

# Waveguide Circulator



## Waveguide Circulator

### ELECTRICAL CHARACTERISTICS:

Part No.	WG Type EIA	Freq Range (GHz)	Working Bandwidth	VSWR	IL(dB)	Isolation (dB)	Flange	Material
SH-14WCIC...	WR650	1.13-1.73	≤5%	≤1.2	≤0.3	≥20	FDP	Al
SH-18WCIC...	WR510	1.45-2.20	≤5%	≤1.2	≤0.3	≥20	FDP	Al
SH-22WCIC...	WR430	1.72-2.61	≤5%	≤1.2	≤0.3	≥20	FDP	Al
SH-26WCIC...	WR340	2.17-3.30	≤5%	≤1.2	≤0.3	≥20	FDP	Al
SH-32WCIC...	WR284	2.60-3.95	≤5%	≤1.2	≤0.3	≥20	FDP	Al
SH-40WCIC...	WR229	3.22-4.90	≤10%	≤1.2	≤0.3	≥20	FDP	Al
SH-48WCIC...	WR187	3.94-5.99	≤10%	≤1.2	≤0.3	≥20	FDP	Al
SH-58WCIC...	WR159	4.64-7.05	≤10%	≤1.2	≤0.3	≥20	FDP	Al
SH-70WCIC...	WR137	5.38-8.17	≤10%	≤1.2	≤0.3	≥20	FDP	Al
SH-84WCIC...	WR112	6.57-9.99	≤15%	≤1.2	≤0.3	≥20	FBP	Al
SH-100WCIC...	WR90	8.20-12.40	≤15%	≤1.2	≤0.3	≥20	FBP	Al
SH-120WCIC...	WR75	9.84-15.0	≤15%	≤1.2	≤0.3	≥20	FBP	Al
SH-140WCIC...	WR62	11.9-18.0	≤15%	≤1.2	≤0.3	≥20	FBP	Al
SH-180WCIC...	WR51	14.5-22.0	≤15%	≤1.25	≤0.3	≥20	FBP	Al
SH-220WCIC...	WR42	17.6-26.7	≤15%	≤1.25	≤0.3	≥20	FBP	Cu
SH-260WCIC...	WR34	21.7-33.0	≤15%	≤1.25	≤0.3	≥20	FBP	Cu
SH-320WCIC...	WR28	26.5-40.0	≤15%	≤1.25	≤0.4	≥20	FBP	Cu
SH-400WCIC...	WR22	32.9-50.1	≤5%	≤1.35	≤0.6	≥17	FUGP	Cu
SH-500WCIC...	WR19	39.2-59.6	≤5%	≤1.50	≤0.6	≥15	FUGP	Cu
SH-620WCIC...	WR15	49.8-75.8	≤5%	≤1.50	≤0.6	≥15	FUGP	Cu
SH-740WCIC...	WR12	60.5-91.9	≤5%	≤1.50	≤0.8	≥15	FUGP	Cu
SH-900WCIC...	Wr10	73.8-112	≤5%	≤1.50	≤1.0	≥15	FUGP	Cu

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## High Power Waveguide Circulator

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Part No.	WG Type EIA	Freq Range (GHz)	Working Bandwidth	VSWR	IL(dB)	Isolation (dB)	Avg Power (W)	Flange	Material
SH-14WHPCIC20K	WR650	1.13-1.73	≤5%	≤1.2	≤0.3	≥20	20k	FDP	Al
SH-18WHPCIC1000	WR510	1.45-2.20	≤5%	≤1.2	≤0.3	≥20	1000	FDP	Al
SH-22WHPCIC1000	WR430	2.2-2.55	≤5%	≤1.2	≤0.3	≥20	1000	FDP	Al
SH-26WHPCIC1000	WR340	2.17-3.3	≤5%	≤1.2	≤0.3	≥20	1000	FDP	Al
SH-32WHPCIC1000	WR284	2.60-3.95	≤5%	≤1.2	≤0.3	≥20	1000	FDP	Al
SH-48WHPCIC1000	WR187	3.94-5.99	≤10%	≤1.2	≤0.3	≥20	1000	FDP	Al
SH-58WHPCIC1000	WR159	4.64-7.05	≤10%	≤1.2	≤0.3	≥20	1000	FDP	Al
SH-70WHPCIC400	WR137	5.38-8.17	≤10%	≤1.2	≤0.3	≥20	400	FDP	Al
SH-84WHPCIC400	WR112	6.57-9.99	≤10%	≤1.2	≤0.3	≥20	400	FBP	Al
SH-100WHPCIC300	WR90	8.2-12.4	≤15%	≤1.2	≤0.3	≥20	300	FBP	Al
SH-120WHPCIC100	WR75	9.84-15.0	≤15%	≤1.2	≤0.3	≥20	100	FBP	Al
SH-140WHPCIC150	WR62	11.9-18.0	≤15%	≤1.2	≤0.3	≥20	150	FBP	Al
SH-180WHPCIC100	WR51	14.5-22.0	≤15%	≤1.25	≤0.3	≥20	100	FBP	Al
SH-220WHPCIC80	WR42	17.6-26.7	≤15%	≤1.25	≤0.3	≥20	80	FBP	Cu
SH-260WHPCIC40	WR34	21.7-33.0	≤15%	≤1.25	≤0.3	≥20	80	FBP	Cu
SH-320WHPCIC40	WR28	26.5-40	≤15%	≤1.25	≤0.3	≥20	50	FBP	Cu
SH-400WHPCIC3	WR22	32.9-50.1	≤5%	≤1.25	≤0.5	≥20	3	FUGP	Cu

