



# CellAdvisor™

## JD786A RF 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)  |                 |
| Aging   | ±0.5 ppm/year  |                 |
| Frequency Span                                |  |                 |
| Range   | 0 Hz (zero span)<br>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 |  |                 |
| <b>Carrier Offset:</b>                        |  |                 |
| 30 kHz  | -100 dBc/Hz (-102 dBc/Hz, typical)   |                 |
| 100 kHz                                       | -105 dBc/Hz (-112 dBc/Hz, typical)   |                 |
| 1 MHz   | -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 JD786A 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 $\Omega$ 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   | -150 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<br>dBm, dBV, dBmV, dB $\mu$ V                    |
| 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  | $\pm 1.3$ dB ( $\pm 0.5$ dB typical)<br>Add $\pm 1.0$ dB                           |
|   | 20 to 30°C after 60-minute warm up<br>-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<br>-80 dBm at 4.8/7.8 GHz<br>-75 dBm at 85.6 MHz and 428 MHz<br>-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<br>24 $\mu$ s to 200 s  | Span = 0 Hz (zero span) |
| Accuracy  | $\pm 2\%$  | Span = 0 Hz (zero span) |
| Mode  | Continuous, single   |                         |
| Gated Sweep   |  |                         |
| Trigger source  | External, video, and GPS   |                         |
| Gate length   | 1 $\mu$ s 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 $\mu$ s                 |
| 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.

## Cable and Antenna Analyzer (Standard)

| Frequency                 |  |
|---------------------------|--|
| Range                     | 5 MHz to 6 GHz   |
| Resolution                | 10 kHz   |
| Accuracy                  | $\pm 1$ 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    | $\pm(0.3 +  20\log(1+10-EP/20) )$ (typical)<br>EP = directivity – measured return loss |
| Output Power              |  |
| High                      | 5 MHz to 5.5 GHz, 0 dBm (typical)<br>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                 | $\pm 50$ V DC   |
| Interference Immunity      |   |
| On channel                 | +17 dBm at >1.4 MHz from carrier frequency (nominal)  |
| On frequency               | 0 dBm within $\pm 10$ kHz from the carrier frequency (nominal)  |
| Measurements               |   |
| Reflection (VSWR)          |   |
| VSWR range                 | 1 to 65   |
| Return loss range          | 0 to 60 dB  |
| Resolution                 | 0.01  |
| Distance to Fault (DTF)    |   |
| Vertical VSWR range        | 1 to 65   |
| Vertical return loss range | 1 to 60 dB  |
| Vertical resolution        | 0.01  |
| Horizontal range           | 0 to (# of data points – 1) x horizontal resolution<br>Maximum = 1500 m (4921 ft)                                 |
| Horizontal resolution      | $(1.5 \times 10^8) \times (V_p)/\Delta$<br>$V_p$ = propagation velocity<br>$\Delta$ = stop freq – start freq (Hz) |
| Cable Loss (1-Port)        |   |
| Range                      | 0 to 30 dB  |
| Resolution                 | 0.01 dB   |
| 1-Port Phase               |   |
| Range                      | –180 to +180°   |
| Resolution                 | 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)<br>4 to 400 W (peak)            | 0.1 to 50 W (average)<br>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                  | $\pm(4\% \text{ of reading} + 0.05 \text{ W})^{1,2}$    |   |                  |
| 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                  | $\pm 7\%^1$   |   |                  |

## 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                       | $\pm 5\%$                  |         |

1. CW condition at 25°C  $\pm 10^\circ\text{C}$

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)<br>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<br>>3 GHz to 6 GHz, 75 dB                         | at average 5<br>at average 5 |
| Scalar               | 5 MHz to 4.5 GHz,<br>> 110 dB<br>4.5 GHz to 6 GHz,<br>> 105 dB          |                              |
| Measurements         |   |                              |
| Insertion Loss/Gain  |   |                              |
| Range                | -120 to 100 dB  |                              |
| Resolution           | 0.01 dB   |                              |
| 2-Port Phase         |   |                              |
| Range                | -180 to +180°   |                              |
| Resolution           | 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<br>>5.5 to 6 GHz, -60 to -5 dBm                                    |
| Range (Option 003 & 007) | 5 MHz to 3.5 GHz, -60 to +10 dBm<br>3.5 to 5.5 GHz, -60 to +5 dBm<br>>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                                    | ±25 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                        |

