average power	Abs power at defined range	DwPTS code	***Midamble Power***	Abs/Rel code power (Bar Chart)	Slot power
Occupied Bandwidth	Rel power at defined range	***Power vs. Time (frame)***	Slot power	Constellation diagram for Individual code	DWPTS power
Occupied bandwidth	***Code Error***	Slot Power, Data Power (L), Midamble Power, Data Power (R), Time offset of all TS (from TS0 to TS7) and DwPTS, UpPTS	DwPTS power	Slot Power, DWPTS Power	UpPTS power
Integrated power	Code power and error	***Power vs. Time (mask)***	Midamble power (1 to 16)	No. of Active Code	On/Off Ratio
Occupied power	Individual code EVM and its constellation	Slot power	***Code Power***	Scramble Code	Frequency Error
Spectrum Emission Mask	Data format	On/off slot ratio	Abs/Rel code power (Bar Chart)	Max Active Code Power	EVM RMS
Reference power	***Spurious Emissions***	Off power	Constellation diagram for Individual code	Max Inactive Code Power	Peack CDE
Peak level at defined range	Peak frequency at defined range	***Timogram***	Slot Power, DWPTS Power	Avg Active Code Power	Max Inavtive
ACLR	Peak level at defined range	***Constellation***	No. of Active Code	Ave Inactive Code Power	Spurious Emission
Reference power	***Power vs. Time (slot)***	Rho	Scramble Code	***Auto Measure***	
Abs power at defined range	Slot power	EVM RMS, EVM peak	Max Active Code Power	Channel Power	
Rel power at defined range	DwPTS power	Peak CDE	Max Inactive Code Power	Occupied bandwidth	
Option 045					
Sync-DL ID Scanner (32)	Pilot dominance	Pilot dominance	Pilot dominance	Pilot dominance	DwPTS Power
Scramble code group	***Sync-DL ID vs. Tau (up to 6)***	***Sync-DL ID Multipath***	***Sync-DL ID Analyzer***	EVM, frequency error	
Ec/Io, Tau	ID, power, Ec/Io, Tau	Ec/Io, Tau	DwPTS power, Ec/Io trend	Ec/Io, CINR	
DwPTS power	DwPTS power	DwPTS power	DwPTS power	***Route Map***	

Longitude, latitude, and satellite in all screens

Mobile WiMAX Signal Analyzer (Options 026 and 046)

General Parameters		
Frequency range	2.1 GHz to 2.7 GHz 3.4 GHz to 3.85 GHz	
Input signal level	−40 to +20 dBm	
Channel power accuracy	±1.0 dB (typical)	
Supported bandwidth	7 MHz, 8.75 MHz, and 10 MHz	
Frequency error	±10 Hz + reference-frequency accuracy	99% confidence level
Residual EVM (RMS)	1.5% (typical)	

Measurements					
Option 026					
Channel Power	*Spurious Emissions*	*Constellation*	Max, min, avg power	*Auto Measure*	Spectral flatness
Channel power	Peak frequency at defined range	Channel power	*EVM vs. Subcarrier*	Channel power	Frequency error
Spectral density	Peak level at defined range	RCE RMS, RCE peak	RCE RMS, RCE peak	Occupied bandwidth	RCE RMS
Peak to average power	*Power vs. Time (frame)*	EVM RMS, EVM peak	EVM RMS, EVM peak	Spectrum emission mask	RCE peak
Occupied Bandwidth	Channel power	Frequency error	Segment ID, cell ID	Spurious emission mask	EVM RMS
Occupied bandwidth	Frame average power	Time offset	Preamble index	Preamble power	EVM peak
Integrated power	Preamble power	Segment ID, cell ID	*EVM vs. Symbol*	DL burst power	*Power Statistics CCDF*
Occupied power	DL burst power	Preamble index	RCE RMS, RCE peak	UL burst power	
Spectrum Emission Mask	UL burst power	*Spectral Flatness*	EVM RMS, EVM peak	Frame average power	
Reference power	I/Q origin offset	Average subcarrier power	Segment ID, cell ID	Time offset	
Peak level at defined range	Time offset	Subcarrier power variation	Preamble index	I/Q origin offset	
Option 046					
Preamble Scanner (up to 6)	Time offset	Relative power, delay	Preamble power	Preamble	Preamble power
Total preamble power	*Multipath Profile*	Preamble power trend	Frame avg power	Cell ID, sector ID	
Preamble, relative power	Total preamble power	*Preamble Power Trend*	Relative power	Time offset	
Cell ID, sector ID	Multipath power	Relative power trend	C/I	*Route Map*	

