



OCEAN  
MICROWAVE

EC MICROWAVE

# E-Series Calibration Kit

DC-18GHz





# E Series Calibration Kit

## ETEST-PRE Calibration Kit

Precise , Durable

Coaxial mechanical Calibration kit is widely used in the VNA calibration and test, it is composed by a series of open-kit , short-kit and load.

### Precise

Ideal connection interface, excellent electrical performance

### Reliable

The test port made by stainless steel extends the service life. Under typical conditions, the calibration kit can be used over 2000 times, which is far more than the 500-times standard by IEC and MIL

### Confidence

Crafted details bring perfect use experience. Advanced standard calibration during manufactory, Ensured customer-confidence in each calibration and test.



DC~  
**18**GHz

**2000**  
times

**N**  
**3.5**mm



## Selection Guide

P/N	Type	Connector	Freq. (GHz)	Specification	Mating Cycles (times)	Coupling Torque (Nm)	Open-end Wrench size (mm)																																																																																																																
ETES-PRE-NM-O-06	Open	N-M	6	Phase deviation :	>3000	1.3~1.7	19																																																																																																																
ETES-PRE -NF-O-06		N-F		$\leq \pm 0.6^\circ$				ETES-PRE-NM-S-06	Short	N-M	6	Phase deviation :	>3000	1.3~1.7	19	ETES-PRE-NF-S-06	N-F	$\leq \pm 0.6^\circ$	ETES-PRE-NM-L-06	Load	N-M	6	VSWR $\leq 1.025$	>3000	1.3~1.7	19	ETES-PRE-NF-L-06	N-F	ETES-PRE-NM-O-09	Open	N-M	9	Phase deviation :	>3000	1.3~1.7	19	ETES-PRE-NF-O-09	N-F	$\leq \pm 0.8^\circ$	ETES-PRE-NM-S-09	Short	N-M	9	Phase deviation :	>3000	1.3~1.7	19	ETES-PRE-NF-S-09	N-F	$\leq \pm 0.8^\circ$	ETES-PRE-NM-L-09	Load	N-M	9	VSWR $\leq 1.032$	>3000	1.3~1.7	19	ETES-PRE-NF-L-09	N-F	ETES-PRE-35M-O-06	Open	3.5-M	6	Phase deviation :	>2000	0.8~1.1	8	ETES-PRE-35F-O-06	3.5-F	$\leq \pm 0.6^\circ$	ETES-PRE-35M-S-06	Short	3.5-M	6	Phase deviation :	>2000	0.8~1.1	8	ETES-PRE-35F-S-06	3.5-F	$\leq \pm 0.6^\circ$	ETES-PRE-35M-L-06	Load	3.5-M	6	VSWR $\leq 1.025$	>2000	0.8~1.1	8	ETES-PRE-35M-L-06	3.5-F	ETES-PRE-35M-O-09	Open	3.5-M	9	Phase deviation :	>2000	0.8~1.1	8	ETES-PRE-35F-O-09	3.5-F	$\leq \pm 0.8^\circ$	ETES-PRE-35M-S-09	Short	3.5-M	9	Phase deviation :	>2000	0.8~1.1	8	ETES-PRE-35F-S-09	3.5-F	$\leq \pm 0.8^\circ$	ETES-PRE-35M-L-09	Load	3.5-M	9	VSWR $\leq 1.032$
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\* Type-N Open-end Wrench size 19mm, Coupling torque 1.35Nm(12in.lbs). Coupling torque is customizable.

\*\* Type- 3.5mm Open-end Wrench size 8mm, open-end, Coupling torque 0.9Nm(8in.lbs) . Coupling torque is customizable.

\*\*\* Phase deviation : relevant tolerance from standard phase

## ETEST-ECO Calibration Kit

### Stable , Economical

Suitable for production testing of various passive and active devices  
with scalar network analyzers (SNAs).



