

Waveguide to Coaxial Adapters

FEATURES:

- ❖ Full waveguide band operation
- ❖ Low insertion loss
- ❖ Low VSWR
- ❖ Rugged mechanical construction

APPLICATIONS:

- ❖ Test setups
- ❖ Instrumentation
- ❖ Subsystems
- ❖ Transceivers



CWK Series

DESCRIPTION:

Cernex CWK Series waveguide to coaxial line adapters are available in several waveguide bands covering the frequency range of 1.7 to 70GHz. These adapters are especially designed for full waveguide band operation with exceptional high performance. The adapters are ideal choices where a waveguide to coaxial transition is required.

SPECIFICATIONS:

Model Number	Frequency (GHz)	Freq. Band	Waveguide Size	Flange Type	Coaxial Connector Type	Insertion Loss (dB max)	VSWR Max
CWK430010203SF	1.7-2.6	L	WR-430	CPR430	SMA-F	0.3	1.25:1
CWK430010203SM	1.7-2.6	L	WR-430	CPR430	SMA-M	0.3	1.25:1
CWK430010203NF	1.7-2.6	L	WR-430	CPR430	N-F	0.3	1.25:1
CWK430010203NM	1.7-2.6	L	WR-430	CPR430	N-M	0.3	1.25:1
CWK340020303SF	2.3-3.3	S	WR-340	UG1347/U	SMA-F	0.3	1.25:1
CWK340G020303SF	2.3-3.3	S	WR-340	GROOVE	SMA-F	0.3	1.25:1
CWK340020303SM	2.3-3.3	S	WR-340	UG1347/U	SMA-M	0.3	1.25:1
CWK340G020303SM	2.3-3.3	S	WR-340	GROOVE	SMA-M	0.3	1.25:1
CWK340020303NF	2.3-3.3	S	WR-340	UG1347/U	N-F	0.3	1.25:1
CWK340G020303NF	2.3-3.3	S	WR-340	GROOVE	N-F	0.3	1.25:1
CWK340020303NM	2.3-3.3	S	WR-340	UG1347/U	N-M	0.3	1.25:1
CWK340G020303NM	2.3-3.3	S	WR-340	GROOVE	N-M	0.3	1.25:1
CWK284020303SF	2.6-3.95	S	WR-284	CPR284	SMA-F	0.3	1.25:1
CWK284G020303SF	2.6-3.95	S	WR-284	GROOVE	SMA-F	0.3	1.25:1
CWK284020303SM	2.6-3.95	S	WR-284	CPR284	SMA-M	0.3	1.25:1
CWK284G020303SM	2.6-3.95	S	WR-284	GROOVE	SMA-M	0.3	1.25:1
CWK284020303NF	2.6-3.95	S	WR-284	CPR284	N-F	0.3	1.25:1
CWK284G020303NF	2.6-3.95	S	WR-284	GROOVE	N-F	0.3	1.25:1

