VIAVI Solutions

Data Sheet

VIAVI
CellAdvisor™
JD788A Signal Analyzer

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

Power Meter: 10 MHz to 8 GHz

Specification* Conditions

The JD788A 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 under 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	0.1 dB	
Linear scale	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	0 to 200 s	
Resolution	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		

* CW signal generator (Option 003) can be set up simultaneously.

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]		

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

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 input	Universal 2.5 and 1.25 mm	
Accuracy	±5%	

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)

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 006)

Personal area network (PAN)
File transfer profile (FTP)
Web-based remote control

Wi-Fi Connectivity (Option 016)

General Parameters	
Interface type	USB LAN Card
Interface standard	IEEE 802.22 b/g/n
Chipset	RealTek, Ralink
USB wireless mode	Infrastructure mode
Web-based remote control	Internet Explorer, Chrome, Safari
Internet protocol version	IPv4, IPv6

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

General Parameters		
Frequency range	Band 0 to 10	
Input signal level	–40 to +25 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	Code channel power >–25 dB
	±1.5 dB absolute power	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	Pilot power
Frequencies or channels	PN offset	***Code domain power***	Max, avg inactive power	Average amplifier capacity	Ec/Io
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	Peak utilization	
PN scanner (up to 6)	Channel power	PN offset	Carrier feed-through	Average utilization	
Channel power	Multipath power	Pilot, Paging, Sync, Q-Paging power	Amplifier capacity	***Route map***	

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 +25 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	Code channel power >–25 dB	
	±1.5 dB absolute power	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	***ACPR***	***Power vs. time (idle and active slot)***	***Constellation (pilot, MAC 64/128, and data)***	***Code domain power (data)***	***Auto measure***
Channel power	Reference power				Channel power
Spectral density	Abs power at defined range	Slot average power	Channel power	Data channel power	Occupied bandwidth
Peak to average power		On/off ratio	Rho, EVM, peak CDE	Slot average power	Spectrum emission mask
Occupied bandwidth	Rel power at defined range	Idle activity	Frequency error	Max, avg active power	ACPR
Occupied bandwidth		Pilot, MAC, data power	Time offset	Max, avg inactive power	Multi-ACPR
Integrated power	***Multi-ACPR***	***Constellation (composite 64/128)***	Carrier feed-through	PN offset	Pilot, MAC, data power
Occupied power	Lowest reference power		PN offset	***MAC codogram***	On/off ratio
Spectrum emission mask	Highest reference power	Channel power	Modulation type*	Code utilization	PvsT mask (idle slot) or PvsT mask (active slot)
Reference power	Abs power at defined range	Rho, EVM, Peak CDE	***Code domain power (pilot and MAC 64/128)***	***RCSI***	
Peak level at defined range		Frequency error		Slot, pilot, MAC, data	Frequency error
	Rel power at defined range	Time offset	Pilot/MAC channel power	***MAC CDP table***	Time offset
		Carrier feed-through	Slot average power	Reference power	Carrier feed-through
	Spurious emissions	PN offset	Max active I/Q power	Code utilization	Pilot, MAC, data Rho
	Peak frequency at defined range	Pilot, MAC, data power	Avg active I/Q power	Code, spreading factor	Max inactive I/Q power
		Pilot, MAC, data EVM	Max inactive I/Q power	Allocation (channel type)	PN offset
	Peak level at defined range		Avg inactive I/Q power	Relative, absolute power	***Power statistics CCDF***
			PN offset		

Option 041

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

Longitude, latitude, and satellite in all screens

*Measurement is performed in Data Constellation only.

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 +25 dBm	
Burst power	±1.0 dB	
Frequency error	±10 Hz + ref freq accuracy	99% confidence level
GMSK modulation quality		
Phase RMS Accuracy	±1.0 degrees	(0 < Phase RMS < 8)
Residual error	0.7 degrees (typical)	
Phase peak accuracy	±2.0 degrees	(0 < Phase peak < 30)
8 PSK modulation quality		
EVM Accuracy	±1.5%	(2% < EVM < 8%)
Residual error	2.5%	
RF power vs. time	±0.25 symbol	

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 +25 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 + ref freq accuracy	99% confidence level
EVM accuracy	±2.0%	2% ≤ EVM ≤ 20%
Residual EVM	2.5% (typical)	
Code domain power	±0.5 dB relative power	Code channel power >–25 dB
	±1.5 dB absolute power	Code channel power >–25 dB
CPICH power accuracy	±0.8 dB (typical)	

