

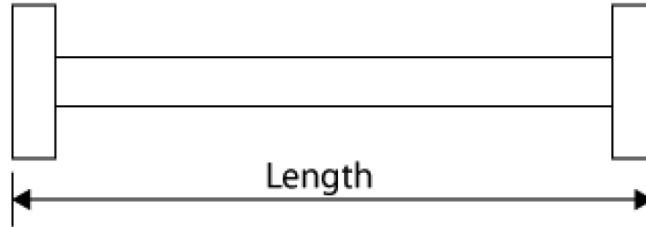


RF Components

Model Number:
197119 / 197120

Ka-Band Waveguide Flexible Twist

WG22 / WR28 / R320 (26.50 - 40 GHz)



Waveguide

Specification						
WGB-	197119			197120		
Waveguide Size	WG22 / WR28/ R320					
Frequency Range	26.5-40 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	UG Flat (UF) / UG Seal (US) / UG Choke (UG) PBR Grooved (PB) / UBR Flat (UB) CBR Grooved (CB)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	1.2	2.1	4	1.2	2	4
Return Loss (dB) (min)	16.7	16.1	14.1	16.7	16.1	14.1
Min E-Plane Bend Radius (Static)	20 mm / 0.8 inches					
Min H-Plane Bend Radius (Static)	40 mm / 1.6 inches					
Maximum Twist (Static)	920 Deg/m or 280.4 Deg/ft					
Min E-Plane Bend Radius (Repeated)	80 mm / 3.1 inches					
Min H-Plane Bend Radius (Repeated)	160 mm / 6.2 inches					
Maximum Twist (Repeated)	230 Deg/m or 70.1 Deg/ft					
Peak Power	22 kW					
Average (CW) Power	75 W					

Model Numbers					
Example: WGB-0200-197119-UFUS					
WG	B	0200	197119	UF	US
Waveguide	A - Aluminium B- Brass	Length (mm)	Model Number	Flange 1	Flange 2

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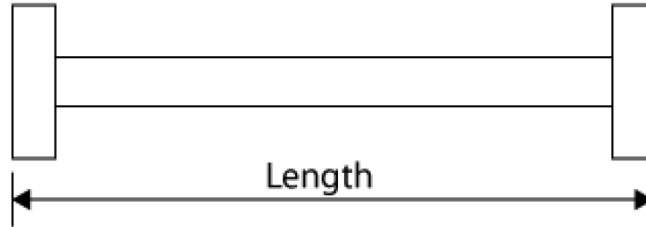


RF Components

Model Number:
197117 / 197118

Ka-Band Waveguide Flexible Twist

WG21 / WR34 / R260 (22-33 GHz)



Waveguide

Specification						
WGB-	197117			197118		
Waveguide Size	WG21 / WR34 / R260					
Frequency Range	22-33 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	UG 1530/U Choke/Groove (UG) / UG 1530/U Flat (UF) / UG 1530/U Seal/Groove (US) CBR 260 (CB) / PBR 260 (PB) / UBR 260 (UB)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.9	1.5	3	0.9	1.5	3
Return Loss (dB) (min)	20	19	17	20	19	17
Min E-Plane Bend Radius (Static)	24 mm / 0.9 inches					
Min H-Plane Bend Radius (Static)	48 mm / 1.9 inches					
Maximum Twist (Static)	630 Deg/m or 192 Deg/ft					
Min E-Plane Bend Radius (Repeated)	96 mm / 3.8 inches					
Min H-Plane Bend Radius (Repeated)	192 mm / 7.6 inches					
Maximum Twist (Repeated)	157 Deg/m or 47.9 Deg/ft					
Peak Power	31 Kw					
Average (CW) Power	85 W					

Model Numbers Example: WGB-0500-197117-CGCF					
WG	B	0500	197117	CG	CF
Waveguide	A - Aluminium B - Brass	Length (mm)	Model Number	Flange 1	Flange 2

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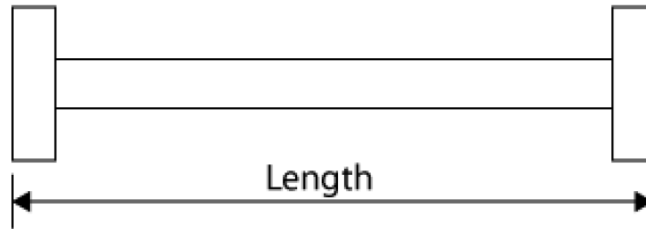