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CWK284020303NM	2.6-3.95	S	WR-284	CPR284	N-M	0.3	1.25:1
CWK284G020303NM	2.6-3.95	S	WR-284	GROOVE	N-M	0.3	1.25:1
CWK229030403SF	3.6-4.2	C	WR-229	CPR229	SMA-F	0.3	1.25:1
CWK229G030403SF	3.6-4.2	C	WR-229	GROOVE	SMA-F	0.3	1.25:1
CWK229030403SM	3.6-4.2	C	WR-229	CPR229	SMA-M	0.3	1.25:1
CWK229G030403SM	3.6-4.2	C	WR-229	GROOVE	SMA-M	0.3	1.25:1
CWK229030403NF	3.6-4.2	C	WR-229	CPR229	N-F	0.3	1.25:1
CWK229G030403NF	3.6-4.2	C	WR-229	GROOVE	N-F	0.3	1.25:1
CWK229030403NM	3.6-4.2	C	WR-229	CPR229	N-M	0.3	1.25:1
CWK229G030403NM	3.6-4.2	C	WR-229	GROOVE	N-M	0.3	1.25:1
CWK187040503SF	4.4-5.8	C	WR-187	CPR187	SMA-F	0.3	1.25:1
CWK187G040503SF	4.4-5.8	C	WR-187	GROOVE	SMA-F	0.3	1.25:1
CWK187040503SM	4.4-5.8	C	WR-187	CPR187	SMA-M	0.3	1.25:1
CWK187G040503SM	4.4-5.8	C	WR-187	GROOVE	SMA-M	0.3	1.25:1
CWK187040503NF	4.4-5.8	C	WR-187	CPR187	N-F	0.3	1.25:1
CWK187G040503NF	4.4-5.8	C	WR-187	GROOVE	N-F	0.3	1.25:1
CWK187040503NM	4.4-5.8	C	WR-187	CPR187	N-M	0.3	1.25:1
CWK187G040503NM	4.4-5.8	C	WR-187	GROOVE	N-M	0.3	1.25:1
CWK159040703SF	4.9-7.05	C	WR-159	CMR-159	SMA-F	0.3	1.25:1
CWK159G040703SF	4.9-7.05	C	WR-159	GROOVE	SMA-F	0.3	1.25:1
CWK159040703SM	4.9-7.05	C	WR-159	CMR-159	SMA-M	0.3	1.25:1
CWK159G040703SM	4.9-7.05	C	WR-159	GROOVE	SMA-M	0.3	1.25:1
CWK159040703NF	4.9-7.05	C	WR-159	CMR-159	N-F	0.3	1.25:1
CWK159G040703NF	4.9-7.05	C	WR-159	GROOVE	N-F	0.3	1.25:1
CWK159040703NM	4.9-7.05	C	WR-159	CMR-159	N-M	0.3	1.25:1
CWK159G040703NM	4.9-7.05	C	WR-159	GROOVE	N-M	0.3	1.25:1
CWK137050803SF	5.8-8.2	C	WR-137	CPR137	SMA-F	0.3	1.25:1
CWK137G050803SF	5.8-8.2	C	WR-137	GROOVE	SMA-F	0.3	1.25:1
CWK137050803SM	5.8-8.2	C	WR-137	CPR137	SMA-M	0.3	1.25:1
CWK137G050803SM	5.8-8.2	C	WR-137	GROOVE	SMA-M	0.3	1.25:1
CWK137050803NF	5.8-8.2	C	WR-137	CPR137	N-F	0.3	1.25:1
CWK137G050803NF	5.8-8.2	C	WR-137	GROOVE	N-F	0.3	1.25:1
CWK137050803NM	5.8-8.2	C	WR-137	CPR137	N-M	0.3	1.25:1
CWK137G050803NM	5.8-8.2	C	WR-137	GROOVE	N-M	0.3	1.25:1
CWK112071004SF	7.05-10	C	WR-112	CPR112	SMA-F	0.4	1.25:1
CWK112G071004SF	7.05-10	C	WR-112	GROOVE	SMA-F	0.4	1.25:1
CWK112071004SM	7.05-10	C	WR-112	CPR112	SMA-M	0.4	1.25:1