Measurements

Option 023

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

Option 043

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

Longitude, latitude, and satellite in all screens

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)	±0.2 µs (typical)	External trigger
Spreading factor	Auto (DL, UL), 1, 2, 4, 8, 16	

Measurements

Option 025

Channel power	Lowest reference power	Data power left (TS [0 to 6], DwPTS, UpPTS)	***Midamble power***	Code power and error	Multi-ACLR
Channel power	Highest reference power	Midamble power (TS [0 to 6], DwPTS, UpPTS)	Slot power	Individual code EVM and its constellation	Slot power
Spectral density	Abs power at defined range	Data power right (TS [0 to 6], DwPTS, UpPTS)	DwPTS power	Data format	DwPTS power
Peak to average power	Rel power at defined range	Time offset (TS [0 to 6], DwPTS, UpPTS)	Midamble power (1 to 16)	Slot, DwPTS power	UpPTS power
Occupied bandwidth	***Spurious emissions***	***Power vs. time (mask)***	***Code power***	No. of active code	On/off slot ratio
Occupied bandwidth	Peak frequency at defined range	Slot power	Abs/Rel code power	Scramble code	Frequency error
Integrated power	Peak level at defined range	On/off slot ratio	Individual code EVM and its constellation	Max active code power	EVM RMS
Occupied power	***Power vs. time (slot)***	Off power	Data format	Avg active code power	Peak CDE
Spectrum emission mask	Slot power	***Timogram***	Slot power, DwPTS power	Max inactive code power	Max inactive power
Reference power	DwPTS power	***Constellation***	No. of active code	Avg inactive code power	Scramble code
Peak level at defined range	UpPTS power	Rho	Scramble code	Peak CDE and peak active CDE	
ACLR	On/off slot ratio	EVM RMS, EVM peak	Max active code power	***Auto measure***	
Reference power	Slot PAR	Peak CDE	Avg active code power	Channel power	
Abs power at defined range	DwPTS code	Frequency error	Max inactive code power	Occupied bandwidth	
Rel power at defined range	***Power vs. time (frame)***	I/Q origin offset	Avg inactive code power	Spectrum emission mask	
Multi-ACLR	Slot power (TS [0 to 6], DwPTS, UpPTS)	Time offset	***Code error***	ACLR	

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 screensTD-SCDMA Signal Analyzer (Option 025)

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 +25 dBm	
Channel power accuracy	±1.0 dB (typical)	
Supported bandwidth	7 MHz, 8.75 MHz, and 10 MHz	
Frequency error	±10 Hz + ref freq 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 and 048)

General Parameters			
Frequency range	Band 1 to 14, 17 to 26		
Input signal level	–40 to +25 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 + ref freq accuracy	99% confidence level	
Residual EVM (RMS)	2.0% (typical)	Data EVM	

Measurements

Option 028/030

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* 64 QAM, PDSCH/Data* 25QAM)		PBCH power
Integrated power	Time offset			***Data allocation map***	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
Reference power	RS TX power	Modulation format		OFDM symbol power	I/Q origin offset
Peak level at defined range	PDSCH/Data* QPSK EVM	Frequency error		Data utilization	***Carrier aggregation***
ACLR	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
Reference power	PDSCH/Data* 64 QAM EVM	EVM RMS, EVM peak		Resource block power	
	PDSCH 256QAM EVM				
Abs power at defined range	Data EVM RMS	***Subframe***	Frame average power	Data utilization	Subframe power
	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/Data* 25QAM)	Frequency error	Channel power	
Multi-ACLR	Time error		I/Q origin offset	Occupied bandwidth	PDSCH/Data* QPSK power and EVM
Lowest reference power	***Data channel***		EVM RMS, peak	Spectrum emission mask	
Highest reference power	MBSFN*		Data EVM RMS, peak	ACLR	PDSCH/Data* 16 QAM power and EVM
Abs power at defined range	Resource block power		Cell, group, sector ID	Multi-ACLR	
	I/Q diagram		***Time alignment error***	Spurious emission mask	PDSCH/Data* 64 QAM power and EVM
Rel power at defined range	RB power	EVM, relative or absolute power, modulation type	Time alignment error trend	Frame average power	PDSCH 256QAM EVM
Spurious emissions	Modulation format			Time alignment error	Cell ID
Peak frequency at defined range	I/Q origin offset	Subframe power	Time alignment error	Frequency error	Frequency error
	EVM RMS, EVM peak	OFDM symbol power	RS power difference	MBSFN*	Time alignment error
Peak level at defined range		Frequency, time error	Antenna 0 RS power and EVM	PDSCH/Data* QPSK EVM	Antenna port
				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 (P-SS, S-SS, PBCH, PCFICH, RS 0, RS 1, RS 2**, RS 3**, MBSFN RS*)	PMCH subframe power*	***Route map***
Frequency or channels	RSRP/RSRQ dominance	Cell, group, sector ID		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 RMS, 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—FDD Signal Analyzer (Options 028/030)