Longitude, latitude, and satellite in all screens

LTE/LTE-Advanced — FDD Signal Analyzer (Options 028/030/032 and 048)

General Parameters		
Frequency range	Band 1 to 14, 17 to 26	
Input signal level	−40 to +20 dBm	
Channel power accuracy	±1.0 dB (typical)	
Supported bandwidths	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, and 20 MHz	
Frequency error	±10 Hz + reference-frequency accuracy	99% confidence level
Residual EVM (RMS)	2.0% (typical)	Data EVM

Measurements

Option 028/030/032

Channel Power	*Power vs. Time (frame)*	*Control Channel*	Data EVM RMS, peak	Antenna 1 RS power and EVM	PDSCH/Data* 64 QAM EVM
Channel power	Frame average power	Control channel summary (P-SS, S-SS, PBCH, PCFICH, PHICH, PDCCH, RS, MBSFN*)	RS EVM RMS, peak		
					PDSCH 256QAM EVM
Spectral density	Subframe power		Cell, group, sector ID	Antenna 2 RS power and EVM**	Data EVM RMS, peak
Peak to average power	First slot power		*Frame*		RS, P-SS, S-SS EVM
Occupied Bandwidth	Second slot power		MBSFN*	Antenna 3 RS power and EVM**	RS, P-SS, S-SS power
Occupied bandwidth	Cell ID, I/Q origin offset	EVM, relative or absolute power, modulation type	Frame summary table (P-SS, S-SS, PBCH, PCFICH, PHICH, PDCCH, RS, MBSFN*, PDSCH/Data* QPSK, PDSCDH/Data* 16 QAM, PDSCH/Data* Data* 64 QAM, PDSCH 256QAM)	*Data Allocation Map*	PBCH power
Integrated power	Time offset				Subframe power
Occupied power	*Constellation*	Each control channels'		Data allocation vs frame	OFDM power
Spectrum Emission Mask	MBSFN*	I/Q diagram		Resource block power	Time error
	RS TX power	Modulation format		OFDM symbol power	I/Q origin offset
Reference power	PDSCH/Data* QPSK EVM	Frequency error		Data utilization	*Carrier Aggregation**
Peak level at defined range	PDSCH/Data* 16 QAM EVM	I/Q origin offset	EVM, relative or absolute power, modulation type	Data allocation vs subframe	Component carriers: up to 5
ACLR	PDSCH/Data* 64 QAM EVM	EVM RMS, EVM peak		Resource block power	
Reference power	PDSCH 256QAM EVM				
	Data EVM RMS	*Subframe*	Frame average power	Data utilization	Subframe power
Abs power at defined range	Data EVM peak	MBSFN*	OFDM symbol power	*Auto Measure*	P-SS, S-SS, PBCH, RS power and EVM
Rel power at defined range	Frequency error	Subframe summary table (P-SS, S-SS, PBCH, PCFICH, PHICH, PDCCH, RS, MBSFN*, PDSCH/Data* QPSK, PDSCH/Data* 16 QAM, PDSCH/Data* 64 QAM , PDSCH 256QAM)	Frequency error	Channel power	PDSCH/Data* QPSK power and EVM
	Time error		I/Q origin offset	Occupied bandwidth	
Multi-ACLR	*Data Channel*		EVM RMS, peak	Spectrum emission mask	
Lowest reference power	MBSFN*		Data EVM RMS, peak	ACLR	PDSCH/Data* 16 QAM power and EVM
Highest reference power	Resource block power		Cell, group, sector ID	Multi-ACLR	
Abs power at defined range	I/Q diagram		*Time Alignment Error*	Spurious emission mask	PDSCH/Data* 64 QAM power and EVM
	RB power	EVM, relative or absolute power, modulation type	Time alignment error trend	Frame average power	PDSCH 256QAM EVM
Rel power at defined range	Modulation format			Time alignment error	Cell ID
Spurious Emissions	I/Q origin offset	Subframe power	Time alignment error	Frequency error	Frequency error
Peak frequency at defined range	EVM RMS, EVM peak	OFDM symbol power	RS power difference	MBSFN*	Time alignment error
		Frequency, time error	Antenna 0 RS power and EVM	PDSCH/Data* QPSK EVM	Antenna port
Peak level at defined range				PDSCH/Data* 16 QAM EVM	*Power Statistics CCDF*