Waveguide to Coaxial Adapters

Model Number	Frequency (GHz)	Freq. Band	Waveguide Size	Flange Type	Coaxial Connector Type	Insertion Loss (dB max)	VSWR Max
CWK112G071004SM	7.05-10	C	WR-112	GROOVE	SMA-M	0.4	1.25:1
CWK112071004NF	7.05-10	C	WR-112	CPR112	N-F	0.4	1.25:1
CWK112G071004NF	7.05-10	C	WR-112	GROOVE	N-F	0.4	1.25:1
CWK112071004NM	7.05-10	C	WR-112	CPR112	N-M	0.4	1.25:1
CWK112G071004NM	7.05-10	C	WR-112	GROOVE	N-M	0.4	1.25:1
CWK90081204SF	8.2-12.4	X	WR-90	UG39/U	SMA-F	0.4	1.25:1
CWK90G081204SF	8.2-12.4	X	WR-90	GROOVE	SMA-F	0.4	1.25:1
CWK90081204SM	8.2-12.4	X	WR-90	UG39/U	SMA-M	0.4	1.25:1
CWK90G081204SM	8.2-12.4	X	WR-90	GROOVE	SMA-M	0.4	1.25:1
CWK90081204NF	8.2-12.4	X	WR-90	UG39/U	N-F	0.4	1.25:1
CWK90G081204NF	8.2-12.4	X	WR-90	GROOVE	N-F	0.4	1.25:1
CWK90081204NM	8.2-12.4	X	WR-90	UG39/U	N-M	0.4	1.25:1
CWK90G081204NM	8.2-12.4	X	WR-90	GROOVE	N-M	0.4	1.25:1
CWK75101504SF	10-15	XKu	WR-75	UBR120	SMA-F	0.4	1.25:1
CWK75G101504SF	10-15	XKu	WR-75	GROOVE	SMA-F	0.4	1.25:1
CWK75101504SM	10-15	XKu	WR-75	UBR120	SMA-M	0.4	1.25:1
CWK75G101504SM	10-15	XKu	WR-75	GROOVE	SMA-M	0.4	1.25:1
CWK75101504NF	10-15	XKu	WR-75	UBR120	N-F	0.4	1.25:1
CWK75G101504NF	10-15	XKu	WR-75	GROOVE	N-F	0.4	1.25:1
CWK75101504NM	10-15	XKu	WR-75	UBR120	N-M	0.4	1.25:1
CWK75G101504NM	10-15	XKu	WR-75	GROOVE	N-M	0.4	1.25:1
CWK62121803SF	12-18	Ku	WR-62	UG419/U	SMA-F	0.3	1.25:1
CWK62G121803SF	12-18	Ku	WR-62	GROOVE	SMA-F	0.3	1.2:1
CWK62121803SM	12-18	Ku	WR-62	UG419/U	SMA-M	0.3	1.2:1
CWK62G121803SM	12-18	Ku	WR-62	GROOVE	SMA-M	0.3	1.2:1
CWK62121805NF	12-18	Ku	WR-62	UG419/U	N-F	0.5	1.25:1
CWK62G121805NF	12-18	Ku	WR-62	GROOVE	N-F	0.5	1.25:1
CWK62121805NM	12-18	Ku	WR-62	UG419/U	N-M	0.5	1.25:1
CWK62G121805NM	12-18	Ku	WR-62	GROOVE	N-M	0.5	1.25:1
CWK51172105SF	17.7-21.2	K	WR-51	UBR180	SMA-F	0.5	1.30:1
CWK51G172105SF	17.7-21.2	K	WR-51	GROOVE	SMA-F	0.5	1.30:1
CWK51172105SM	17.7-21.2	K	WR-51	UBR180	SMA-M	0.5	1.30:1
CWK51G172105SM	17.7-21.2	K	WR-51	GROOVE	SMA-M	0.5	1.30:1
CWK51172105KF	17.7-21.2	K	WR-51	UBR180	K-F	0.5	1.30:1
CWK51G172105KF	17.7-21.2	K	WR-51	GROOVE	K-F	0.5	1.30:1
CWK42182405SF	18-24	K	WR-42	UG595/U	SMA-F	0.5	1.25:1
CWK42G182405SF	18-24	K	WR-42	GROOVE	SMA-F	0.5	1.25:1