## EMF Analyzer (Option 050)

| General Parameters   |   |  |
|--|---|--|
| Supported Antenna  | Isotropic Antenna G700050380<br>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  | dB $\mu$ V/m, dBmV/m, dBV/m, V/m, W/m <sup>2</sup> , dBm/m <sup>2</sup> , dBW/m <sup>2</sup> , A/m, dBA/m, and Watt/cm <sup>2</sup> . |  |
| Miscellaneous  | Spectrum logging and Replay<br>Export to CSV<br>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  |   |
|---|---|
| <b>RF in</b><br>Connector<br>Impedance<br>Damage level                          | Spectrum analyzer<br>Type-N, female<br>50 $\Omega$ (nominal)<br>>+33 dBm, $\pm$ 50 V DC (nominal), 3 min          |
| <b>Reflection/RF out</b><br>Connector<br>Impedance<br>Damage level              | Cable and antenna analyzer<br>Type-N, female<br>50 $\Omega$ (nominal)<br>>+40 dBm, $\pm$ 50 V DC (nominal), 3 min |
| <b>RF in</b><br>Connector<br>Impedance<br>Damage level                          | Cable and antenna analyzer<br>Type-N, female<br>50 $\Omega$ (nominal)<br>>+25 dBm, $\pm$ 50 V DC (nominal)        |
| <b>External trigger, GPS</b><br>Connector<br>Impedance                          | SMA, female<br>50 $\Omega$ (nominal)  |
| <b>External ref</b><br>Connector<br>Impedance<br>Input frequency<br>Input range | SMA, female<br>50 $\Omega$ (nominal)<br>10 MHz, 13 MHz, 15 MHz<br>-5 to +5 dBm                                    |
| <b>USB</b><br>USB host <sup>1</sup><br>USB client <sup>2</sup>                  | Type A, 1 port<br>Type B, 1 port  |
| LAN <sup>3</sup>  | RJ45, 10/100Base-T  |
| E1/T1   | RJ45  |
| 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, transfective LCD with anti-glare coating   |
| Resolution  | 800 x 600   |
| Power   |   |
| External DC input   | 18 to 19 V DC   |
| Power consumption   | 37 W<br>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)<br>9 hr (while operating)  |
| Charging temperature  | 0 to 45°C (32 to 104°F) $\leq$ 85% RH   |
| Discharging temperature   | -20 to 55°C (4 to 131°F) $\leq$ 85% RH  |
| Storage temperature   | 0 to 25°C (32 to 77°F)<br>$\leq$ 85% RH (noncondensing)   |

| Data Storage                                     |   |
|--|---|
| Internal <sup>4</sup>                            | Maximum 100 MB  |
| External <sup>5</sup>                            | Limited by size of USB flash drive  |
| Environmental                                    |   |
| Operating Temperature                            |   |
| AC Power   | 0 to 40°C (32 to 104°F) with no derating  |
| Battery  | 0 to 40°C (32 to 104°F) at charging<br>-10 to 55°C (14 to 131°F) at discharging |
| Maximum humidity                                 | 95% RH (noncondensing)  |
| Shock and vibration                              | MIL-PRF-28800F class 2  |
| Storage temperature <sup>6</sup>                 | -30 to 71°C (-22 to 160°F)  |
| EMC  |   |
| IEC/EN 61326-1:2006 (complies with European EMC) |   |
| CISPR11:2009 +A1:2010                            |   |
| ESD  |   |
| IEC/EN 61000-4-2                                 |   |
| Size and Weight (standard configuration)         |   |
| Weight (with battery)                            | <4.3 kg (9.5 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
5. temperature above 45°C could significantly degrade battery performance and life
6. Supports USB 2.0 compatible memory devices. (FAT and FAT32 compatible)
7. With the battery pack removed

