# Keysight E5061B Network Analyzer

Configuration Guide







## Ordering guide

The following steps will guide you through configuring your E5061B.

Standard furnished item <sup>1</sup>	
Description	Additional information
Installation guide	Contains the information necessary to start up with the E5061B.
CD ROM IO libraries	
Power cable	
Certificate of calibration	

Step 1. Choose test set option (must choose one of the nine test set options.)		
Option No.	Description	
$50\Omega$ RF NA options		
E5061B-115	Transmission/Reflection test set, 100 kHz to 1.5 GHz, 50 $\Omega$ system impedance	
E5061B-215	S-parameter test set, 100 kHz to 1.5 GHz, 50 $\Omega$ system impedance	
E5061B-135	Transmission/Reflection test set, 100 kHz to 3 GHz, 50 $\Omega$ system impedance	
E5061B-235	S-parameter test set, 100 kHz to 3GHz, 50 $\Omega$ system impedance	
75 Ω RF NA options		
E5061B-117	Transmission/Reflection test set, 100 kHz to 1.5 GHz, 75 $\Omega$ system impedance	
E5061B-217	S-parameter test set, 100 kHz to 1.5 GHz, 75 $\Omega$ system impedance	
E5061B-137	Transmission/Reflection test set, 100 kHz to 3 GHz, 75 $\Omega$ system impedance	
E5061B-237	S-parameter test set, 100 kHz to 3GHz, 75 Ω system impedance	
LF-RF NA option <sup>2</sup>		
E5061B-3L3	LF-RF network analyzer with DC bias source, 5 Hz to 500 MHz	
E5061B-3L4	LF-RF network analyzer with DC bias source, 5 Hz to 1.5 GHz	
E5061B-3L5	LF-RF network analyzer with DC bias source, 5 Hz to 3 GHz	

Step 2. Choose impedance analysis option (for E5061B-3L5 LF-RF network analyzer. If not required, go to step 3.)		
Option No.	Description	
Software option		
	E5061B-005 3,4	Impedance analysis for E5061B-3L3/3L4/3L5 LF-RF network analyzer
Accessory		
	E5061B-720 4,5	Add 50 $\Omega$ resistor set

Keyboard and mouse are not furnished as standard. Refer to "Step 6. accessory option" for the selection of these items.
 The E5061B-3L3/3L4/3L5 includes the 50 ohm S-parameter test set (5 Hz to 500 M/1.5 G/3 GHz), and the gain-phase test port (5 Hz to 30 MHz)
 This option is not applicable for the E5061B RF NA options 1x5/2x5/1x7/2x7.
 Refer to "Upgrade Kit" section for retrofit information on the above option.
 For calibration at test fixtures. Required for the gain-phase series-thru method.

Step 3. Choose hardware option (If not required, go to step 4)	
Option No.	Description
E5061B-1E5 <sup>1</sup>	High stability time base

Step 4. Choose storage option <sup>2</sup>	
Option No.	Description
E5061B-020	Standard hard disk drive

Step 5. Choose software option (If not required, go to step 6)	
Option No.	Description
E5061B-010 <sup>3</sup>	Time domain/fault location analysis
E5061B-006 <sup>4</sup>	Wireless power transfer analysis

Step 6. Choose accessory option (If not required, go to step 7)		
Option No.	Description	
E5061B-810	Add keyboard	
E5061B-820	Add mouse	
E5061B-1CM	Rack mount Kit	
E5061B-1CN	Front Handle Kit	
E5061B-1CP	Rack mount and front handle kit	

Step 7. Choose calibration option (if not required, go to step 8)	
Option No.	Description
E5061B-1A7	Calibration + Uncertainties + Guardbanding
E5061B-A6J	ANSI Z540-1-1994 Calibration

Step 8. Choose your warranty service (optional)		
Option No.	Description	
R-50C-011-3	Keysight Calibration - 3 years	
R-50C-011-5	Keysight Calibration - 5 years	
R-50C-021-3	ANSI Z540-1-1994 Calibration - 3 years	
R-50C-021-5	ANSI Z540-1-1994 Calibration - 5 years	
R-51B-001-5C	Return ro Keysight warranty - 5 years	

Refer to "Hardware upgrade" section for retrofit information on the above options.
 Option 020 is the only storage option for the E5061B. Must choose this option when ordering the E5061B.
 Refer to "Software upgrade" section for retrofit information on the above option.
 This option is not applicable for the E5061B 75 ohm test set options 1x7/2x7 and Transmission/Reflection test set options 1x5.