Option 048

Channel Scanner (up to 6)	*ID Scanner (up to 6)*	*Multipath Profile*	Control channel table	PMCH subframe power*	*Route Map*
Frequency or channels	RSRP/RSRQ dominance	Cell, group, sector ID	(P-SS, S-SS, PBCH, PCFICH, RS 0, RS 1, RS 2**, RS 3**, MBSFN RS*)	Time alignment error	RSRP
Cell, group, sector ID	S-SS RSSI dominance	Ant 0 RS Ec/Io, delay		Time offset	RSRQ
Channel power	S-SS Ec/Io dominance	Ant 1 RS Ec/Io, delay		*Datagram*	RS-SINR
RSRP/RSRQ	Cell, group, sector ID	Ant 2 RS Ec/Io**, delay**	Absolute power	Datagram	S-SS RSSI
RS-SINR	RSRP/RSRQ	Ant 3 RS Ec/Io**, delay**	Relative power	Resource block power	P-SS/S-SS Power
Antenna port	RS-SINR/S-SS RSSI	*Control Channel*	EVM RSM, phase	Data utilization	S-SS Ec/Io
	P-SS/S-SS Power	RS power trend	Frequency error		
	S-SS Ec/Io	Cell, group, sector ID			

Longitude, latitude, and satellite in all screens

*Measurement is performed when MBMS is enabled.

**Measurement is performed when option 030 is enabled.

LTE/LTE-Advanced — TDD Signal Analyzer (Options 029/031/033 and 049)

General Parameters

Frequency range	Band 33 to 43	
Input signal level	−40 to +20 dBm	
Channel power accuracy	±1.0 dB (typical)	
Supported bandwidth	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, and 20 MHz	
Frequency error	±10 Hz + reference-frequency accuracy	99% confidence level
Residual EVM (RMS)	2.0% (typical)	Data EVM

Measurements

Option 029/031/033

Channel Power	*Spurious Emissions*	Data EVM peak	*Subframe*	Antenna 3 RS power and EVM**	PDSCH/Data* 64 QAM EVM
Channel power	Peak frequency at defined range	Frequency error	MBSFN*		PDSCH 256QAM EVM
Spectral density		Time error	Subframe summary table	Cell, group, sector ID	Data EVM RMS, peak
Peak to average power	Peak level at defined range	*Data Channel*	(P-SS, S-SS, PBCH, PCFICH, PHICH, PDCCH, RS, MBSFN*, PDSCH/Data* QPSK, PDSCH/Data* 16 QAM, PDSCH/Data* 64 QAM , PDSCH 256QAM)	*Data Allocation Map*	RS, P-SS, S-SS EVM
Occupied Bandwidth		MBSFN*		Data allocation vs frame	RS, P-SS, S-SS power
Occupied bandwidth	*Power vs. Time (frame)*	Resource block power		Resource block power	PBCH power
Integrated power	Frame average power	I/Q diagram		OFDM symbol power	Subframe power
Occupied power	Subframe power	RB power		Data utilization	OFDM power
Spectrum Emission Mask	First slot power	Modulation format	EVM, relative or absolute power, modulation type	Data allocation vs subframe	Time error
Reference power	Second slot power	I/Q origin offset			I/Q origin offset
Peak level at defined range	Cell ID, I/Q origin offset	EVM RMS, EVM peak	Subframe power	Resource block power	*Carrier Aggregation**
	Time offset	*Control Channel*	OFDM symbol power	Data utilization	Component carriers: up to 5
ACLR	*Power vs. Time (slot)*	Control channel summary (P-SS, S-SS, PBCH, PCFICH, PHICH, PDCCH, RS, MBSFN*)	Frequency, time error	*Auto Measure*	Subframe power
Reference power	Slot average power		Data EVM RMS, peak	Channel power	P-SS, S-SS, PBCH, RS power and EVM
Abs power at defined range	Transient period length		RS EVM RMS, peak	Occupied bandwidth	
	Off power		Cell, group, sector ID	Spectrum emission mask	
Rel power at defined range	*Constellation*	EVM, relative or absolute power, modulation type	*Time Alignment Error*	ACLR	PDSCH/Data* QPSK power and EVM
	MBSFN*		Time alignment error trend	Mult-ACLR	
Multi-ACLR	RS TX power	Each control channels'	Time alignment error	Spurious emission mask	PDSCH/Data* 16 QAM power and EVM
Lowest reference power	PDSCH/Data* QPSK EVM	I/Q diagram	RS power difference	Slot average power	
Highest reference power / Abs power at defined range	PDSCH/Data* 16 QAM EVM	Modulation format / Frequency error	Antenna 0 RS power and EVM	Off power / Transition period	PDSCH/Data* 64 QAM power and EVM / PDSCH 256QAM EVM
	PDSCH/Data* 64 QAM EVM	I/Q origin offset / EVM RMS, EVM peak	Antenna 1 RS power and EVM	Time alignment error	Cell ID
Rel power at defined range	PDSCH 256QAM EVM		Antenna 2 RS power and EVM**	MBSFN*	Frequency error
				PDSCH/Data* QPSK EVM	Time alignment error
	Data EVM RMS			PDSCH/Data* 16 QAM EVM	Antenna port
					Power Statistics CCDF