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Model Number	Frequency (GHz)	Freq. Band	Waveguide Size	Flange Type	Coaxial Connector Type	Insertion Loss (dB max)	VSWR Max
CWK42182405SM	18-24	K	WR-42	UG595/U	SMA-M	0.5	1.25:1
CWK42G182405SM	18-24	K	WR-42	GROOVE	SMA-M	0.5	1.25:1
CWK42182603F	18-26.5	K	WR-42	UG595/U	K-F	0.35	1.2:1
CWK42G182603F	18-26.5	K	WR-42	GROOVE	K-F	0.35	1.2:1
CWK42182603M	18-26.5	K	WR-42	UG595/U	K-M	0.35	1.2:1
CWK42G182603M	18-26.5	K	WR-42	GROOVE	K-M	0.35	1.2:1
CWK42182605F	18-26.5	K	WR-42	UG595/U	K-F	0.5	1.25:1
CWK42G182605F	18-26.5	K	WR-42	GROOVE	K-F	0.5	1.25:1
CWK42182605M	18-26.5	K	WR-42	UG595/U	K-M	0.5	1.25:1
CWK42G182605M	18-26.5	K	WR-42	GROOVE	K-M	0.5	1.25:1
CWK42182605M	18-26.5	K	WR-42	UG595/U	K-M	0.5	1.25:1
CWK42G182605M	18-26.5	K	WR-42	GROOVE	K-M	0.5	1.25:1
CWK42182603F4	18-26.5	K	WR-42	UG595/U	2.4mm(F)	0.35	1.25:1
CWK42G182603F4	18-26.5	K	WR-42	GROOVE	2.4mm(F)	0.35	1.25:1
CWK42182603M4	18-26.5	K	WR-42	UG595/U	2.4mm(M)	0.35	1.25:1
CWK42G182603M4	18-26.5	K	WR-42	GROOVE	2.4mm(M)	0.35	1.25:1
CWK34223305F	22-33	Kb	WR-34	UG1530/U	K-F	0.55	1.25:1
CWK34G223305F	22-33	Kb	WR-34	GROOVE	K-F	0.55	1.25:1
CWK34223305M	22-33	Kb	WR-34	UG1530/U	K-M	0.55	1.25:1
CWK34G223305M	22-33	Kb	WR-34	GROOVE	K-M	0.55	1.25:1
CWK34223303F	22-33	Kb	WR-34	UG1530/U	K-F	0.35	1.2:1
CWK34G223303F	22-33	Kb	WR-34	GROOVE	K-F	0.35	1.2:1
CWK34223303M	22-33	Kb	WR-34	UG1530/U	K-M	0.35	1.2:1
CWK34G223303M	22-33	Kb	WR-34	GROOVE	K-M	0.35	1.2:1
CWK28264005F	26.5-40	Ka	WR-28	UG599/U	K-F	0.55	1.25:1
CWK28G264005F	26.5-40	Ka	WR-28	GROOVE	K-F	0.55	1.25:1
CWK28264005M	26.5-40	Ka	WR-28	UG599/U	K-M	0.5	1.3:1
CWK28G264005M	26.5-40	Ka	WR-28	GROOVE	K-M	0.5	1.3:1
CWK28264003F	26.5-40	Ka	WR-28	UG599/U	K-F	0.35	1.2:1
CWK28G264003F	26.5-40	Ka	WR-28	GROOVE	K-F	0.35	1.2:1
CWK28264003M	26.5-40	Ka	WR-28	UG599/U	K-M	0.35	1.2:1
CWK28G264003M	26.5-40	Ka	WR-28	GROOVE	K-M	0.35	1.2:1
CWK28264003F4	26.5-40	Ka	WR-28	UG599/U	2.4mm(F)	0.35	1.2:1
CWK28G264003F4	26.5-40	Ka	WR-28	GROOVE	2.4mm(F)	0.35	1.2:1
CWK28264003M4	26.5-40	Ka	WR-28	UG599/U	2.4mm(M)	0.35	1.2:1
CWK28G264003M4	26.5-40	Ka	WR-28	GROOVE	2.4mm(M)	0.35	1.2:1
CWK22335005F	33-50	Q	WR-22	UG383/U	2.4mm(F)	0.5	1.25:1