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

General Parameters					
Frequency range	Band 33 to 43				
Input signal level	–40 to +25 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 + ref freq 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 (P-SS, S-SS, PBCH, PCFICH, PHICH, PDCCH, RS, MBSFN*, PDSCH/Data* QPSK, PDSCH/Data* 16 QAM, PDSCH/Data* 64 QAM, PDSCH/Data* 25QAM)	Cell, group, sector ID	Data EVM RMS, peak
Peak to average power	Peak level at defined range	***Data channel***		***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***	
Reference power	Slot average power		Data EVM RMS, peak	Channel power	Subframe power
Abs power at defined range	Transient period length		RS EVM RMS, peak	Occupied bandwidth	P-SS, S-SS, PBCH, RS power and EVM
	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	PDSCH/Data* 16 QAM EVM	Modulation format	Antenna 0 RS power and EVM	Off power	PDSCH/Data* 64 QAM power and EVM
Abs power at defined range		Frequency error		Transition period	PDSCH 256QAM EVM
	PDSCH/Data* 64 QAM EVM	I/Q origin offset	Antenna 1 RS power and EVM	Time alignment error	Cell ID
Rel power at defined range	PDSCH 256QAM EVM	EVM RMS, EVM peak		MBSFN*	Frequency error
	Data EVM RMS		Antenna 2 RS power and EVM**	PDSCH/Data* QPSK EVM	Time alignment error
				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 RMS, phase	***Route map***
	RSRP/RSRQ dominance	Cell, group, sector ID	RS power trend	Frequency error	RSRP
Frequency or channels	S-SS RSSI dominance	Ant 0 RS Ec/Io, delay	Cell, group, sector ID	PMCH subframe power*	RSRQ
Cell, group, sector ID	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
Channel power	Cell, group, sector ID	Ant 2 RS Ec/Io**, delay**		Time offset	S-SS RSSI
RSRP/RSRQ	RSRP/RSRQ	Ant 3 RS Ec/Io**, delay**		***Datagram***	P-SS, S-SS power
RS-SINR	RS-SINR/S-SS RSSI			Datagram	S-SS Ec/Io
Antenna port	P-SS/S-SS power		Absolute power	Resource block power	
	S-SS Ec/Io		Relative power	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, and Standalone	
Input signal level	-40 to +25 dBm	
Channel power accuracy	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** Constellation diagram, Modulation Format, Frequency error, IQ Origin offset, EVM RMS/Peak
Channel power	Reference Power	
Spectral density	Peak level at defined range	
Peak to average Power	**ACLR**	
Occupied bandwidth	Reference Power	**Channel Summary** EVM, Power (dBm), and Modulation type of: Frame (Subframe) Power, NPSS, NSSS, NPBCH, NPDSCH, NRS0 (NRS1), PCI
Occupied Bandwidth	Abs. power at defined range	
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

Frequency		
RF In Connector Impedance Damage level	Spectrum analyzer Type-N, female 50 Ω (nominal) >+33 dBm, ±50 V DC (nominal), 3 min	
RF Out Connector Impedance Damage level	 Type-N, female 50 Ω (nominal) >+40 dBm, ±50 V DC (nominal), 3 min	
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	
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	
Resolution	800 x 600	
Power		
External DC input	18 to 19 V DC	
Power consumption	37 W	49 W maximum (when charging battery)
Battery		
Type	10.8 V, 7800 mA/hr (lithium ion)	
Operating time	>3 hours (typical)	
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	0 to 25°C (32 to 77°F) ≤85% RH (noncondensing)	

Data Storage	
Internal[4]	Maximum 100 MB
External[5]	Limited by size of USB flash drive
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 61326-1:2006 (complies with European EMC)	
CISPR11:2009 +A1:2010	
ESD	
IIEC/EN 61000-4-2	
Size and Weight (standard configuration)	
Weight (with battery)	< 3.6 kg (7.9 lb)
Size (W x H x D)	295 x 195 x 82 mm (11.6 x 7.7 x 3.2 in)
Warranty	
3 years	
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. (FAT and FAT32 compatible)
6. With the battery pack removed