Option 049

Channel Scanner (up to 6)	*ID Scanner (up to 6)*	*Multipath Profile*	*Control Channel*	EVM RSM, phase	*Route Map*
Frequency or channels	RSRP/RSRQ dominance	Cell, group, sector ID	RS power trend	Frequency error	RSRP
Cell, group, sector ID	S-SS RSSI dominance	Ant 0 RS Ec/Io, delay	Cell, group, sector ID	PMCH subframe power*	RSRQ
Channel power	S-SS Ec/Io dominance	Ant 1 RS Ec/Io, delay	Control channel table (P-SS, S-SS, PBCH, PCFICH, RS 0, RS 1, RS 2**, RS 3**, MBSFN RS*)	Time alignment error	RS-SINR
RSRP/RSRQ	Cell, group, sector ID	Ant 2 RS Ec/Io**, delay**		Time offset	S-SS RSSI
RS-SINR	RSRP/RSRQ	Ant 3 RS Ec/Io**, delay**		*Datagram*	P-SS, S-SS power
Antenna port	RS-SINR/S-SS RSSI		Absolute power	Datagram	S-SS Ec/Io
	P-SS/S-SS power		Relative power	Resource block power	
	S-SS Ec/Io			Data utilization	

Longitude, latitude, and satellite in all screens

*Measurement is performed when MBMS is enabled.

**Measurement is performed when option 031 is enabled.

NB-IoT Signal Analyzer (Option 034)

General Parameters	
Operation Mode	In-band, Guard Band, Standalone
Input signal level	−40 to +25 dBm
Channel power accuracy	±1.0 dB (typical)
Supported bandwidths	180 kHz
Anchor Carrier definition	PRBS Index or Frequency
Measurement Type	Frame, Subframe
Frequency error	±10 Hz + ref freq accuracy 99% confidence level

Residual EVM (RMS)	2.0% (typical)	Data EVM

Measurement

Option 034		
RF Analysis		**Modulation Analysis**
Channel Power	**Spectrum Emission Mask**	**IQ Diagram**
Channel power	Reference Power	Constellation diagram, Modulation Format, Frequency error, IQ Origin offset, EVM RMS/Peak
Spectral density	Peak level at defined range	
Peak to average Power	**ACLR**	
Occupied bandwidth	Reference Power	**Channel Summary**
Occupied Bandwidth	Abs. power at defined range	EVM, Power (dBm), and Modulation type of: Frame (Sub-frame) Power, NPSS, NSSS, NPBCH, NPDSCH, NRS0 (NRS1), PCI
Integrated Power	Rel. power at defined range	
Occupied power	**Spurious Emission**	
	Peak frequency at defined range	
	Peak level at defined range	

EMF Analyzer (Option 050)

General Parameters	
Supported Antenna	Isotropic Antenna G700050380 26 MHz to 3 GHz
Mode	Sweep / FFT
Trace	X-Axis, Y-Axis, Z-Axis, Current, Isotropic, Isotropic Accumulated
Limit lines	MSL, ICNIRP
Dwell Time	1 to 60s
Measurement Time	1 to 30 min (# of measurement= Measurement Time / (Dwell Time x 3)
Units	dBμV/m, dBmV/m, dBV/m, V/m, W/m^2, dBm/m^2, dBW/m^2, A/m, dBA/m, and $Watt/cm^2$.
Miscellaneous	Spectrum logging and Replay Export to CSV PDF Report Generation