### Test accessories and calibration kits

Test accessories and calibration kits that can be used with the E5061B are listed in this section. A complete line of test accessories and calibration kits can be found at the Keysight RF and Microwave Test Accessories Web site: www.Keysight.com/find/accessories

#### Test accessories

Test accessories such as test port cable are necessary for a complete measurement system using the E5061B. Order test accessories in accordance with the desired measurement system.

#### Calibration kits

Calibration is an accuracy enhancement procedure that effectively reduces the system errors that cause uncertainty in network measurement. Calibration kit is necessary to perform the calibration.

- **Mechanical calibration kits** include standards, such as opens, shorts and loads, which are measured by the network analyzer. Choose a calibration kit for each connector type to be used.
- Electronic calibration (ECal) modules¹ replace mechanical calibration standards with one solid-state calibration
  module that is controlled by the network analyzer via USB. ECal modules provide many different impedances to the
  test ports which enables a full two-port calibration to be performed quickly with a single connection. This technique
  reduces operator errors and connector wear and abrasion.





Mechanical calibration kits



Electronic calibration (ECal) modules

ECal modules don't cover the whole frequency range of the E5061B. Check whether the frequency range of each ECal module meets your measurement needs.

Test accessories (for 50 $\Omega$ Model No.	,
	Description
Test Port Cable	
N6314A	$50\Omega$ type-N (m) to type-N (m) cable, DC to 12.4 GHz, 61 cm (24 in)
N6315A	50 $\Omega$ type-N (m) to type-N (f) cable, DC to 12.4 GHz, 61 cm (24 in)
11500E	3.5 mm (m) to 3.5 mm (m) cable, 61 cm (24 in)
11500F	3.5 mm (m) to 3.5 mm (m) cable, 152 cm (60 in)
11857D	$50\Omega7$ mm to 7 mm cable, 300 kHz to 6 GHz, 61 cm (24 in)
8120-1838	$50\Omega$ BNC (m) to BNC (m) cable, $30\mathrm{cm}$ (12 in)
8120-1839	50 Ω BNC (m) to BNC (m) cable, 61 cm (24 in)
Adapter	
1250-0780	50 Ω type-N (m) to 50 Ω BNC (f) adapter
1250-1200	50 Ω BNC (f) to SMA (m) adapter
1250-2015	50 Ω BNC (m) to SMA (f) adapter
Accessory Kit	
11853A	50 Ω type-N accessory kit. Includes;
	- Type-N (f) to type-N (f) adapter (2 qty.)
	- Type-N (m) to type-N (m) adapter (2 qty.)
	- Type-N (f) short
	- Type-N (m) short
11854A	$50 \Omega$ BNC accessory kit. Includes;
	- BNC (m) to Type-N (m) adapter (2 qty.)
	- BNC (f) to Type-N (f) adapter (2 qty.)
	- BNC (f) to Type-N (m) adapter (2 qty.)
	- BNC (m) to Type-N (f) adapter (2 qty.)
A de ate a IVI	- BNC (m) short
Adapter Kit	
11878A	50 Ω type-N to 3.5 mm adapter kit. Includes;
	- 3.5 mm (m) to type-N (m) adapter
	- 3.5 mm (f) to type-N (f) adapter
	- 3.5 mm (f) to type-N (m) adapter - 3.5 mm (m) to type-N (f) adapter
Power Splitter <sup>1</sup>	- 3.3 min (iii) to type-in (i) adaptei
11667L	BNC (f) connectors, DC to 2 GHz
DC Block	DINO (I) CONTIDUCTO S, DO TO Z ONZ
	2.5 mm (m) and 2.5 mm (f) connectors 50 kHz to 26 5 0Hz
N9398C	3.5 mm (m) and 3.5 mm (f) connectors, 50 kHz to 26.5 GHz
N9399C	3.5 mm (m) and 3.5 mm (f) connectors, 700 kHz to 26.5 GHz



<sup>1.</sup> For transmission measurement with the gain-phase test port of the E5061B-3L3/3L4/3L5. Required for milliohm impedance measurements in the low frequency range.