RF Components

Model Number:
197029 / 197116

Ku-Band Waveguide Flexible Twist

WG20 / WR42 / R220 (17.7-26.5 GHz)



Waveguide

Specification						
WGB-	197029			197116		
Waveguide Size	WG20 / WR42 / R220					
Frequency Range	17.7-26.5 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	UG 596A/U (UG) / UG 595/U (UF) CBR 220 (CB) / PBR 220 (PB) UG 595/U (US) / UBR 220 (UB)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.72	1.2	2.4	0.72	1.2	2.4
Return Loss (dB) (min)	21.1	20.1	18.1	21.1	20.1	18.1
Min E-Plane Bend Radius (Static)	30 mm / 1.2 inches					
Min H-Plane Bend Radius (Static)	60 mm / 2.4 inches					
Maximum Twist (Static)	630 Deg/m or 192 Deg/ft					
Min E-Plane Bend Radius (Repeated)	120 mm / 4.7 inches					
Min H-Plane Bend Radius (Repeated)	240 mm / 9.4 inches					
Maximum Twist (Repeated)	157 Deg/m or 47.9 Deg/ft					
Peak Power	45 Kw					
Average (CW) Power	100 W					

Model Numbers					
Example: WGB-0500-197029-CGCF					
WG	B	0500	197029	CG	CF
Waveguide	A - Aluminium B - Brass	Length (mm)	Model Number	Flange 1	Flange 2

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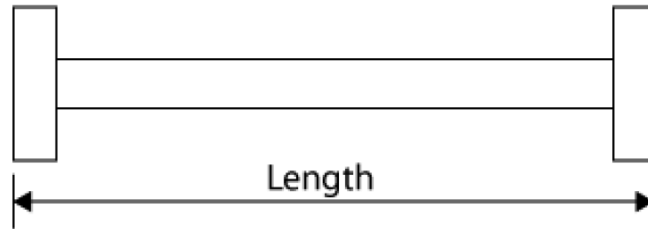


RF Components

Model Number:
197048 / 197106

Ku-Band Waveguide Flexible Twist

WG18 / WR62 / R140 (12.4 - 18.0 GHz)



Waveguide

Specification						
WGB-	197048			197106		
Waveguide Size	WG18 / WR62 / R140					
Frequency Range	12.4 - 18.0 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	UG 541A/U (UG) / UG 419/U (UF) / UG 419/U (US) CBR 140 (CB) / PBR 140 (PB) / UBR 140 (UB) PDR 140 (PD) / UDR 140 (UD)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.5	0.8	1.6	0.5	0.8	1.6
Return Loss (dB) (min)	25.4	25	23	25.4	25	23
Min E-Plane Bend Radius (Static)	46 mm / 1.8 inches					
Min H-Plane Bend Radius (Static)	92 mm / 3.6 inches					
Maximum Twist (Static)	445 Deg/m or 135.6 Deg/ft					
Min E-Plane Bend Radius (Repeated)	184 mm / 7.2 inches					
Min H-Plane Bend Radius (Repeated)	368 mm / 14.5 inches					
Maximum Twist (Repeated)	112 Deg/m or 34.1 Deg/ft					
Peak Power	120 Kw					
Average (CW) Power	400 W					

Model Numbers					
Example: WGB-0500-197048-UBPB					
WG	B	0500	197048	UB	PB
Waveguide	A - Aluminium B- Brass	Length (mm)	Model Number	Flange 1	Flange 2

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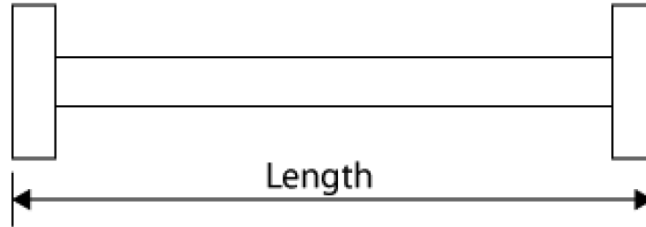


RF Components

Model Number:
197111 / 197112

Ku-Band Waveguide Flexible Twist

WG17 / WR75 / R120 (10-15 GHz)



