

WAVEGUIDE DATA SHEET

23 Series Offset Shorts 1/8

The 23 series 1/8 offset shorts are banded waveguide components used for waveguide calibrations. Waveguide calibrations require an alternative calibration than a coaxial SOLT (Short-open-load-thru) because an open waveguide standard is generally not very reflective so the use of offset shorts is generally accepted as a substitute. Waveguide calibrations that use offset shorts include SSLT (Short-short-load-thru) and LRL/LRM (Line-Reflect-Line/Match).



Specifications

Model	Description*	Offset length (mm)	Designation	Cutoff frequency (GHz)
23UA28-R	1/8 Offset Short, US, 26.5 GHz – 40 GHz	1.50	WR28	21.1
23UA42-R	1/8 Offset Short, US, 17 GHz – 26.5 GHz	2.25	WR42	14.1
23UA62-R	1/8 Offset Short, US, 12.4 GHz – 18 GHz	3.33	WR62	9.49
23UA90-R	1/8 Offset Short, US, 8.2 GHz – 12.4 GHz	4.82	WR90	6.56
23UA112-R	1/8 Offset Short, US, 7.05 GHz – 10 GHz	6.02	WR112	5.26
23UA137-R	1/8 Offset Short, US, 5.85 GHz – 8.2 GHz	7.36	WR137	4.301

23UA187-R	1/8 Offset Short, US, 3.95 GHz – 5.85 GHz	10.05	WR187	3.152
23UM40-R	1/8 Offset Short, Metric, 3.3 GHz – 4.9 GHz	12.0	WR229	2.577
23UM48-R	1/8 Offset Short, Metric, 3.95 GHz – 5.85 GHz	10.05	WR187	3.152
23UM70-R	1/8 Offset Short, Metric, 5.85 GHz – 8.2 GHz	7.36	WR137	4.301
23UM84-R	1/8 Offset Short, Metric, 7.05 GHz – 10 GHz	6.02	WR112	5.26
23UM100- R	1/8 Offset Short, Metric, 8.2 GHz – 12.4 GHz	4.82	WR90	6.56
23UM120- R	1/8 Offset Short, Metric, 10 GHz – 15 GHz	4.01	WR75	7.87
23UM140- R	1/8 Offset Short, Metric, 12.4 GHz – 18 GHz	3.33	WR62	9.49
23UM220- R	1/8 Offset Short, Metric, 17 GHz – 26.5 GHz	2.25	WR42	14.1
23UM320- R	1/8 Offset Short, Metric, 26.5 GHz – 40 GHz	1.50	WR28	21.1

24 Series Offset Shorts 3/8

The 24 series offset shorts are fitted with “precision flanges” that are fully compatible with standard flanges while maintaining accuracy and repeatability. The 3/8 offset section is designed to provide a phase balanced response over the desired waveguide frequency range. All 3/8 offset short components are RoHS compliant.



Specifications

Model	Description*	Offset length (mm)	Designation	Cutoff frequency (GHz)
24UA28-R	3/8 Offset Short, US, 26.5 GHz – 40 GHz	4.50	WR28	21.1
24UA42-R	3/8 Offset Short, US, 17 GHz – 26.5 GHz	6.75	WR42	14.1
24UA62-R	3/8 Offset Short, US, 12.4 GHz – 18 GHz	10.0	WR62	9.49
24UA90-R	3/8 Offset Short, US, 8.2 GHz – 12.4 GHz	14.4	WR90	6.56
24UA112-R	3/8 Offset Short, US, 7.05 GHz – 10 GHz	18.0	WR112	5.26
24UA137-R	3/8 Offset Short, US, 5.85 GHz – 8.2 GHz	22.1	WR137	4.301
24UA187-R	3/8 Offset Short, US, 3.95 GHz – 5.85 GHz	10.05	WR187	3.152
24UM40-R	3/8 Offset Short, Metric, 3.3 GHz – 4.9 GHz	36.1	WR229	2.577
24UM48-R	3/8 Offset Short, Metric, 3.95 GHz – 5.85 GHz	30.2	WR187	3.152
24UM70-R	3/8 Offset Short, Metric, 5.85 GHz – 8.2 GHz	7.36	WR137	4.301
24UM84-R	3/8 Offset Short, Metric, 7.05 GHz – 10 GHz	6.02	WR112	5.26
24UM100-R	3/8 Offset Short, Metric, 8.2 GHz – 12.4 GHz	14.4	WR90	6.56
24UM120-R	3/8 Offset Short, Metric, 10 GHz – 15 GHz	12.0	WR75	7.87
24UM140-R	3/8 Offset Short, Metric, 12.4 GHz – 18 GHz	10.0	WR62	9.49
24UM220-R	3/8 Offset Short, Metric, 17 GHz – 26.5 GHz	6.75	WR42	14.1
24UM320-R	3/8 Offset Short, Metric, 26.5 GHz – 40 GHz	4.50	WR28	21.1