### Selection Guide

P/N	Type	Connector	Freq. (GHz)	Specification	Mating cycles (times)	Coupling torque (Nm)	Open-end wrench size (mm)
ETES-ECO-NM-O-03	Open	N-M	3	Phase deviation : $\leq \pm 0.8^\circ$	>3000	1.3~1.7	19
ETES-ECO-NF-O-03		N-F					
ETES-ECO-NM-S-03	Short	N-M	3	Phase deviation : $\leq \pm 0.8^\circ$	>3000	1.3~1.7	19
ETES-ECO-NF-S-03		N-F					
ETES-ECO-NM-L-03	Load	N-M	3	VSWR $\leq 1.02$	>3000	1.3~1.7	19
ETES-ECO-NF-L-03		N-F					
ETES-ECO-NM-O-06	Open	N-M	6	Phase deviation : $\leq \pm 1^\circ$	>3000	1.3~1.7	19
ETES-ECO-NF-O-06		N-F					
ETES-ECO-NM-S-06	Short	N-M	6	Phase deviation : $\leq \pm 1^\circ$	>3000	1.3~1.7	19
ETES-ECO-NF-S-06		N-F					
ETES-ECO-NM-L-06	Load	N-M	6	VSWR $\leq 1.035$	>3000	1.3~1.7	19
ETES-ECO-NF-L-06		N-F					
ETES-ECO-35M-O-03	Open	3.5-M	3	Phase deviation : $\leq \pm 0.8^\circ$	>2000	0.8~1.1	8
ETES-ECO-35F-O-03		3.5-F					
ETES-ECO-35M-S-03	Short	3.5-M	3	Phase deviation : $\leq \pm 0.8^\circ$	>2000	0.8~1.1	8
ETES-ECO-35F-S-03		3.5-F					
ETES-ECO-35M-L-03	Load	3.5-M	3	VSWR $\leq 1.02$	>2000	0.8~1.1	8
ETES-ECO-35F-L-03		3.5-F					
ETES-ECO-35M-O-06	Open	3.5-M	6	Phase deviation : $\leq \pm 1^\circ$	>2000	0.8~1.1	8
ETES-ECO-35F-O-06		3.5-F					
ETES-ECO-35M-S-06	Short	3.5-M	6	Phase deviation : $\leq \pm 1^\circ$	>2000	0.8~1.1	8
ETES-ECO-35F-S-06		3.5-F					
ETES-ECO-35M-L-06	Load	3.5-M	6	VSWR $\leq 1.035$	>2000	0.8~1.1	8
ETES-ECO-35F-L-06		3.5-F					

## Integrated Calibration Kit Portable

Integrated calibration kit is mechanically integrated by single calibration kit, also known as Type-T calibration kit.

Suitable for outdoor application and engineering test

Maximum operating frequency up to 9GHz(characteristic impedance $50\Omega$ ), Type-N connector.



### Selection Guide

P/N	Type	Connector	Freq. (GHz)	Specification	Mating cycles (times)	Coupling torque (Nm)	Open-end wrench size (mm)
EINT-NM-O-04	Open	N-M	4	Phase deviation : $\leq \pm 0.6^\circ$	>3000	1.3~1.7	19
EINT-NF-O-04		N-F					
EINT-NM-S-04	Short	N-M	4	Phase deviation : $\leq \pm 0.6^\circ$	>3000	1.3~1.7	19
EINT-NF-S-04		N-F					
EINT-NF-L-04	Load	N-M	4	VSWR $\leq 1.025$	>3000	1.3~1.7	19
EINT-NF-L-04		N-F					
EINT-NM-O-06	Open	N-M	6	Phase deviation : $\leq \pm 0.8^\circ$	>3000	1.3~1.7	19
EINT-NF-O-06		N-F					
EINT-NM-S-06	Short	N-M	6	Phase deviation : $\leq \pm 0.8^\circ$	>3000	1.3~1.7	19
EINT-NF-S-06		N-F					
EINT-NF-L-06	Load	N-M	6	VSWR $\leq 1.032$	>3000	1.3~1.7	19
EINT-NF-L-06		N-F					
EINT-NM-O-09	Open	N-M	9	Phase deviation : $\leq \pm 0.8^\circ$	>3000	1.3~1.7	19
EINT-NF-O-09		N-F					
EINT-NM-S-09	Short	N-M	9	Phase deviation : $\leq \pm 0.8^\circ$	>3000	1.3~1.7	19
EINT-NF-S-09		N-F					
EINT-NF-L-09	Load	N-M	9	VSWR $\leq 1.032$	>3000	1.3~1.7	19
EINT-NF-L-09		N-F					



# Port Adapter

## NMD Port Adapter Precise, 67GHz

NMD test port connector is a ruggedized test port connector used for stable connection to VNA or any NMD style test port. These adapters can provide connection between or adapt to cable assemblies and devices. The adapter provides precise calibration port to ensure the original accuracy of the analyzer.