Model No.		Description
Active Probe		
41800A		5 Hz to 500 MHz active probe, 100 k $\Omega$ (probe alone) / 1 M $\Omega$ (with 10:1 or 100:1 divider). Includes; - Probe to BNC adapter - Hook tip adapter - Slip-on tip adapter - 10:1 and 100:1 divider
	41800A-001	Adds a cable to connect the probe with an external power supply. This option is not necessary for the E5061B-3L3/3L4/3L5 since it is equipped with the probe power.
	41800A-UK6	Commercial cal certificate with test data
85024A		300 kHz to 3 GHz active probe. Includes; - Probe tip to type-N Adapter - 10:1 divider - Hook tip adapter - Slip-on tip adapter - Leads
Differential Active	Probe	
1141A <sup>1</sup>		DC to 200 MHz differential active probe. The 1142A is required. Includes;  - 10x and 100x attenuator adapter  - AC coupling adapter  - Two-inch extension leads  - Mini-grabbers (2 qty.)  - Five-inch ground lead  - Shielded signal lead  - Test board  - Flat-blade alignment tool  - Circuit connection post
Probe Control and	Power Module	
1142A		Probe control and power module for the 1141A Differential Active Probe.







1141A, 1142A, and E5061B

Model No.	Description
Injection Transformer	
Picotest J2100A Injection Transformer	1 Hz to 5 MHz (when terminated with 5 $\Omega$ ), 10 Hz to 5 MHz (when terminated with 50 $\Omega$ ), Input: BNC(f), Output: Banana jacks, 600 V/CAT II isolation voltage. Optimized for loop gain measurements of DC-DC converters and switching power supplies
Picotest J2101A Injection Transformer	10 Hz to 45 MHz (when terminated with 5 $\Omega$ ), 60 Hz to 45 MHz (when terminated with 50 $\Omega$ ), Input: BNC(f), Output: Banana jacks, 600 V/CAT II isolation voltage. Optimized for loop gain measurements of DC-DC converters and switching power supplies
North Hills Signal Processing 0017CC 50 Ω Video Isolation Transformer	10 Hz to 5 MHz (when terminated with 50 $\Omega$ ), Input: BNC(f), Output: BNC(f). Applicable to loop gain measurements of DC-DC converters and switching power supplies
Other Signal Injector	
Picotest J2110A Solid-State Injector (Bode Box)	DC to 40 MHz, Input and output voltage up to ± 10.5 V, Signal input: BNC(f), Output: Banana jacks. Optimized for wide band loop gain measurements of control loop circuits.
Picotest J2120A Line Injector	15 Hz to 5 MHz, up to 50 Vdc / 5 Adc, Signal input: BNC(f), DC input & output: Banana jacks. For PSRR measurements of linear regulators and DC-DC converters.
Picotest J2111A Current Injector	Input: BNC(f), Output: Banana jacks. For output impedance measurements of DC-DC converters with high-voltage outputs up t 40 Vdc. The recommended frequency range with the E5061B is 5 Hz to 1 MHz.
Banana test lead/adapter	
Pomona Electronics 1166	Banana plug to alligator clip
Pomona Electronics 4650	Banana plug to test clip
Pomona Electronics 4650	Banana plugs to test clips
Pomona Electronics 1269	Banana plugs to BNC(f) adapter
BNC breakout	
Pomona Electronics 2886	BNC(m) to alligator clips
Pomona Electronics 3789	BNC(m) to test clips
BNC to test clip lead	
Pomona Electronics 3787-C-18	Coax. cable with a BNC(m) connector and test clips at the ends, approx. 60 cm (total length).  For probing the DUT from the gain-phase receiver ports.
$50\Omega$ feed through	
Pasternack Enterprises PE6008-50	DC to 1 GHz, 50 $\Omega$ BNC(m) to BNC(f) feed through.
DC Block	
Mini-Circuits BLK-89	100 kHz to 8 GHz, 50 $\Omega$ SMA(m) to SMA(f) DC blocking capacitor.