Ordering Information

Description	Part Number
Standard CellAdvisor JD788A Signal Analyzer	
Signal analyzer includes: Spectrum analyzer 9 kHz to 8 GHz RF power meter 10 MHz to 8 GHz	JD788A[1]
Options Note: Upgrade options for the JD788A use the designation JD788AU before the respective last three-digit option number	
2 Port transmission measurements for JD788A	JD788A001
CW signal generator for JD788A	JD788A003
Bluetooth connectivity for JD788A	JD788A016[2]
High power CW signal generator for JD788A	JD788A007
20 MHz demodulation hardware for JD788A	JD788A009[3]
GPS receiver and antenna for JD788A	JD788A010
Interference analyzer for JD788A	JD788A011[4,5]
Channel scanner for JD788A	JD788A012
LTE-FDD RAN performance indicator for JD788A	JD788A014[6,7]
LTE-TDD RAN performance indicator for JD788A	JD788A015[7,8]
Wi-Fi connectivity for JD788A	JD788A016[9]
cdmaOne/cdma2000 analyzer for JD788A	JD788A020[7]
EV-DO analyzer for JD788A	JD788A021[7,10]
GSM/GPRS/EDGE analyzer for JD788A	JD788A022[7]
WCDMA/HSPA+ analyzer for JD788A	JD788A023[7]
TD-SCDMA analyzer for JD788A	JD788A025[7]
Mobile WiMAX analyzer for JD788A	JD788A026[7]
LTE - FDD analyzer for JD788A	JD788A028[7,11]
LTE - TDD analyzer for JD788A	JD788A029[7,11]
LTE Advanced - FDD analyzer for JD788A	JD788A030[7,12,13]
LTE Advanced - TDD analyzer for JD788A	JD788A03[17,13,14]
256QAM Demodulator for LTE-FDD	JD788A032[7,15]
256QAM Demodulator for LTE-TDD	JD788A033[7,16]
NB-IoT Analyzer for JD788A	JD788A034[7,12]
cdmaOne/cdma2000 OTA analyzer for JD788A	JD788A040[7,17]
EV-DO OTA analyzer for JD788A	JD788A041[7,17]
GSM/GPRS/EDGE OTA analyzer for JD788A	JD788A042[7,17]
WCDMA/HSPA+ OTA analyzer for JD788A	JD788A043[7,17]
TD-SCDMA OTA analyzer for JD788A	JD788A045[7,17]
Mobile WiMAX OTA analyzer for JD788A	JD788A046[7,17]
LTE - FDD OTA analyzer for JD788A	JD788A048[7,17]
LTE - TDD OTA analyzer for JD788A	JD788A049[7,17]
EMF Analyzer for JD788A	JD788A050[18]
Calibration service for Asia and North America for JD788A	JD788A200[19]
Calibration service for Latin America and EMEA for JD788A	JD788A201[19]
Warranty extension of 1 year for Asia and North America for JD788A	JD788A250
Warranty extension of 1 year for Latin America and EMEA for JD788A	JD788A251

Description	Part Number
Optional Accessories	
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 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
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

Ordering Information Continued

Description	Part Number
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	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 ohm	G710050577
Adapter Type-N(f) to DIN(m), DC to 7 GHz, 50 Ω	G710050578

Description	Part Number
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
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

Ordering Information Continued

Description	Part Number
Accessory - Battery & Chargers	
Rechargeable lithium ion battery	G710550325
JD700B series AC/DC power adapter_90 W_15 V	JD70050326
Automotive cigarette lighter/12V DC adapter	G710550323
External battery charger	G710550324
Accessory - Manual & Documentation	
JD780A series user's manual - printed version	JD780A362
JD780A series Korean quick guide - printed version	JD780A363
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. Includes a Bluetooth USB dongles with 5 dBi dipole antennas (JD70050006)
3. Needs options 020, 021, 022, 023, 025, 026, 028, 029, 030, 031, 032, 033, 040, 041, 042, 043, 045, 046, 048, 049
4. Needs Omni or Yagi antenna
5. Highly recommended adding option 010
6. Requires option 006 and option 028 and Needs TrueSite(FTA)
7. Requires option 009
8. Requires option 006 and option 029 and Needs TrueSite(FTA)
9. Includes a Wi-Fi USB dongle
10. Requires option 020
11. Highly recommended using the RF Directional Coupler or RF combiner (G710050585 or G710050586)
12. Requires option 028
13. Highly recommended using the 4x1 RF combiner (G710050587)
14. Requires option 029
15. Requires option 030
16. Requires option 031
17. Requires option 010
18. Requires G700050380
19. Requires factory return

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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
BronzeCare	Technician Efficiency	Premium	✓	✓	✓		
SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓

VIAVI Solutions

Contact Us **+1 844 GO VIAVI**
(+1 844 468 4284)

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