Waveguide

Specification								
WGB-	197111				197112			
Waveguide Size	WG17 / WR75 / R120							
Frequency Range	10-15 GHz							
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber							
Flange Options (Abbreviations)	UG MIL 59D (UG) / UG MIL 53C-007 (UF) / UG MIL 53C-007 (US) CBR 120 (CB) / PBR 120 (PB) / UBR 120 (UB) PDR 120 (PD) / UDR 120 (UD)							
Flange Material/Finish	Brass / No Plating (standard)				Brass / Tin Plated			
	≤600mm	≤1000mm	≤2000mm	≤2500mm	≤600mm	≤1000mm	≤2000mm	≤2500mm
Insertion Loss (dB) (max)	0.3	0.5	1.0	1.25	0.3	0.5	1.0	1.25
Return Loss (dB) (min)	26	25.4	23.4	23.4	26	25.4	23.4	23.4
Min E-Plane Bend Radius (Static)	54 mm / 2.1 inches							
Min H-Plane Bend Radius (Static)	108 mm / 4.3 inches							
Maximum Twist (Static)	365 Deg/m or 111.3 Deg/ft							
Min E-Plane Bend Radius (Repeated)	216 mm / 8.5 inches							
Min H-Plane Bend Radius (Repeated)	432 mm / 17.0 inches							
Maximum Twist (Repeated)	92 Deg/m or 28.0 Deg/ft							
Peak Power	180 Kw							
Average (CW) Power	750 W							

Model Numbers					
Example: WGB-0500-197111-CGCF					
WG	B	0500	197111	CG	CF
Waveguide	A - Aluminium B- Brass	Length (mm)	Model Number	Flange 1	Flange 2

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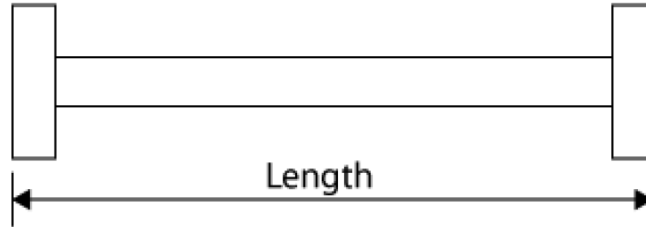


RF Components

Model Number:
197109 / 197110

Ku-Band Waveguide Flexible Twist

WG16 / WR90 / R100



Waveguide

Specification						
WGB-	197109			197110		
Waveguide Size	WG16 / WR90 / R100					
Frequency Range	8.2—12.4 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	UG 40B/U (UG) / UG39/U (UF) CPR 90G (CG) / CPR 90F (CF) CBR 100 (CB) / PDR 100 (PD) PBR 100 (PB) / UDR 100 (UD) UBR 100 (UB) / UG 39/U (UG)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.24	0.4	0.8	0.24	0.4	0.8
Return Loss (dB) (min)	26.1	26.0	24.0	26.1	26.0	24.0
Min E-Plane Bend Radius (Static)	66 mm / 2.6 inches					
Min H-Plane Bend Radius (Static)	132 mm / 5.2 inches					
Maximum Twist (Static)	315 Deg/m or 96.0 Deg/ft					
Min E-Plane Bend Radius (Repeated)	264 mm / 10.4 inches					
Min H-Plane Bend Radius (Repeated)	528 mm / 20.8 inches					
Maximum Twist (Repeated)	76 Deg/m or 23.2 Deg/ft					
Peak Power	220 kW					
Average (CW) Power	1 kW					

Model Numbers					
Example: WGB-0500-197109-CGCF					
WG	B	0500	197109	CG	CF
Waveguide	A - Aluminium B - Brass	Length (mm)	Model Number	Flange 1	Flange 2

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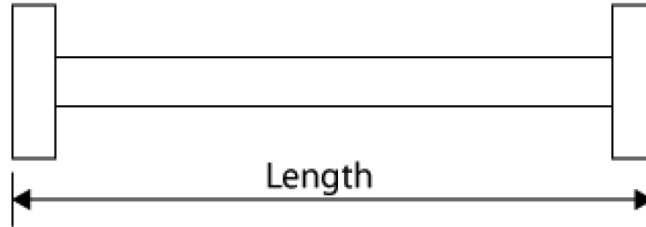


RF Components

Model Number:
197115 & 197166

X-Band Waveguide Flexible Twist

WG15 / R84 / WR112 (7.05 - 10.0 GHz)