#### Non-Keysight test accessories (for 50 $\Omega$ system, continued)



Picotest J2100A Injection Transformer



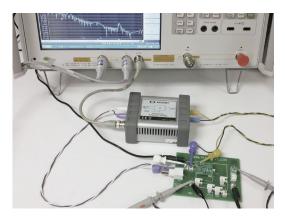
Picotest J2111A Current Injector



North Hills Signal Processing 0017CC



Picotest J2120A Line Injector



Picotest J2120A Line Injector (Banana-to-test clip leads connected to its banana jacks)



Pomona 3787-C-18 test lead (connected to gain-phase receiver ports) Pomona 2886 BNC breakout (connected to 0017CC)

Picotest web page: http://www.picotest.com

North Hills Signal Processing web page: http://www.northhills-sp.com/index.html
Mini-Circuits web page: http://www.minicircuits.com/index.html

Pomona Electronics web page: http://www.pomonaelectronics.com/

Pasternack Enterprises web page: http://www.pasternack.com/

Calibration kits (for 50	n n evetem)				
Model No.	o a system,	Description			
Type-N		2000,			
Mechanical calib	oration kits				
85032E		50 Ω economy calibration kit, DC to 6 GHz. Includes; - Type-N (m) fixed load - Type-N (m) combined open/short			
85032F	050005 400	50 Ω standard calibration kit, DC to 9 GHz. Includes;  - Type-N (m) fixed load  - Type-N (f) fixed load  - Type-N (m) Open  - Type-N (f) Open  - Type-N (m) Short  - Type-N (f) Short			
	85032F-100	Adds 50 Ω type-N (f) to type-N (f) adapter			
	85032F-200	Adds 50 $\Omega$ type-N (m) to type-N (m) adapter			
	85032F-300	Adds 50 Ω type-N (m) to type-N (f) adapter			
	85032F-500	Adds;   - 50 $\Omega$ type-N (m) to 7 mm adapter (2 qty.)   - 50 $\Omega$ type-N (f) to 7 mm adapter (2 qty.)			
Electronic calibration	ation kits				
85092C <sup>1</sup>		RF ECal module 2-port (50 $\Omega$ type-N), 300 kHz to 9 GHz. The sexes of the connectors depend on the option.			
	85092C-M0F <sup>2</sup>	Type-N (f) to Type-N (m) RF ECal module			
	85092C-00M <sup>2</sup>	Type-N (m) to Type-N (m) RF ECal module			
	85092C-00F <sup>2</sup>	Type-N (f) to Type-N (f) RF ECal module			
	85092C-00A	Adds; - Type-N (f) to Type-N (f) adapter - Type-N (m) to Type-N (m) adapter			

This ECal module cannot be used in the low frequency range below 300 kHz.
 Mixed connector options are also available. Visit our website for more details about the ECal: www.keysight.com/find/ecal

lodel No.		Description
.5mm		
Mechanical cal	libration kits	
85033E		$50~\Omega$ standard calibration kit, DC to 9 GHz. Includes; - 3.5 mm (m) Load / 3.5 mm (m) Open / 3.5 mm (m) Short - 3.5 mm (f) Load / 3.5 mm (f) Open / 3.5 mm (f) Short - Torque wrench
	85033E-100	Adds 3.5mm (f) to 3.5 mm (f) adapter
	85033E-200	Adds 3.5mm (m) to 3.5 mm (m) adapter
	85033E-300	Adds 3.5mm (f) to 3.5 mm (m) adapter
	85033E-400	Adds; - 3.5 mm (m) to 50 $\Omega$ type- N (m) adapter - 3.5 mm (f) to 50 $\Omega$ type- N (f) adapter - 3.5 mm (f) to 50 $\Omega$ type- N (m) adapter - 3.5 mm (m) to 50 $\Omega$ type- N (f) adapter
	85033E-500	Adds; - 3.5 mm (m) to 7 mm adapter (2 qty.) - 3.5 mm (f) to 7 mm adapter (2 qty.)
Electronic calib	oration kits	
85093C <sup>1</sup>		RF ECal module 2-port (3.5 mm), 300 kHz to 9 GHz
	85093C-M0F <sup>2</sup>	3.5 mm (f) to 3.5 mm (m) RF ECal module
	85093C-00M <sup>2</sup>	3.5 mm (m) to 3.5 mm (m) RF ECal module
	85093C-00F <sup>2</sup>	3.5 mm (f) to 3.5 mm (f) RF ECal module
	85093C-00A	Adds; - 3.5 mm (f) to 3.5 mm (f) adapter - 3.5 mm (m) to 3.5 mm (m) adapter
electable connector	type	
Electronic calib	ration kit	
N4431B <sup>1</sup>		RF ECal module 4-port, 9 kHz to 13.5 GHz. The connector type depends on the option.
	N4431B-010 <sup>2</sup>	Four 3.5 mm (f) connectors
	N4431B-020 <sup>2</sup>	Four 50 Ωtype-N (f) connectors