Measurement

Option 050 and G700050380		
Trace: X-Axis, Y-Axis, Z-Axis, Current, Isotropic, Isotropic Accumulated	Isotropic EMF Power: AVG, Max, Min	Accumulated Isotropic EMF Power: AVG, Max, Min

General Information

Inputs and Outputs	
RF In Connector Impedance Damage level	Spectrum analyzer Type-N, female 50 Ω (nominal) >+40 dBm, ±50 V DC (nominal)
Reflection/RF Out Connector Impedance Damage level	Cable and antenna analyzer Type-N, female 50 Ω (nominal) >+37 dBm, ±50 V DC (nominal)
RF In Connector Impedance Damage level	Cable and antenna analyzer Type-N, female 50 Ω (nominal) >+25 dBm, ±50 V DC (nominal)
External Trigger, GPS Connector Impedance	SMA, female 50 Ω (nominal)
External Ref Connector Impedance Input frequency Input range	SMA, female 50 Ω (nominal) 10 MHz, 13 MHz, 15 MHz −5 to +5 dBm
USB USB host[1] USB client[2]	Type A, 1 port Type B, 1 port
SFP Cage Port 1 Port 2	RFoFiber (with option 008) SFP/SFP+ compatible
LAN[3]	RJ45, 10/100Base-T
Audio jack	3.5 mm headphone jack
External power	5.5 mm barrel connector
Speaker	Built-in speaker

Display	
Type	Resistive touch screen
Size	8 inch, LED backlight, transflective LCD with anti-glare coating

Power		
External DC input	18 to 19 V DC	
Power consumption	42 W	54 W maximum (when charging battery)

Battery	
Type	10.8 V, 7800 mA/hr (Lithium ion)
Operating time	>3 hr (typical at spectrum analyzer)
Charge time	3 hr (while not operating) 9 hr (while operating)
Charging temperature	0 to 45°C (32 to 104°F) ≤85% RH
Discharging temperature	−20 to 55°C (4 to 131°F) ≤85% RH
Storage temperature[4]	0 to 25°C (32 to 77°F)

Data Storage	
Internal	Maximum 512 MB
External[5]	Up to 32 GB with FAT32 format

Environmental		
Operating Temperature		
AC power	0 to 40C (without derating on battery charging)	
	−10 to 55C (with derating on battery charging)	
Battery Operation	0 to 40C (without derating on battery operating time)	
	−10 to 55C (with derating on battery operating time)	
Maximum humidity	95% RH (noncondensing)	
Shock and vibration	MIL-PRF–28800F class 2	
Storage temperature[6]	−30 to 71°C (−22 to 160°F)	

EMC	
IEC/EN 61326-1:2013 (complies with European EMC)	
CISPR11:2009 +A1:2010	

ESD	
IEC/EN 61000-4-2	

Size and Weight (standard configuration)		
Weight (with battery)	Standard	4.17 kg (9.19 lb)
	Fully loaded	4.34 kg (9.57 lb)
Size (W x H x D)	295 x 195 x 82 mm	

Calibration Cycle	
1 year	

1. Connects flash drive, power sensor, EZ-Cal kit, and fiber microscope.
2. Data transfer and PC Application based remote control.
3. Data transfer or PC Application/Web-based remote control.
4. 20 to 85% RH, store battery pack in low-humidity environment; extended exposure to temperature above 45°C could significantly degrade battery performance and life.
5. Supports USB 2.0 compatible memory devices.
6. With the battery pack removed.