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Model Number	Frequency (GHz)	Freq. Band	Waveguide Size	Flange Type	Coaxial Connector Type	Insertion Loss (dB max)	VSWR Max
CWK22335005M	33-50	Q	WR-22	UG383/U	2.4mm(M)	0.5	1.25:1
CWK22335005SQF	33-50	Q	WR-22	SQ Flange	2.4mm(F)	0.5	1.25:1
CWK22G335005SQF	33-50	Q	WR-22	GROOVE	2.4mm(F)	0.5	1.25:1
CWK22335005SQM	33-50	Q	WR-22	SQ Flange	2.4mm(M)	0.5	1.25:1
CWK22G335005SQM	33-50	Q	WR-22	GROOVE	2.4mm(M)	0.5	1.3:1
CWK22335005F18	33-50	Q	WR-22	SQ Flange	1.85mm(F)	0.50	1.3:1
CWK22G335005F18	33-50	Q	WR-22	GROOVE	1.85mm(F)	0.50	1.3:1
CWK19406004F	40-60	U	WR-19	UG383/U	1.85mm(F)	0.45	1.35:1
CWK19406004M	40-60	U	WR-19	UG383/U	1.85mm(M)	0.45	1.35:1
CWK15507505F ▲	50-75	V	WR-15	UG385/U	1.85mm(F)	0.55	1.4:1
CWK155075051F	50-75	V	WR-15	UG385/U	1mm(F)	1.0 typ	1.4:1
CWK155075051M	50-75	V	WR-15	UG385/U	1mm(M)	1.0 typ	1.4:1
CWK15507505M ▲	50-75	V	WR-15	UG385/U	1.85mm(M)	0.55	1.4:1
CWK12609006VF ▲	60-90	E	WR-12	UG387/U	1.85mm(F)	0.65	1.8:1
CWK126090061F	60-90	E	WR-12	UG387/U	1mm(F)	1.0 typ	2:1 typ
CWK126090061M	60-90	E	WR-12	UG387/U	1mm(M)	1.0 typ	2:1 typ
CWK10751101F	75-110	W	WR-10	UG387/U-M	1mm(F)	1.0 typ	2:1 typ
CWK10751101M	75-110	W	WR-10	UG387/U-M	1mm(M)	1.0 typ	2:1 typ

▲ DEGRADED PERFORMANCE > 70GHz

IN LINE: (END LAUNCH)

Model Number	Frequency (GHz)	Bandwidth (GHz)	Waveguide Size	Flange Type	Coaxial Connector Type	Insertion Loss (dB max)	VSWR Max
CWKE187050501SG	5.0-5.8	0.20	WR187	CPR187	SMA-F	0.1*	1.15:1
CWKE187G050501SG	5.0-5.8	0.20	WR187	GROOVE	SMA-F	0.1*	1.15:1
CWKE187050501NG	5.0-5.8	0.20	WR187	CPR187	N-F	0.1*	1.15:1
CWKE187G050501NG	5.0-5.8	0.20	WR187	GROOVE	N-F	0.1*	1.15:1
CWKE137060701SG	6.0-7.8	0.20	WR137	PDR-70	SMA-F	0.1*	1.15:1
CWKE137G060701SG	6.0-7.8	0.20	WR137	GROOVE	SMA-F	0.1*	1.15:1
CWKE137060701NG	6.0-7.8	0.20	WR137	PDR-70	N-F	0.1*	1.15:1
CWKE137G060701NG	6.0-7.8	0.20	WR137	GROOVE	N-F	0.1*	1.15:1
CWKE112070801SG	7.7-8.5	0.20	WR112	CPR112	SMA-F	0.1*	1.15:1
CWKE112G070801SG	7.7-8.5	0.20	WR112	GROOVE	SMA-F	0.1*	1.15:1

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Model Number	Frequency (GHz)	Bandwidth (GHz)	Waveguide Size	Flange Type	Coaxial Connector Type	Insertion Loss (dB max)	VSWR Max
CWKE112070801NG	7.7-8.5	0.20	WR112	CPR112	N-F	0.1*	1.15:1
CWKE112G070801NG	7.7-8.5	0.20	WR112	GROOVE	N-F	0.1*	1.15:1
CWKE90081201SG	8.8-12.0	0.30	WR90	UG39/U	SMA-F	0.1*	1.15:1
CWKE90G081201SG	8.8-12.0	0.30	WR90	GROOVE	SMA-F	0.1*	1.15:1
CWKE75101601SG	10.0-16.0	0.30	WR75	UBR120	SMA-F	0.1*	1.15:1
CWKE75G101601SG	10.0-16.0	0.30	WR75	GROOVE	SMA-F	0.1*	1.15:1
CWKE62121801SG	12.7-18.0	0.50	WR62	UG419/U	SMA-F	0.1*	1.15:1
CWKE62G121801SG	12.7-18.0	0.50	WR62	GROOVE	SMA-F	0.1*	1.15:1
CWKE42182605F	18-26.5	2.00	WR-42	UG595/U	2.92mm-F	0.5	1.35:1
CWKE42G182605F	18-26.5	2.00	WR-42	GROOVE	2.92mm-F	0.5	1.35:1
CWKE180D184005F	18-40.0	18-40.0	WRD-180	UG1587	2.92mm-F	0.5	1.6:1
CWKE180DG184005F	18-40.0	18-40.0	WRD-180	GROOVE	2.92mm-F	0.5	1.6:1
CWKE28264005F	26.5-40	2.00	WR-28	UG599/U	2.92mm-F	0.5	1.35:1
CWKE28G264005F	26.5-40	2.00	WR-28	GROOVE	2.92mm-F	0.5	1.35:1