# Waveguide Circulator



## High Power Waveguide

## Differential Phase Shift Circulator

### ELECTRICAL CHARACTERISTICS:

Part No.	WG Type EIA	Freq Range (GHz)	Working Bandwidth	VSWR	IL(dB)	Ioslation (dB)	Avg Power(W)	Material
SH-14WHPDPSI40KW	WR650	1.13-1.73	≤5%	≤1.2	≤0.3	≥20	40k	Al
SH-18WHPDPSI30KW	WR510	1.45-2.20	≤5%	≤1.2	≤0.3	≥20	30k	Al
SH-22WHPDPSI20KW	WR430	1.72-2.61	≤5%	≤1.2	≤0.3	≥20	20k	Al
SH-26WHPDPSI20KW	WR340	2.17-3.30	≤5%	≤1.2	≤0.3	≥20	20k	Al
SH-32WHPDPSI10KW	WR284	2.60-3.95	≤5%	≤1.2	≤0.4	≥20	10k	Al
SH-40WHPDPSI5KW	WR187	3.22-4.90	≤5%	≤1.2	≤0.4	≥20	5k	Al
SH-48WHPDPSI8KW	WR159	3.94-5.99	≤5%	≤1.2	≤0.4	≥20	8k	Al
SH-84WHPDPSI1200W	WR112	6.57-9.99	≤7%	≤1.25	≤0.4	≥20	1.2k	Cu
SH-100WHPDPSI1000W	WR90	8.2-12.5	≤7%	≤1.25	≤0.5	≥20	1k	Cu
SH-120WHPDPIC1000W	WR75	9.84-15.0	≤7%	≤1.25	≤0.5	≥20	1k	Cu
SH-140WHPDPSI800W	WR62	11.9-18.0	≤7%	≤1.25	≤0.5	≥20	800	Cu
SH-180WHPDPSI800W	WR51	14.5-22.0	≤7%	≤1.25	≤0.5	≥20	800	Cu

# WAVEGUIDE CIRCULATOR

Shinhom Microwave offers a standard product line of waveguide circulators ranging from WR10 to WR 137. For more information feel free to call us and discuss your needs with one of our sales engineers.



## ELECTRICAL CHARACTERISTICS:

Part No.	Freq Range (GHz)	Operating Bandwidth (MHz)	VSWR (Max)	IL (dB) (Max)	Isolation (dB) (Min)	WG Type		Flange	Material
						IEC	EIA		
SH-70WCIC	5.38-8.17	700	1.20	0.3	20	R70	WR137	FDP/FDM	Al/Cu
SH-84WCIC	6.57-9.99	700	1.20	0.3	20	R84	WR112	FBP/FBM/FBE	Al/Cu
SH-100WCIC	8.20-12.40	800	1.20	0.3	20	R100	WR90	FBP/FBM/FBE	Al/Cu
SH-120WCIC	9.84-15.0	1000	1.20	0.3	20	R120	WR75	FBP/FBM/FBE	Al/Cu
SH-140WCIC	11.9-18.0	1000	1.20	0.3	20	R140	WR62	FBP/FBM/FBE	Al/Cu
SH-180WCIC	14.5-22.0	1000	1.20	0.3	20	R180	WR51	FBP/FBM/FBE	Al/Cu
SH-220WCIC	17.6-26.7	2000	1.20	0.3	20	R220	WR42	FBP/FBM/FBE	Al/Cu
SH-260WCIC	21.7-33.0	2000	1.20	0.3	20	R260	WR34	FBP/FBM/FBE	Al/Cu
SH-320WCIC	26.3-40.0	2000	1.20	0.3	20	R320	WR28	FBP/FBM/FBE	Al/Cu
SH-400WCIC	32.9-50.1	2000	1.30	0.6	20	R400	WR22	FUGP	Cu
SH-500WCIC	39.2-59.6	2000	1.30	0.6	20	R500	WR19	FUGP	Cu
SH-620WCIC	49.8-75.8	2000	1.30	0.6	20	R620	WR15	FUGP	Cu
SH-740WCIC	60.5-91.9	2000	1.30	0.8	20	R740	WR12	FUGP	Cu
SH-900WCIC	73.8-112	2000	1.30	1.0	20	R900	WR10	FUGP	Cu

### Ordering Information

Example Part No: SH - 100 WCIC



- Flange type: Multiple types available – see Shinhom Microwave Flanges page
- Finish: Corrosion protection plus black/grey top coat