



RECTANGULAR WAVEGUIDE CIRCULATOR 140 SERIES

DATA
SHEET
No. T173
1 OF 2

- 140 SERIES -MEDIUM POWER HANDLING
- HIGH ISOLATION
- LOW INSERTION LOSS
- LOW VSWR

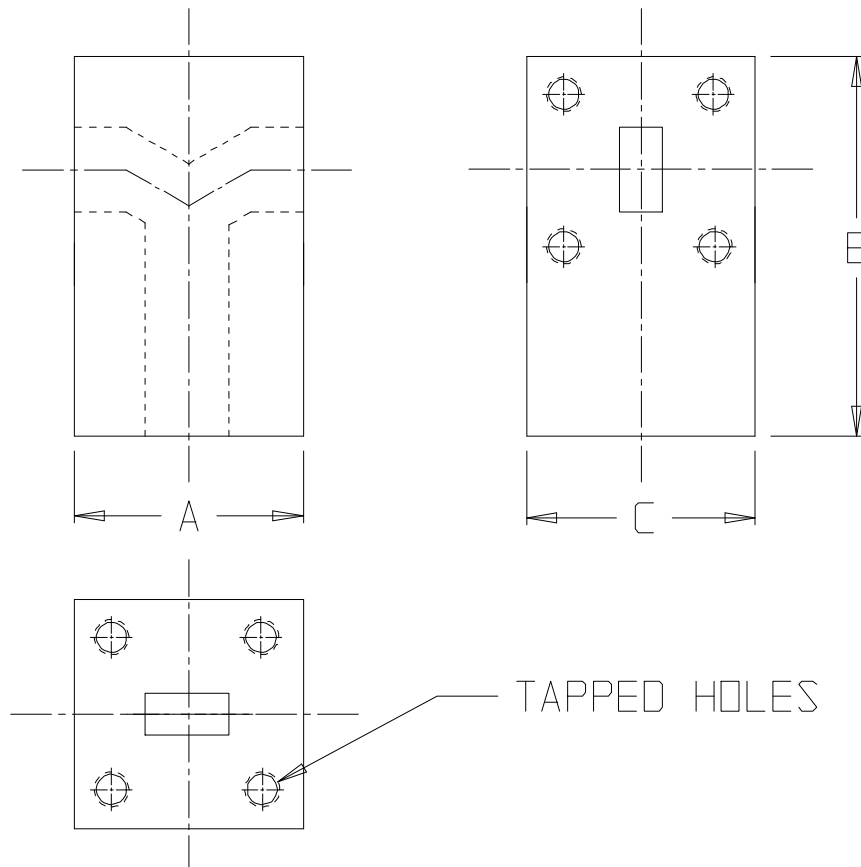
DESCRIPTION

The 140-Series offers high power state-of-the-art waveguide junction circulators in the most commonly used rectangular waveguides.

The circulator consists of a Y-junction design with thin flat resonators using ultra low loss ferrite or garnet materials which are customized to our specifications using the latest technology.

The standard junction design has an aluminum housing with iridite finish and typically flat black paint. The flanges are standard but with tapped holes and helicoil inserts.

A 3 port junction circulator can be used as an isolator by terminating the port 3 with a high power load. If you want an isolator instead of a circulator then also specify how much power the load has to handle.



Data subject to change without notice



MICROWAVE ENGINEERING CORPORATION

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SPECIFICATIONS

MODEL#	RANGE (GHz)	WAVE GUIDE SIZE	PWR CAPABILITY (WATTS)		ISOLATION dB (min)	INSERTION LOSS dB (max)	VSWR (max)	FLANGE TYPE	SIZE TYP (inches)		
			Pk (kW)	Avg (W)					A	B	C
975-140	0.905-0.925	WR975		30000	26	0.15	1.10		26	29	9
L140	1.25-1.35	WR650	60	6000	20	0.25	1.15	UG-418A/U	24	18	6
LA140	2.0-2.2	WR430		4000	25	0.25	1.15	UG-437B/U	9	10	4.5
S140-1	2.7-2.9	WR284	50	5000	20	0.25	1.20	CPR-284F	5.5	6.5	3
S140-2	2.9-3.1	WR284	125	1250	20	0.30	1.20	CPR-284F	5.5	6.5	3
S140-3	3.1-3.5	WR284	400	4000	20	0.30	1.20	UG-584/U	5.5	6.5	5.5
G140	5.25-5.85	WR187	25	2500	20	0.30	1.20	CPR187F	4	4.25	3
J140	7.125-7.725	WR137		250	26	0.20	1.10	CPR-137F	3	3.25	2
H140-1	6.9-7.1	WR112		1000	20	0.20	1.20	CPR112G	2.5	3	1.75
H140-2	8.5-9.6	WR112	25	500	20	0.30	1.20	UG138/U	2.5	3.0	1.75
X140-1	9.0-10.0	WR90	50	500	22	0.30	1.15	UG135/U	2.0	2.25	1.63
X140-2	8.2-12.4	WR90	10	250	18	0.50	1.30	UG135/U	2.75	3.00	1.63
M140	14.0-14.5	WR75		300	20	0.25	1.20	M3922/53-008	1.75	1.75	1.5
P140	15.5-17.0	WR62	10	300	20	0.30	1.20	UG1665/U	1.5	1.5	1.32
N140	20.2-21.2	WR51		400	23	0.20	1.15	M3922/70-011	1.25	1.5	1.32
K140	22.0-24.0	WR42		100	23	0.30	1.15	UG597/U	1.0	1.0	0.88
A140-1	30.0-31.0	WR28		50	20	0.25	1.20	UG599/U	0.5	1.25	0.75
A140-2	34.0-36.0	WR28	2	50	20	0.25	1.20	UG599/U	0.5	1.25	0.75
T140	43.5-45.5	WR22		50	20	0.30	1.20	UG383/U	0.5	1.25	1.00

Customized Designs

The above standard designs are available. If you don't find anything suitable for your application then a customized design could be available.

Customized designs might include operating over a wider frequency band or higher power level. Alternatively existing designs can be optimized to realize lower loss characteristics at higher power levels using a novel technique of avoiding non linear losses at high operating power levels. New designs can include water cooling jackets, finning for forced air cooling or conduction cooling. Ultra small packages are available and integration with other components is an offering available from Microwave Engineering to reduce size and weight. Please contact Microwave Engineering and ask to talk to an engineer.

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