26 Series Precision Load

The 26 series are Precision Loads are banded waveguide components used for waveguide calibrations. Waveguide calibrations require an alternative calibration than a coaxial SOLT (Short-open-load-thru). Waveguide calibrations that use Precision Load include SSLT (Short-short-load-thru) and LRL/LRM (Line-Reflect-Line/Match).



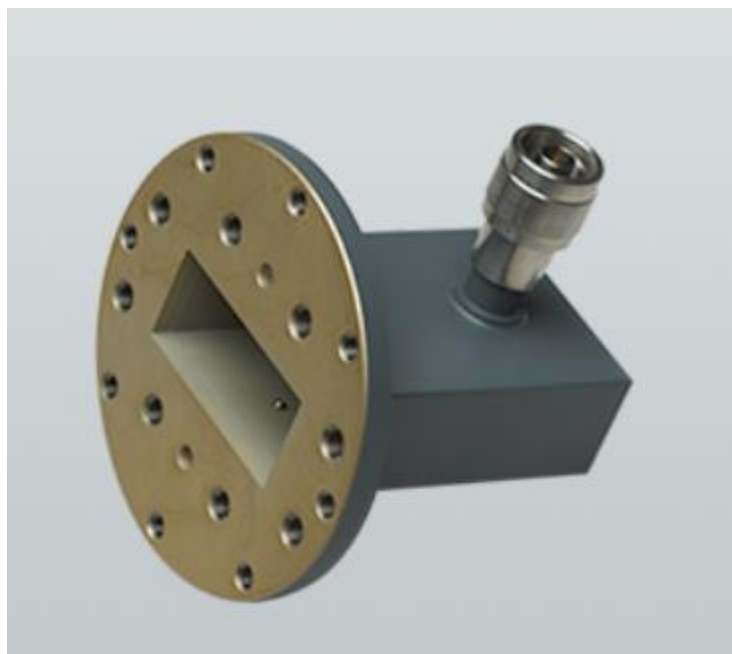
Specifications

Model	Description*	VSWR (max)	VSWR at center frequency	Designation	Cutoff frequency (GHz)
26UA28-R	Precision Load, US, 26.5 GHz – 40 GHz	1.02	1.016	WR28	21.1
26UA42-R	Precision Load, US, 17 GHz – 26.5 GHz	1.03	1.02	WR42	14.1
26UA62-R	Precision Load, US, 12.4 GHz – 18 GHz	1.02	1.016	WR62	9.49
26UA90-R	Precision Load, US, 8.2 GHz – 12.4 GHz	1.02	1.016	WR90	6.56
26UA112-R	Precision Load, US, 7.05 GHz – 10 GHz	1.02	1.016	WR112	5.26
26UA137-R	Precision Load, US, 5.85 GHz – 8.2 GHz	1.02	1.016	WR137	4.301
26UA187-R	Precision Load, US, 3.95 GHz – 5.85 GHz	1.02	1.016	WR187	3.152
26UM40-R	Precision Load, Metric, 3.3 GHz – 4.9 GHz	1.02	1.016	WR229	2.577
26UM48-R	Precision Load, Metric, 3.95 GHz – 5.85 GHz	1.02	1.016	WR187	3.152
26UM70-R	Precision Load, Metric, 5.85 GHz – 8.2 GHz	1.02	1.016	WR137	4.301