These ECal modules cannot be used in the low frequency range below 300 kHz or 9 kHz.
 Mixed connector options are also available. Visit our website for more details about the ECal: www.keysight.com/find/ecal

el No.		Description			
)					
Mechanical ca	libration kits				
85038A		50 Ω standard calibration kit, DC to 7.5 GHz. Includes; - 7-16 (m) Load / 7-16 (m) Open / 7-16 (m) Short - 7-16 (f) Load / 7-16 (f) Open / 7-16 (f) Short - Torque wrench - Open-end wrench			
85038F		$50~\Omega$ standard calibration kit, DC to 7.5 GHz. Includes; - 7-16 (f) Load / 7-16 (f) Open / 7-16 (f) Short - 7-16 (f) to 7-16 (f) adapter			
85038M		$50~\Omega$ standard calibration kit, DC to 7.5 GHz. Includes; – 7-16 (m) Load / 7-16 (m) Open / 7-16 (m) Short – 7-16 (m) to 7-16 (m) adapter			
Electronic calib	oration kits				
85098C	1	RF ECal module 2-port (7-16), 300 KHz to 7.5 GHz. The sexes of the connectors depend on the option			
	85098C-M0F <sup>2</sup>	7-16 (m) to 7-16 (f) RF ECal module			
	85098C-00F <sup>2</sup>	7-16 (f) to 7-16 (f) RF ECal module			
	85098C-00M <sup>2</sup>	7-16 (m) to 7-16 (m) RF ECal module			
	85098C-00A	Adds; - 7-16 (m) to 7-16 (m) adapter - 7-16 (f) to 7-16 (m) adapter			
n					
Mechanical cal	ibration kits				
85031B		$50\Omega$ economy calibration kit, DC to 6 GHz. Includes; – 7 mm Load (2 qty.) – 7 mm combined Open/Short			

This ECal module cannot be used in the low frequency range below 300 kHz.
 Mixed connector options are also available. Visit our website for more details about the ECal: www.keysight.com/find/ecal

Test accessories (for 75 $\Omega$ system)	
Model No.	Description
Test Port Cable	
11857B	$75\Omega$ type–N cable set, 61 cm (24 in). Includes; - Type–N (m) to type–N (m) cable - Type–N (m) to type–N (f) cable
11857F	$75\Omega$ type-N to type-F cable set, 61 cm (24 in)
11857F-M0F	Includes; - Type-N (m) to type-F (m) cable - Type-N (m) to type-F (f) cable
11857F-00F	Includes; - Type-N (m) to type-F (f) cable
11857F-00M	Includes; - Type-N (m) to type-F (m) cable
11857-60005	Precision 75 $\Omega$ Type-N cable, 61 cm (24 in) cable with male connectors.
Minimum Loss Pad	
11852B	Type-N minimum loss pad. DC to 3 GHz, 50 $\Omega$ type-N (f) to 75 $\Omega$ type-N (m)
11852B-004	$50~\Omega$ type-N (m) to $75~\Omega$ type-N (f)

lel No.		Description		
e-N				
Mechanical cal	libration kits			
85036B		75 Ω standard calibration kit, DC to 3 GHz. Includes;  - Type-N (m) broadband load  - Type-N (f) broadband load  - Type-N (m) short  - Type-N (f) short  - Type-N (m) open  - Type-N (f) open body  - Type-N (f) open center conductor extender  - Type-N (m) to type-N (m) adapter  - Type-N (f) to type-N (f) adapter  - Type-N (m) to type-N (f) adapter		
85036E		75 Ω economy calibration kit, DC to 3 GHz. Includes; - Type-N (m) broadband load - Type-N (m) combined Open/Short		
Electronic calib	oration kits			
85096C <sup>1</sup>		RF ECal module 2-port (75 $\Omega$ type-N), 300 kHz to 3 GHz. The sexes of the connectors depend on the option.		
	85096C-M0F	Type-N (m) to Type-N (f) RF ECal module		
	85096C-00F Type-N (f) to Type-N (f) RF ECal module			
	85096C-00M	Type-N (m) to Type-N (m) RF ECal module		
	85096C-00A	Adds; - Type-N (f) to Type-N (f) adapter - Type-N (m) to Type-N (m) adapter		

