

CobaltFx FEV-15/FEV-12 Specifications¹



Necessary Accessories*

For each set of extenders (2) DC cable, (4) IF cables, and (4) RF-LO cables are needed to operate the frequency extension system.

CobaltFx FEV-15

System Operating Frequency	50 GHz to 75 GHz
Test Port Output Power	5 dBm min., 8 dBm typ.
System Dynamic Range ²	110 dB min., 120 dB typ.
Raw Coupler Directivity	40 dB min., 45 dB typ.
Trace Stability Magnitude ³	±0.2 dB
Trace Stability Phase ³	2°
Test Port Input 0.1 dB Compression Point	15 dBm
RF Input Frequency	6.25 GHz to 9.375 GHz
RF Input Power	0 dBm
LO Input Frequency	4.17 GHz to 6.25 GHz
LO Input Power	-5 dBm
IF Output Frequency	7.5 MHz
Test Port Damage Level	+20 dBm
RF/LO Port Damage Level	+10 dBm
Test Port Interface	WR-15 IEEE 1785-2a compatible with UG-385/U
RF/LO/IF Connector	SMA (F)
DC Power Requirements	+6 V at 2200 mA
Weight	3.5 kg
Dimensions	220 x 105 x 80 mm (8 ³ / ₅ x 4 ¹ / ₈ x 3 ¹ / ₈ inches)
Operating temperature	0°C to 30°C (32°F to 86°F)

CobaltFx FEV-12

System Operating Frequency	60 GHz to 90 GHz
Test Port Output Power	2 dBm min., 5 dBm typ.
System Dynamic Range ²	100 dB min., 110 dB typ.
Raw Coupler Directivity	40 dB min., 45 dB typ.
Trace Stability Magnitude ³	±0.2 dB
Trace Stability Phase ³	2°
Test Port Input 0.1 dB Compression Point	15 dBm
RF Input Frequency	5 GHz to 7.5 GHz
RF Input Power	0 dBm
LO Input Frequency	5 GHz to 7.5 GHz
LO Input Power	-5 dBm
IF Output Frequency	7.5 MHz
Test Port Damage Level	+20 dBm
RF/LO Port Damage Level	+10 dBm
Test Port Interface	WR-12 IEEE 1785-2a compatible with UG-387/U
RF/LO/IF Connector	SMA (F)
DC Power Requirements	+6 V at 2200 mA
Weight	3.5 kg
Dimensions	220 x 105 x 80 mm (8 ³ / ₅ x 4 ¹ / ₈ x 3 ¹ / ₈ inches)
Operating temperature	0°C to 30°C (32°F to 86°F)

[1] All specifications subject to change without notice. *Necessary Accessories are included in a standard length (4 feet). [2] Measured at 10 Hz IF BW [3] At 23 °C +/- 5 °C after 1 hour warm-up and calibration. Assuming ideal RF and LO cables © Copper Mountain Technologies - www.coppermountaintech.com - Rev. 2018Q1

FEV-10 Specifications¹/Waveguide Calibration Kits

CobaltFx FEV-10

System Operating Frequency	75 GHz to 110 GHz
Test Port Output Power	0 dBm min., 5 dBm typ.
System Dynamic Range ²	100 dB min., 110 dB typ.
Raw Coupler Directivity	40 dB min., 45 dB typ.
Trace Stability Magnitude ³	±0.2 dB
Trace Stability Phase ³	2°
Test Port Input 0.1 dB Compression Point	10 dBm
RF Input Frequency	6.25 GHz to 9.17 GHz
RF Input Power	0 dBm
LO Input Frequency	4.688 GHz to 6.875 GHz
LO Input Power	-5 dBm
IF Output Frequency	7.5 MHz
Test Port Damage Level	+20 dBm
RF/LO Port Damage Level	+10 dBm
Test Port Interface	WR-10 IEEE 1785-2a compatible with UG-387/UM
RF/LO/IF Connector	SMA (F)
DC Power Requirements	+6 V at 2200 mA
Weight	3.5 kg
Dimensions	220 x 105 x 80 mm (8 3/5 x 4 1/8 x 3 1/8 inches)
Operating temperature	0°C to 30°C (32°F to 86°F)

Waveguide Calibration Kits compatible with CobaltFx FEV Models

	CobaltFx WR-15 Calibration Kit	CobaltFx WR-12 Calibration Kit	CobaltFx WR-10 Calibration Kit
Operating Frequency Range	50 GHz to 75 GHz	60 GHz to 90 GHz	75 GHz to 110 GHz
Waveguide Designation	WR-15, WG-25, typ.	WR-12, WG-26, typ.	WR-10, WG-27
Flange Type	IEEE 1785-2a (Precision Style)	IEEE 1785-2a (Precision Style)	IEEE 1785-2a (Precision Style)
Cut Off Frequency	39.8765 GHz	48.3692 GHz	59.0143 GHz
Fixed Load VSWR	< 1.035:1	< 1.04:1	< 1.04:1
Flush Short Flatness	< 0.016 mm	< 0.012 mm	< 0.012 mm
Operating Temperature Range	20 to 30°C (68 to 86°F)	20 to 30°C (68 to 86°F)	20 to 30°C (68 to 86°F)

	Quantity	Quantity	Quantity
Broadband Termination	1 off	1 off	1 off
Flush Short	1 off	1 off	1 off
1/4 Lambda Offset	1 off	1 off	1 off

	Quantity	Quantity	Quantity
Hex Driver 5/64" A/F	1 off	1 off	1 off
Flange Screws - Short	4 off	4 off	4 off
Flange Screws - Long	4 off	4 off	4 off
Alignment Pins	4 off	4 off	4 off
USB Flash Memory	1 off	1 off	1 off

Typical Output Power Plots for FEV Models