26UM84-R	Precision Load, Metric, 7.05 GHz – 10 GHz	1.02	1.016	WR112	5.26
26UM100- R	Precision Load, Metric, 8.2 GHz – 12.4 GHz	1.02	1.016	WR90	6.56
26UM120- R	Precision Load, Metric, 10 GHz – 15 GHz	1.02	1.016	WR75	7.87
26UM140- R	Precision Load, Metric, 12.4 GHz – 18 GHz	1.02	1.016	WR62	9.49
26UM220- R	Precision Load, Metric, 17 GHz – 26.5 GHz	1.03	1.016	WR42	14.1
26UM320- R	Precision Load, Metric, 26.5 GHz – 40 GHz	1.02	1.02	WR28	21.1

35U Series Waveguide-to-coaxial Adapters

The 35U Series precision adapters transform standard waveguide to coaxial N and K Connector® interfaces, thus enabling convenient microwave coaxial measurements.



Specifications

Model	Frequency Range (GHz)	Connectors	W/G flange UG-() U	SWR
35UM40N	3.3 to 4.9	WR229 to N(m) WG11A to N(m)	PDR40	1.08
35UM48N	3.9 to 5.8	WR187 to N(m) WG12 to N(m)	CAR48, PAR48, UAR48, DR48	1.08
35UM70N	5.8 to 8.2	WR137 to N(m) WG14 to N(m)	CAR70, PAR70, UAR70, PDR70	1.08
35UM84N	7.0 to 10	WR112 to N(m) WG15 to N(m)	CBR84, UBR84, PBR84, PDR84	1.08
35UM100N	8.2 to 12.4	WR90 to N(m) WG16 to N(m)	CBR100, UBR100, PBR100, PDR100	1.08
35UM120N	10 to 15	WR75 to N(m) WG17 to N(m)	CBR120, UBR120, PBR120, PDR120	1.08
35UM140N	12.4 to 18	WR62 to N(m) WG18 to N(m)	CBR140, UBR140, PBR140, PDR140	1.08
35UM220K	17 to 26.5	WR42 to K(m) WG20 to K(m)	CBR220, UBR220, PBR220, PDR220	1.20
35UA112N	7.0 to 10	WR112 to N(m) WG15 to N(m)	CPR112F,CPR112G, UG-1358/U, UG-1359/U, UG-1734/U, UG-1735/U, UG-52B/U, UG-51/U, UG-137B/U, UG-138/U	1.08
35UA187N	3.9 to 5.8	WR187 to N(m) WG12 to N(m)	CPR187F,CPR187G, UG-1352/U, UG-1353/U, UG-1728/U, UG-1729/U, UG-148/U, UG-149A/U	1.08
35UA137N	5.8 to 8.2	WR137 to N(m) WG14 to N(m)	CPR137F,CPR137G, UG-1356/U, UG-1357/U, UG-1732/U, UG-1733/U, UG-343B/U, UG-344/U, UG-440B/U, UG-441/U	1.08
35UA90N	8.2 to 12.4	WR90 to N(m) WG16 to N(m)	CPR90F,CPR90G, UG-1360/U, UG-1361/U, UG-1736/U, UG-1737/U, UG-135B/U, UG-136/U	1.08
35UA62N	12.4 to 18	WR62 to N(m) WG18 to N(m)	UG-541A/U, UG-419A/U UG-1665/U, UG-1666/U	1.08
35UA42K	17 to 26.5	WR42 to K(m) WG20 to K(m)	UG-596A/U, UG-595/U, UG-597/U, UG-598A/U	1.08