The rugged construction makes the connection very stable, repeatable and protects the test port of the instrument

Frequency up to 67GHz.



DC~  
**67** GHz

**1.15**:1  
VSWR

**0.23** dB  
I.L.

## NMD3.5mm Port Adapter

### Selection Guide



P/N	Description	Freq.(GHz)	VSWR	IL(dB)
EADP-NMD35F- NMD35M	NMD3.5mm(f) to NMD3.5mm(m)	DC~26.5	<1.15:1	<0.23
EADP- NMD35F- 35F	NMD3.5mm(f) to 3.5mm(f)	DC~26.5	<1.15:1	<0.23
EADP- NMD35F- NM	NMD3.5mm(f) to N(m)	DC~18	<1.15:1	<0.19
EADP- NMD35F- NF	NMD3.5mm(f) to N(f)	DC~18	<1.15:1	<0.19

## NMD 2.92mm Port Adapter



P/N	Description	Freq.(GHz)	VSWR	IL (dB)
EADP- NMD292F- NMD292M	NMD2.92mm(f) to NMD2.92mm(m)	DC~40	<1.20:1	<0.40
EADP- NMD292F- 292F	NMD2.92mm(f) to 2.92mm(f)	DC~40	<1.20:1	<0.40
EADP- NMD292F- NMD24F	NMD2.92mm(f) to NMD2.4mm(m)	DC~40	<1.20:1	<0.36
EADP- NMD292F- 24F	NMD2.92mm(f) to 2.4mm(f)	DC~40	<1.20:1	<0.36
EADP- NMD292F- NMD35M	NMD2.92mm(f) to NMD3.5mm(m)	DC~26.5	<1.15:1	<0.25
EADP- NMD292F- 35F	NMD2.92mm(f) to 3.5mm(f)	DC~26.5	<1.15:1	<0.25

Body Materials	stainless steel, passivated
Center Conductor Materials	Ag-plated Beryllium Copper
Storage Temperature	-55°C~+125°C
Operating Temperature	0°C~85°C
Mating cycles	>2000 times

## NMD 2.4mm Port Adapter



### Selection Guide

P/N	Description	Freq.(GHz)	VSWR	IL(dB)
EADP- NMD24F- NMD24M	NMD2.4mm(f) to NMD2.4mm(m)	DC~50	<1.25:1	<0.40
EADP- NMD24F- 24F	NMD2.4mm(f) to 2.4mm(f)	DC~50	<1.25:1	<0.40
EADP- NMD24F- NMD292M	NMD2.4mm(f) to NMD2.92mm(m)	DC~40	<1.20:1	<0.36
EADP- NMD24F- 292F	NMD2.4mm(f) to 2.92mm(f)	DC~40	<1.20:1	<0.36
EADP- NMD24F- NMD35M	NMD2.4mm(f) to NMD3.5mm(m)	DC~26.5	<1.15:1	<0.25
EADP- NMD24F- 35F	NMD2.4mm(f) to 3.5mm(f)	DC~26.5	<1.15:1	<0.25

## NMD 1.85mm Port Adapter



### Selection Guide

P/N	Description	Freq.(GHz)	VSWR	IL(dB)
EADP- NMD185F- NMD185M	NMD1.85mm(f) to NMD1.85mm(m)	DC~67	<1.35:1	<0.52
EADP- NMD185F- 185F	NMD1.85mm(f) to 1.85mm(f)	DC~67	<1.35:1	<0.52
EADP- NMD185F- NMD24M	NMD1.85mm(f) to NMD2.4mm(m)	DC~50	<1.25:1	<0.44
EADP- NMD185F- 24F	NMD1.85mm(f) to 2.4mm(f)	DC~50	<1.25:1	<0.44

Body Materials	stainless steel, passivated
Center Conductor Materials	Ag-plated Beryllium Copper
Storage Temperature	-55°C~+125°C
Operating Temperature	0°C~85°C
Mating cycles	>2000 times