Ordering Information

Description	Part Number
Standard CellAdvisor Base Station Analyzer	
Base station analyzer includes: · Spectrum analyzer 9 kHz to 8 GHz · RF power meter 10 MHz to 8 GHz · Cable and antenna 5 MHz to 6 GHz	JD785A[1,2]
Packages/Bundles - General Packages	
JD785A bundle 2 · JD785A;Base station analyzer · JD74050341;Soft-carrying case	JD785AB02
Option	
2 port transmission measurements for JD785A[3]	JD785A001
Bias tee for JD785A[4]	JD785A002
CW signal generator for JD785A	JD785A003
E1 analyzer for JD785A[5]	JD785A004
T1 analyzer for JD785A[5]	JD785A005
Bluetooth connectivity for JD785A[6]	JD785A006
High power CW signal generator for JD785A	JD785A007
GPS receiver and antenna for JD785A	JD785A010
Interference analyzer for JD785A[7,8]	JD785A011
Channel scanner for JD785A	JD785A012
LTE-FDD RAN performance indicator for JD785A[9]	JD785A014
LTE-TDD RAN performance indicator for JD785A[10]	JD785A015
Wi-Fi connectivity for JD785A[11]	JD785A016
cdmaOne/cdma2000 analyzer for JD785A	JD785A020
EV-DO analyzer for JD785A[12]	JD785A021
GSM/GPRS/EDGE analyzer for JD785A	JD785A022
WCDMA/HSPA+ analyzer for JD785A	JD785A023
TD-SCDMA analyzer for JD785A	JD785A025
Mobile WiMAX analyzer for JD785A	JD785A026
LTE - FDD analyzer for JD785A[13]	JD785A028
LTE - TDD analyzer for JD785A[13]	JD785A029
LTE Advanced - FDD analyzer for JD785A[14,16]	JD785A030
LTE Advanced - TDD analyzer for JD785A[15,16]	JD785A031
LTE-FDD 256 QAM Demodulator for JD785A[17]	JD785A032
LTE-TDD 256 QAM Demodulator for JD785A[18]	JD785A033
NB-IoT Analyzer for JD785A[14]	JD785A034
cdmaOne/cdma2000 OTA analyzer for JD785A[19]	JD785A040
EV-DO OTA analyzer for JD785A[19]	JD785A041
GSM/GPRS/EDGE OTA analyzer for JD785A[19]	JD785A042
WCDMA/HSPA+ OTA analyzer for JD785A[19]	JD785A043
TD-SCDMA OTA analyzer for JD785A[19]	JD785A045
Mobile WiMAX OTA analyzer for JD785A[19]	JD785A046
LTE - FDD OTA analyzer for JD785A[19]	JD785A048
LTE - TDD OTA analyzer for JD785A[19]	JD785A049
EMF analyzer for JD785A[20]	JD785A050

Description	Part Number
Product Support- Calibration	
Calibration service for Asia and North America for JD785A	JD785A200
Calibration service for Latin America and EMEA for JD785A	JD785A201
Product Support - Extended Warranty	
Warranty extension of 1 year for Asia, North America for JD785A	JD785A250
Warranty extension of 1 year for Latin America, EMEA for JD785A	JD785A251
Optional Accessories	
Accessory - RF Calibrators (General)	
Y- calibration kit Type-N(m), DC to 6 GHz, 50 ohm	JD78050509
Y- calibration kit DIN(m), DC to 6 GHz, 50 ohm	JD78050510
EZ-Cal kit Type-N(m), DC to 6 GHz, 50 Ω	JD70050509
Dual port Type-N 6 GHz calibration kit (Includes 1x JD78050509 Y- calibration kit, 2x G700050530 RF Cable, and 2x G700050575 RF Adapter Type-N(f) to Type-N(f))	JD78050507
Dual port DIN 6 GHz calibration kit (Includes 1x JD78050510 DIN Y- calibration kit, 2x G710050536 RF Cable, and 2x G700050572 RF Adapter DIN(m) to DIN(m))	JD78050508
50 Ω Load, DC to 4 GHz, 1 W	GC72550511
Accessory - RF Cables (Cables)	
RF cable DC to 8 GHz Type-N(m) to Type-N(m), 1.0 m	G700050530
RF cable DC to 8 GHz Type-N(m) to Type-N(f), 1.5 m	G700050531
RF cable DC to 8 GHz Type-N(m) to Type-N(f), 3.0 m	G700050532
RF cable DC to 18 GHz Type-N(m) to SMA(m), 1.5 m	G710050533
RF cable DC to 18 GHz Type-N(m) to QMA(m), 1.5 m	G710050534
RF cable DC to 18 GHz Type-N(m) to SMB(m),1.5 m	G710050535
RF cable DC to 6 GHz Type-N(m) to DIN(f), 1.5 m	G710050536
RF cable DC to 4 GHz Type-N(m) to 1.0/2.3 (m), 1.5 m	G710050537
Phase-stable RF cable w grip DC to 6 GHz Type-N(m) to Type-N(f), 1.5 m	G700050540
Phase-stable RF cable w grip DC to 6 GHz Type-N(m) to DIN(f), 1.5 m	G700050541
RF cable DC to 18 GHz Type-N(m) to Type-N(f), 1.5 m	G710050531
Accessory - RF Antennas (General)	
RF omni antenna Type-N(m), 806 to 896 MHz	G700050353
RF omni antenna Type-N(m), 870 to 960 MHz	G700050354
RF omni antenna Type-N(m), 1710 to 2170 MHz	G700050355
RF omni antenna Type-N(m), 720 to 800 MHz	G700050356
RF omni antenna Type-N(m), 2300 to 2700 MHz	G700050357
Mag mount RF omni antenna Type-N(m), 689 to 1200 MHz, 1700 to 2700 MHz, 3000 to 6000 MHz	G700050358
RF Omni Antenna N(m), 2.4 GHz to 2.5 GHz, 4.5 dBi, and 5.150 GHz to 5.850 GHz, 7 dBi	G700050359