Waveguide

Specification						
WGB-	197115			197166		
Waveguide Size	WG15 / R84 / WR112					
Frequency Range	7.05 - 10.0 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	UG 52B/U (UG) / UG 51/U (UF) CPR 112G (CG) / CPR 112F (CF) PDR 84 (PD) / UDR 84 (UD) CBR 84 (CB) / PRB 84 (PB) / UBR 84 (UB)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
Length	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.18	0.3	0.6	0.18	0.3	0.6
Return Loss (dB) (min)	27.3	27.1	25.1	27.3	27.1	25.1
Min E-Plane Bend Radius (Static)	82 mm / 3.2 inches					
Min H-Plane Bend Radius (Static)	164 mm / 6.5 inches					
Maximum Twist (Static)	260 Deg/m or 79.2 Deg/ft					
Min E-Plane Bend Radius (Repeated)	328 mm / 12.9 inches					
Min H-Plane Bend Radius (Repeated)	656 mm / 25.8 inches					
Maximum Twist (Repeated)	68 Deg/m or 20.7 Deg/ft					
Peak Power	330 MW					
Average (CW) Power	1.5 kW					

Model Numbers					
Example: WGB-0500-197115-CGCF					
WG	B	0500	197115	CG	CF
Waveguide	A - Aluminium B - Brass	Length (mm)	Model Number	Flange 1	Flange 2

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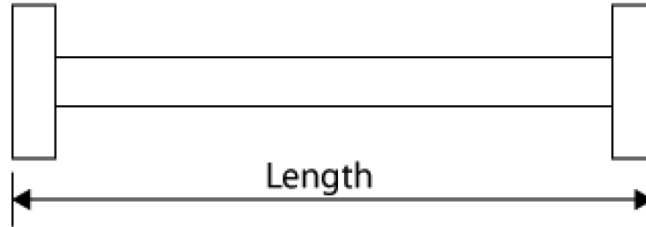


RF Components

Model Number:
197105 / 197089

C-Band Waveguide Flexible Twist

WG14 / WR137 / R70 (5.85 - 8.2 GHz)



Waveguide

Specification						
WGB-	197105			197089		
Waveguide Size	WG14 / WR137 / R70					
Frequency Range	5.85 - 8.20 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	UG 343B/U (UG) / UG3 44/U (UF) CPR 137G (CG) / CPR 137F (CF) PDR 70 (PD) / UDR 70 (UD) UAR 70 (UA) / PAR 70 (PA)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.168	0.28	0.56	0.168	0.28	0.56
Return Loss (dB) (min)	26.8	26.30	24.3	26.8	26.30	24.3
Min E-Plane Bend Radius (Static)	100 mm / 3.9 inches					
Min H-Plane Bend Radius (Static)	200 mm / 7.9 inches					
Maximum Twist (Static)	210 Deg/m or 64.0 Deg/ft					
Min E-Plane Bend Radius (Repeated)	400 mm / 15.7 inches					
Min H-Plane Bend Radius (Repeated)	800 mm / 31.5 inches					
Maximum Twist (Repeated)	52 Deg/m or 15.8 Deg/ft					
Peak Power	560 MW					
Average (CW) Power	2 kW					

Model Numbers					
Example: WGB-0500-197105-CGCF					
WG	B	0500	197105	CG	CF
Waveguide	A - Aluminium B - Brass	Length (mm)	Model Number	Flange 1	Flange 2

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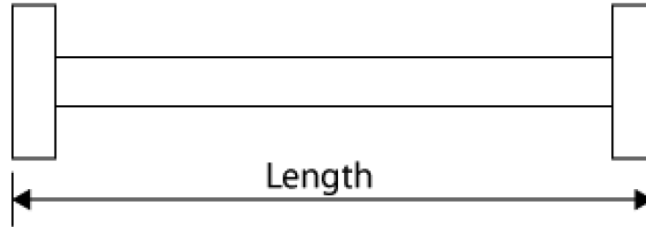


RF Components

Model Number:
197107 / 197108

C-Band Waveguide Flexible Twist

WG13 / WR159 / R58 (4.9-7.05GHz)



Waveguide

Specification						
WGB-	197107			197108		
Waveguide Size	WG13 / WR159 / R58					
Frequency Range	4.9 - 7.05 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	CPR 159G (CG) / CPR 159F (CF) PDR 58 (PD) / UDR 58 (UD) UAR 58 (UA) / PAR 58 (PA)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.108	0.18	0.36	0.108	0.18	0.36
Return Loss (dB) (min)	28.3	27.8	25.8	28.3	27.8	25.8
Min E-Plane Bend Radius (Static)	116 mm / 4.6 inches					
Min H-Plane Bend Radius (Static)	232 mm / 9.1 inches					
Maximum Twist (Static)	185 Deg/m or 56.4 Deg/ft					
Min E-Plane Bend Radius (Repeated)	464 mm / 18.3 inches					
Min H-Plane Bend Radius (Repeated)	928 mm / 36.5 inches					
Maximum Twist (Repeated)	45 Deg/m or 13.7 Deg/ft					
Peak Power	600 kW					
Average (CW) Power	2.5 kW					