## Ordering Information

| Description   | Part Number           |
|---|-----------------------|
| <b>Standard CellAdvisor JD786A RF Analyzer</b>  |                       |
| RF analyzer includes:<br>Spectrum analyzer 9 kHz to 8 GHz<br>RF Power Meter 10 MHz to 8 GHz<br>Cable and Antenna 5 MHz to 6 GHz         | JD786A <sup>1,2</sup> |
| <b>Options</b><br>Note: Upgrade options for the JD786A use the designation JD786AU before the respective last three-digit option number |                       |
| 2 port transmission measurements for JD786A <sup>3</sup>  | JD786A001             |
| Bias tee for JD786A <sup>4</sup>  | JD786A002             |
| CW signal generator for JD786A  | JD786A003             |
| Bluetooth connectivity for JD786A <sup>5</sup>  | JD786A006             |
| High power CW signal generator for JD786A   | JD786A007             |
| GPS receiver and antenna for JD786A   | JD786A010             |
| Interference analyzer for JD786A <sup>6,7</sup>   | JD786A011             |
| Channel scanner for JD786A  | JD786A012             |
| Wi-Fi connectivity for JD786A <sup>8</sup>  | JD786A016             |
| EMF analyzer for JD786A <sup>9</sup>  | JD786A050             |
| Calibration service for Asia and North America for JD786A   | JD786A200             |
| Calibration service for Latin America and EMEA for JD786A   | JD786A201             |
| Warranty extension of 1 year for Asia and North America for JD786A  | JD786A250             |
| Warranty extension of 1 year for Latin America and EMEA for JD786A  | JD786A251             |
| <b>Optional Accessories</b>   |                       |
| <b>Accessory - RF Calibrators (General)</b>   |                       |
| Y- calibration kit Type-N(m), DC to 6 GHz, 50 Ω   | JD78050509            |
| Y- calibration kit DIN(m), DC to 6 GHz, 50 Ω  | JD78050510            |
| EZ-Cal kit Type-N(m), DC to 6 GHz, 50 Ω   | JD70050509            |
| Dual port Type-N 6 GHz calibration kit  | JD78050507            |
| Dual port DIN 6 GHz calibration kit   | JD78050508            |
| 50 ohm Load, DC to 4 GHz, 1 W   | GC72550511            |
| <b>Accessory - RF Cables (Cables)</b>   |                       |
| 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            |
| <b>Accessory - RF Antennas (General)</b>  |                       |
| RF omni antenna Type-N(m), 806 to 896 MHz   | G700050353            |
| RF omni antenna Type-N(m), 870 to 960 MHz   | G700050354            |

| Description   | Part Number |
|---|-------------|
| 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 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  |
| <b>Accessory - RF Power Sensor (General)</b>                      |             |
| 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      |
| <b>Accessory - RF Adapters (Connector &amp; Adapters)</b>         |             |
| 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 to 7.5 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 ohm                  | G710050571  |
| Adapter N(f) to N(f), DC to 4 GHz, 50 ohm                         | 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 ohm                  | G710050578  |



## Ordering Information (Continued)

| Description  | Part Number |
|--|-------------|
| <b>Accessory - RF Miscellaneous (General)</b>            |             |
| Attenuator 40 dB, 100 W, DC to 4 GHz (unidirectional)    | G710050581  |
| 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  |
| <b>Accessory - General</b>                               |             |
| 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  |
| <b>Accessory - Battery &amp; Chargers</b>                |             |
| Rechargeable lithium ion battery                         | G710550325  |
| AC/DC Power adapter                                      | G710550326  |
| Automotive cigarette lighter/12V DC adapter              | G710550323  |
| External battery charger                                 | G710550324  |
| <b>Accessory - Manual &amp; Documentation</b>            |             |
| JD780A series user's manual - printed version            | JD780A362   |
| JD780A series Korean quick guide - printed version       | JD780A363   |
| <b>Accessory - Carrying Case</b>                         |             |
| 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. Includes a Bluetooth USB dongles with 5 dBi dipole antennas (JD70050006)
6. Needs Omni or Yagi antenna
7. Highly recommended adding option 010
8. Includes a Wi-Fi USB dongle
9. Requires G700050380



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