Ordering Information (Continued)

Description	Part Number
RF yagi antenna Type-N(f), 1750 to 2390 MHz, 10.2 dBd	G700050363
RF yagi antenna Type-N(f), 806 to 896 MHz, 10.2 dBd	G700050364
RF yagi antenna Type-N(f), 866 to 960 MHz, 9.8 dBd	G700050365
RF yagi antenna SMA(f), 700 to 4000 MHz, 1.85 dBd	G700050366
RF yagi antenna SMA(f), 700 to 6000 MHz, 2.85 dBd	G700050367
Isotropic Antenna Type-N(m), 26 MHz to 3 GHz	G700050380
Accessory - RF Power Sensor (General)	
Directional power sensor (peak and average power) 300 to 3800 MHz	JD731B
Terminating power sensor (Average Power) 20 to 3800 MHz	JD732B
Directional power sensor (peak and average power) 150 to 3500 MHz	JD733A
Terminating power sensor (peak power) 20 to 3800 MHz	JD734B
Terminating power sensor (average/peak power) 20 to 3800 MHz	JD736B
Accessory - RF Adapters (Connector & Adapters)	
Adapter Type-N(m) to DIN(f), DC to 7.5 GHz, 50 Ω	G700050571
Adapter DIN(m) to DIN(m), DC to 7.5 GHz, 50 Ω	G700050572
Adapter Type-N(m) to SMA(f) DC to 18 GHz, 50 Ω	G700050573
Adapter Type-N(m) to BNC(f), DC to 4 GHz, 50 Ω	G700050574
Adapter Type-N(f) to Type-N(f), DC to 18 GHz 50 Ω	G700050575
Adapter Type-N(m) to DIN(m), DC to7.5 GHz, 50 Ω	G700050576
Adapter Type-N(f) to DIN(f), DC to 7.5 GHz, 50 Ω	G700050577
Adapter Type-N(f) to DIN(m), DC to 7.5 GHz, 50 Ω	G700050578
Adapter DIN(f) to DIN(f), DC to 7.5 GHz, 50 Ω	G700050579
Adapter Type-N(m) to Type-N(m), DC to 11 GHz 50 Ω	G700050580
Adapter N(m) to QMA(f), DC to 6.0 GHz, 50 Ω	G700050581
Adapter N(m) to QMA(m), DC to 6.0 GHz, 50 Ω	G700050582
Adapter N(m) to 4.1/9.5 MINI DIN (f), DC to 6.0 GHz, 50 Ω	G700050583
Adapter N(m) to 4.1/9.5 MINI DIN (m), DC to 6.0 GHz, 50 Ω	G700050584
Adapter N(m) to 4.3-10 (f), DC to 6.0 GHz, 50 Ω	G700050585
Adapter N(m) to 4.3-10 (m), DC to 6.0 GHz, 50 Ω	G700050586
Adapter Type-N(m) to DIN(f), DC to 4 GHz, 50 Ω	G710050571
Adapter N(f) to N(f), DC to 4 GHz, 50 Ω	G710050575
Adapter Type-N(f) to DIN(f), DC to 4 GHz, 50 Ω	G710050577
Adapter Type-N(f) to DIN(m), DC to 7 GHz, 50 c	G710050578
Accessory - RF Miscellaneous (General)	
Attenuator 40 dB, 100 W, DC to 4 GHz (unidirectional)	G710050581
RF directional coupler, 700 to 4000 MHz, 30 dB, 50 W Input/output; Type-N(m) to Type-N(f), tap off; Type-N(f)	G710050585