Calibration kits (for 75	5 Ω system, continu	ed)
Model No.		Description
Type-F		
Mechanical calib	oration kits	
85039B		$75\Omega$ economy calibration kit, DC to 3 GHz
	85039B-M0F	Includes;  - Type-F (m) Load / Type-F (m) Open / Type-F (m) Short  - Type-F (f) Load / Type-F (f) Open / Type-F (f) Short  - Type-F (m) to type-F (m) adapter  - Type-F (f) to type-F (f) adapter  - Type-F (f) to type-N (m) adapter  - Type-F (m) to type-N (f) adapter
	85039B-00F	Includes; - Type-F (f) Load - Type-F (f) Short - Type-F (f) Open - Type-F (f) to type-F (f) adapter
	85039B-00M	Includes; - Type-F (m) Load - Type-F (m) Short - Type-F (m) Open - Type-F (m) to type-F (m) adapter
Electronic calibr	ration kits	
85099C <sup>1</sup>		2-port (type-F), 300 kHz to 3 GHz. The sexes of the connectors depend on the option.
	85099C-M0F	Type-F (m) to Type-F (f) RF ECal module
	85099C-00F	Type-F (f) to Type-F (f) RF ECal module
	85099C-00M	Type-F (m) to Type-F (m) RF ECal module
	85099C-00A	Adds; - Type-F (f) to Type-F (f) adapter - Type-F (m) to Type-F (m) adapter

Impedance	pedance test accessories <sup>1,2</sup>				
Model No.	del No.		Description		
Terminal ad	rminal adapter and calibration kit				
Mecl	hanical calibration	kits			
	16201A		7 mm terminal adapter kit		
		16201A-001 <sup>3</sup>	7 mm terminal adapter kit for E5061B		
	16195B		7 mm calibration kit (open/short/load, and low-loss capacitor)		
	85031B		7 mm calibration kit (open/short/load)		
7 mn	n test fixtures				
	16092A		Test fixture, 500 MHz, for SMD and leaded DUT		
	16192A		SMD test fixture, 2 GHz		
	16196A/B/C/D		SMD test fixture, 3 GHz		
	16197A		SMD test fixture, 3 GHz		
4-tei	rminal-pair test fix	tures			
	16047E		Test fixture, for leaded DUT		
	16034E/G/H		SMD test fixture		

General accessories	
Model No.	Description
Interface cables	
10833A	GPIB Cable, 1 m (3.3 ft)
10833B	GPIB Cable, 2 m (6.6 ft)
10833C	GPIB Cable, 4 m (13.1 ft)
10833D	GPIB Cable, 0.5 m (1.6 ft)
10833F	GPIB Cable, 6 m (19.7 ft)
10833G	GPIB Cable, 8 m (26.2 ft)
82357B	GPIB to USB Interface:
	Provides a direct connection from a USB port to GPIB port
System racks and cases	
1CM015A	Rack mount kit, for use without handles: may be ordered as option 1CM
1CN005A	Front handle kit: may be ordered as option 1CN
1CP009A	Rack mount and front handle kit: may be orderd as option 1CP
E3663AC	Rack mount rail kit, for use with 5063-9216 or 5188-4430
1180CZ	Testmobile Scope Cart

For more detailed information about how to select impedance test accessories for the E5061B-3L3/3L4/3L5+005, refer to 5990-7033EN
 For more detailed information about applicable DUT size of these test fixtures, refer to Accessories Selection Guide for Impedance Measurement (5965-4792E).

<sup>3.</sup> Option 001 is the only option for the 16201A. Must choose this option when ordering the 16201A.

## Upgrade kits<sup>1</sup>

The following upgrade kits are available.