Model Numbers					
Example: WGB-0500-197107-CGCF					
WG	B	0500	197107	CG	CF
Waveguide	A - Aluminium B - Brass	Length (mm)	Model Number	Flange 1	Flange 2

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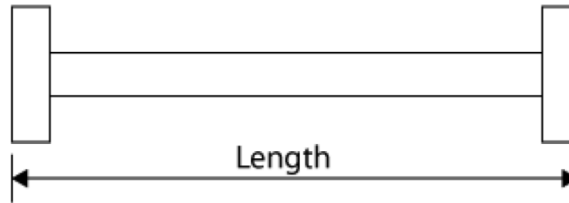


RF Components

Model Number:
197103 / 197104

C-Band Waveguide Flex Twist

WG12 / WR187 / R48 (3.95 - 5.85 GHz)



Waveguide

Specification						
WGB	197103			197104		
Waveguide Size	WG12 / WR187 / R48					
Frequency Range	3.95 - 5.85 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	UG 148C/U (UG) / UG148C/U (UF) CPR 187G (CG) / CPR 187F (CF) PDR 48 (PD) / UDR 48 (UD) UAR 48 (UA) / PAR 48 (PA)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.096	0.16	0.32	0.096	0.16	0.32
Return Loss (dB) (min)	27.8	27.3	25.3	27.8	27.3	25.3
Min E-Plane Bend Radius (Static)	136 mm / 5.4 inches					
Min H-Plane Bend Radius (Static)	272 mm / 10.7 inches					
Maximum Twist (Static)	155 Deg/m or 47.2 Deg/ft					
Min E-Plane Bend Radius (Repeated)	544 mm / 21.4 inches					
Min H-Plane Bend Radius (Repeated)	1088 mm / 42.8 inches					
Maximum Twist (Repeated)	40 Deg/m or 12.2 Deg/ft					
Peak Power	1.4 MW					
Average (CW) Power	3 kW					

Model Numbers					
Example: WGB-197103-0500-CGCF					
WG	B	197103	0500	CG	CF
Waveguide	A - Aluminium B- Brass	Model Number	Length (mm)	Flange 1	Flange 2

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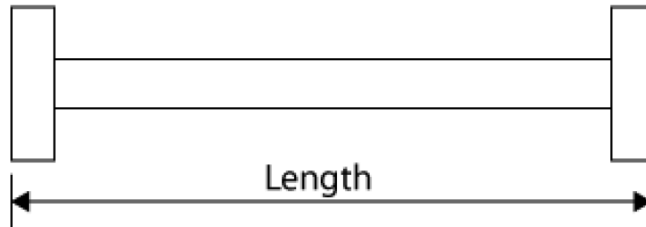


RF Components

Model Number:
197101 / 197102

C-Band Waveguide Flexible Twist

WG11 / WR229 / R40 (3.3 - 4.9 GHz)



Waveguide

Specification						
WGB	197101			197102		
Waveguide Size	WG11 / WR229 / R40					
Frequency Range	3.30 - 4.90 GHz					
Core Material / Jacket Material	Silver Plated Brass / Silicone Rubber					
Flange Options (Abbreviations)	CPR 229G (CG) / CPR 229F (CF) PDR 40 (PD) / UDR 40 (UD)					
Flange Material/Finish	Brass / No Plating (standard)			Brass / Tin Plated		
	≤600mm	≤1000mm	≤2000mm	≤600mm	≤1000mm	≤2000mm
Insertion Loss (dB) (max)	0.09	0.15	0.3	0.09	0.15	0.3
Return Loss (dB) (min)	29.5	28.8	26.8	29.5	28.8	26.8
Min E-Plane Bend Radius (Static)	166 mm / 6.5 inches					
Min H-Plane Bend Radius (Static)	332 mm / 13.1 inches					
Maximum Twist (Static)	130 Deg/m or 39.6 Deg/ft					
Min E-Plane Bend Radius (Repeated)	654 mm / 25.7 inches					
Min H-Plane Bend Radius (Repeated)	1328 mm / 52.3 inches					
Maximum Twist (Repeated)	35 Deg/m or 10.7 Deg/ft					
Peak Power	1.8 MW					
Average (CW) Power	4 kW					

Model Numbers					
Example: WGB-0500-197101-CGCF					
WG	B	0500	197101	CG	CF
Waveguide	A - Aluminium B- Brass	Length (mm)	Model Number	Flange 1	Flange 2

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