Description	Part Number
RF combiner, 700 to 4000 MHz, Type-N(f) to Type-N(m)	G710050586
4x1 RF combiner, 700 to 4000 MHz, Type-N(f) to Type-N(m)	G710050587
Bandpass filter 696 MHz to 716 MHz, N(m) to N(f), 50 Ω	G700050601
Bandpass filter 776 MHz to 788 MHz, N(m) to N(f), 50 Ω	G700050602
Bandpass filter 806 MHz to 849 MHz, N(m) to N(f), 50 Ω	G700050603
Bandpass filter 1710 MHz to 1755 MHz, N(m) to N(f), 50 Ω	G700050604
Bandpass filter 1850 MHz to 1910 MHz, N(m) to N(f), 50 Ω	G700050605
Bandpass filter 703 MHz to 748 MHz, N(m) to N(f), 50 ohm	G700050606
Bandpass filter 832 MHz to 862 MHz, N(m) to N(f), 50 ohm	G700050607
Bandpass filter 880 MHz to 915 MHz, N(m) to N(f), 50 ohm	G700050608
Bandpass filter 1710 MHz to 1785 MHz, N(m) to N(f), 50 ohm	G700050609
Bandpass filter 1920 MHz to 1980 MHz, N(m) to N(f), 50 ohm	G700050610
Bandpass filter 2500 MHz to 2570 MHz, N(m) to N(f), 50 ohm	G700050611
Accessory - General	
2 port USB hub	G700050200
USB Bluetooth dongle and dipole antenna 5 dBi	JD70050006
USB Wi-Fi Dongle	JD70050008
GPS antenna for JD740 and JD780 series	JD71050351
AntennaAdvisor handle	JD70050007
Cross LAN cable (6ft)	G700550335
USB A to B cable (1.8m)	GC73050515
> 1GB USB memory	GC72450518
Stylus pen	G710550316
RJ45 to Y bantam cable	G710050317
RJ45 to Y BNC cable	G710050318
RJ45 to 4 Alligator Clips	G710050319
Accessory - Battery & Chargers	
Rechargeable lithium ion battery	G710550325
AC/DC Power adapter	G710550326
Automotive cigarette lighter/12V DC adapter	G710550323
External battery charger	G710550324
Accessory - Manual & Documentation	
JD700B series user's guide - printed version	JD700B362
JD780A series Korean quick guide - printed version	JD780A363

Description	Part Number
Accessory - Carrying Case	
General soft carrying case	G700050341
Soft carrying case	JD74050341
Hard carrying case	JD71050342
Hard carrying case with wheels	JD70050342
CellAdvisor backpack carrying case	JD70050343

1. Supplied accessories: User's Guide, USB Memory (1GB), Cross LAN Cable, USB Cable, DC car adapter, Li-Ion Battery, AC/DC adapter, Stylus Pen
2. Highly recommended using the Calibration Kit (JD78050509)
3. Highly recommended using the Calibration Kit (JD78050507) and Bias Tee (option 002)
4. Requires option 001
5. Needs Test Cable (G710050317, -50318, or -50319)
6. Includes a Bluetooth USB dongles with 5 dBi dipole antennas (JD70050006)
7. Needs Omni or Yagi antenna
8. Highly recommended adding option 010
9. Requires option 06 and option 28 and Needs TrueSite(FTA)
10. Requires option 06 and option 29 and Needs TrueSite(FTA)
11. Includes a Wi-Fi USB dongle
12. Requires option 020
13. Highly recommended using the RF Directional Coupler or RF combiner (G710050585 or G710050586)
14. Requires option 028
15. Requires option 029
16. Highly recommended using the 4x1 RF combiner (G710050587)
17. Requires option 010
18. Requires factory return for the upgrade
19. Requires serial number for placing an order of the upgrade
20. Needs for OTA/Interference measurements (options 011/040, 041, 042, 043, 044, 045, 046, 048, 049)

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• Maintain your equipment for peak performance at a low, predictable cost.

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Features

*5-year plans only

Plan	Objective	Technical Assistance	Factory Repair	Priority Service	Self-paced Training	5 Year Battery and Bag Coverage	Factory Calibration	Accessory Coverage	Express Loaner
BronzeCare	Technician Efficiency	Premium	✓	✓	✓				
SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓		
MaxCare	High Availability	Premium	✓	✓	✓	✓*	✓	✓	✓

VIAVI Solutions

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