Cernex offers a full range of high rectangular end-launch adapters covering the waveguide sizes **WR-19** thru **WR-650**. Power handling can exceed 1000 watts depend on connector type and waveguide size.

* Only for the specific narrow Bandwidth

WRD ADAPTERS:

Model Number	Frequency (GHz)	Waveguide Size	Flange Type	Coaxial Connector Type	Insertion Loss (dB typ.)	VSWR Max
CWK200D020402F	2.0-4.8	WRD200	COVER	SMA-F	0.25	1.25:1
CWK200D020402M	2.0-4.8	WRD200	COVER	SMA-M	0.25	1.25:1
CWK200D020402NF	2.0-4.8	WRD200	COVER	N-F	0.25	1.25:1
CWK250D020702F	2.6-7.8	WRD250	COVER	SMA-F	0.25	1.25:1
CWK250D020702M	2.6-7.8	WRD250	COVER	SMA-M	0.25	1.25:1
CWK250D020702NF	2.6-7.8	WRD250	COVER	N-F	0.25	1.25:1
CWK350D030802F	3.5-8.2	WRD350	COVER	SMA-F	0.25	1.25:1
CWK350D030802M	3.5-8.2	WRD350	COVER	SMA-M	0.25	1.25:1
CWK350D030802NF	3.5-8.2	WRD350	COVER	N-F	0.25	1.25:1
CWK475D041102F	4.75-11.0	WRD475	COVER	SMA-F	0.25	1.25:1
CWK475D041102M	4.75-11.0	WRD475	COVER	SMA-M	0.25	1.25:1
CWK475D041102NF	4.75-11.0	WRD475	COVER	N-F	0.25	1.25:1
CWK750D071802NF	7.5-18.0	WRD750	COVER	N-F	0.25	1.25:1
CWK750D071802NM	7.5-18.0	WRD750	COVER	N-M	0.25	1.25:1

Waveguide to Coaxial Adapters

Model Number	Frequency (GHz)	Waveguide Size	Flange Type	Coaxial Connector Type	Insertion Loss (dB typ.)	VSWR Max
CWK500D051802NF	5.0-18.0	WRD500	COVER	N-F	0.25	1.3:1
CWK580D051602F	5.8-16.0	WRD580	COVER	SMA-F	0.25	1.25:1
CWK580D051602M	5.8-16.0	WRD580	COVER	SMA-M	0.25	1.25:1
CWK580D051602NF	5.8-16.0	WRD580	COVER	N-F	0.25	1.25:1
CWK650D061802F	6.5-18.0	WRD650	COVER	SMA-F	0.25	1.25:1
CWK650D061802M	6.5-18.0	WRD650	COVER	SMA-M	0.25	1.25:1
CWK650D061802NF	6.5-18.0	WRD650	COVER	N-F	0.25	1.25:1
CWK110D142603M	14.0-26.0	WRD110	COVER	K-M	0.3	1.4:1
CWK180D184005F	18.0-40.0	WRD180	COVER	K-F	0.5	1.35:1
CWK180D184005M	18.0-40.0	WRD180	COVER	K-M	0.5	1.35:1
CWK180D184005F4	18.0-40.0	WRD180	COVER	2.4mm-F	0.5	1.4:1
CWK180D184005M4	18.0-40.0	WRD180	COVER	2.4mm-M	0.5	1.4:1