Maximum frequency upgrade (Installed by the Keysight service center)						
Upgrade kit No. (Order with this No.)	Description		No.	Customer installable		
		From	To			
E5061BU	Upgrade kit					
E5061BU-035	Upgrade from 50 $\Omega$ 1.5 GHz S-param. To 50 $\Omega$ 3 GHz S-param	215	235	No		
E5061BU-135	Upgrade from 50 $\Omega$ 1.5 GHz Trans./Refl. To 50 $\Omega$ 3 GHz Trans./Refl.	115	135	No		
E5061BU-037	Upgrade from 75 $\Omega$ 1.5 GHz S-param. To 75 $\Omega$ 3 GHz S-param.	217	237	No		
E5061BU-137	Upgrade from 75 $\Omega$ 1.5 GHz Trans./Refl. To 75 $\Omega$ 3 GHz Trans./Refl.	117	137	No		
E5061BU-343	Upgrade from 50 $\Omega$ 500 MHz LF-RF To 50 $\Omega$ 1.5 GHz LF-RF	3L3	3L4	No		
E5061BU-353	Upgrade from 50 $\Omega$ 500 MHz LF-RF To 50 $\Omega$ 3 GHz LF-RF	3L3	3L5	No		
E5061BU-354	Upgrade from 50 $\Omega$ 1.5 GHz LF-RF To 50 $\Omega$ 3 GHz LF-RF	3L4	3L5	No		

Test set upgrade (Installed by the Keysight service center)						
Upgrade kit No. (Order with this No.)		Description		No.	Customer installable	
				To		
E5061BU		Upgrade kit				
	E5061BU-215	Upgrade from 50 $\Omega$ 1.5 GHz Trans./Refl. To 50 $\Omega$ 1.5 GHz S-param.	115	215	No	
	E5061BU-235	Upgrade from 50 $\Omega$ 3 GHz Trans./Refl. To 50 $\Omega$ 3 GHz S-param.	135	235	No	
	E5061BU-217	Upgrade from 75 $\Omega$ 1.5 GHz Trans./Refl To 75 $\Omega$ 1.5 GHz S-param.	127	217	No	
	E5061BU-237	Upgrade from 75 Ω 3 GHz Trans./Refl. To 75 Ω 3 GHz S-param.	137	237	No	

Hardwa	Hardware upgrade options matrix (Frequency and test set)						
From	To	Upgrade options to order	From	To	Upgrade options to order		
115	135	E5061BU-135	117	137	E5061BU-137		
	215	E5061BU-215		217	E5061BU-217		
	235	E5061BU-135+E5061BU-235		237	E5061BU-137+E5061BU-237		
	235	E5061BU-235	137	237	E5061BU-237		
	235	E5061BU-035	217	237	E5061BU-037		

Test set upgrade (Installed by the Keysight service center)					
Upgrade kit No. (Order with this No.)	Description	Option No.	Customer installable		
E5061BU	Upgrade kit				
E5061BU-1E5	Add high stability time base	E5061B-1E5	No		

Software upgrade					
Upgrade kit No. (Order with this No.)		Description	Option No.	Customer installable	
E5006A		Time domain/fault location analysis	E5061B-010	Yes	
	E5006A-1FP	Fixed, Perpetual license			
E5007A <sup>1, 2</sup>		Impedance analysis for E5061B-3L3/3L4/3L5 LF-RF network analyzer	E5061B-005	Yes	
	E5007A-1FP	Fixed, Perpetual license			
E5061BU-006 <sup>3</sup>		Wireless power transfer analysis - Fixed, Perpetual license	E5061B-006	Yes	

Impedance accessory					
Upgrade kit No. (Order with this No.)	Description	Option No.	Customer installable		
E5061-60109	50 Ω resister set (Equivalent to E5061B-720)	E5061B-720	N/A		

## Literature resources

You can find detail information about the key features, application examples, and technical specification of the E5061B in the following document.

Literature resources for the E5061B			
Literature number	Literature title		
5990-6794EN	Keysight E5061B Network Analyzer Brochure		
5990-4392EN	Keysight E5061B Network Analyzer Data Sheet		
5990-7033EN	Keysight E5061B-3L5/005 Impedance Analysis Function Data Sheet and Configuration Guide		

## Web resources

Have access to the following website to acquire the latest news, product and support information, application literature and more. http://www.keysight.com/find/e5061b

<sup>1.</sup> This option is not applicable for the E5061B RF NA options 1x5/1x7/2x5/2x7.

<sup>2.</sup> The firmware must be Rev. A.02.00 or later.

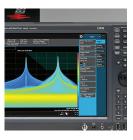
<sup>3.</sup> This option is not applicable for the E5061B 70 ohm test set options 1x7/2x7 and Transmission/Reflection test set options 1x5. The firmware must be Rev. B.04.10 or later.

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