# Hybrid (Magic) Tee, WR340

Model GA2321

Waveguide hybrid (magic) Tees are hybrid 4-port devices consisting of superimposed H-plane (shunt) and E-plane (series) Tees. When matched loads are connected to both output ports, microwave power entering one of the two input ports is divided equally between the output ports and isolated from the other input port. The phase relationships between the two output ports also retain the same characteristics as with individual H-plane and E-plane Tees. That is, the waves at the output port flange surfaces have the same phase relationship for divided power from the H-plane (shunt) input port, and the outputs are 180 degrees out of phase for divided power from the E-plane (series) input port.

A further characteristic of hybrid (magic) Tees that is useful in high power applications is that the output ports are isolated from each other. For example, power reflected from a mismatched load connected into an output port is divided equally and exits the two inputs while none exits the other output port. Connecting a dummy load to the unused input port is a convenient method to manage reflected power in power splitter waveguide configurations without requiring isolators at the output ports. Contact GAE for more information about power splitter waveguide configurations.

Specifications:

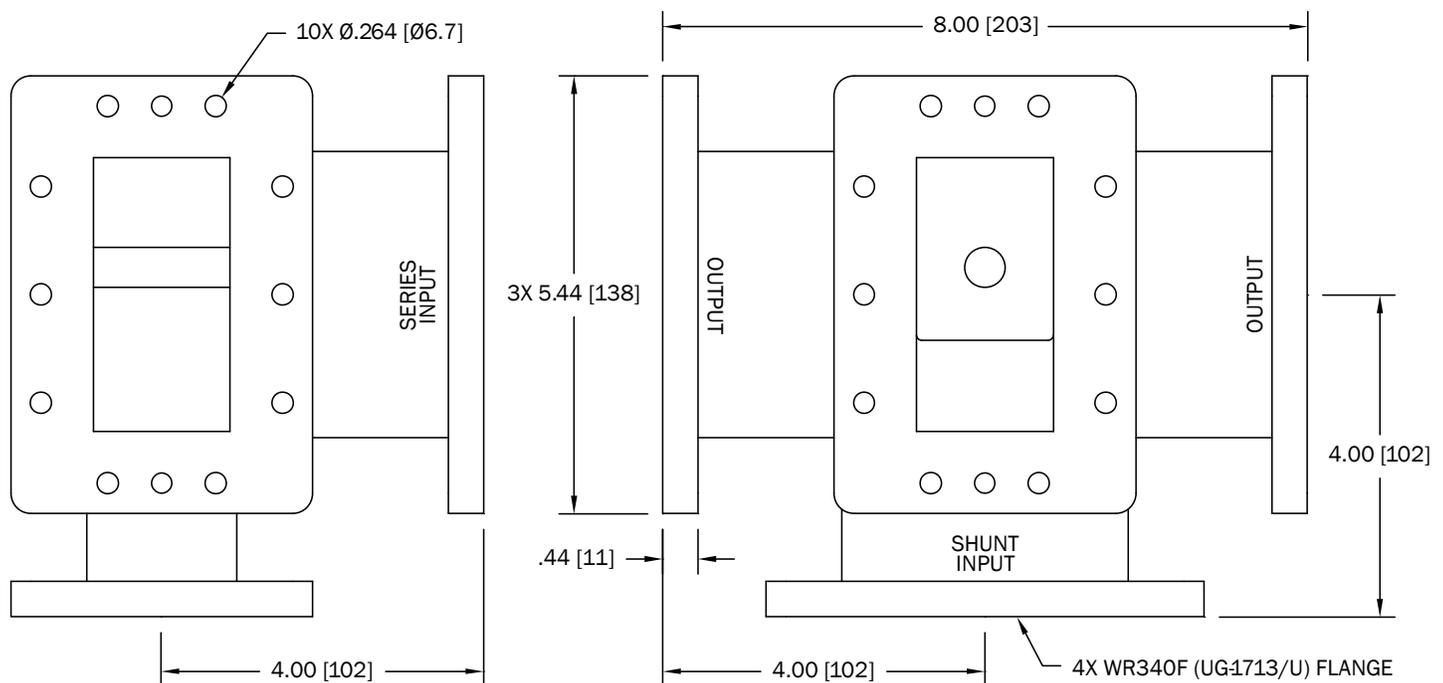|	
Frequency:	2450 MHz +/- 30 MHz
Waveguide:	WR340
Flange:	CPR340F (UG-1713/U)
Material:	6061-T6 Aluminum
Finish:	Chemical conversion coating
Input VSWR:	1.15 (max.)
Output Gain:	-3 dB +/- 0.2 dB
Isolation:	30 dB (min.) between input ports
Total Insertion Loss:	.05 dB (max.)
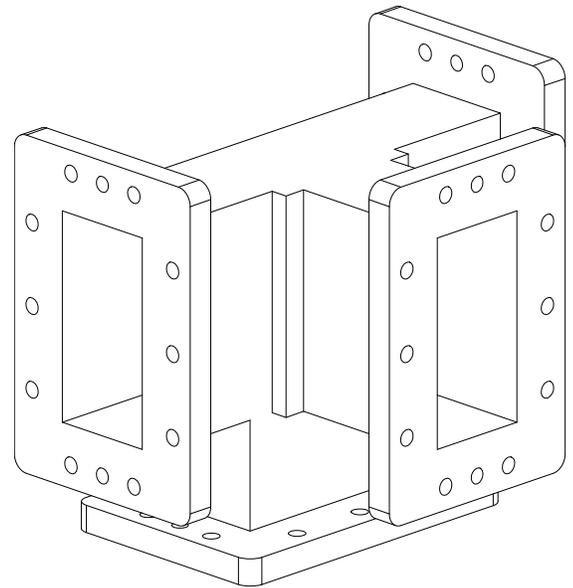
Options:
♦ Flange interlock switches
♦ Alternate finish (paint)

Accessories:
♦ Flange hardware kit, model GA8409 (please specify type and length)
♦ GA1228/GA1231 dummy load

10X Ø.264 [Ø6.7]

8.00 [203]

SERIES INPUT

3X 5.44 [138]

OUTPUT

OUTPUT

4.00 [102]

.44 [11]

SHUNT INPUT

4X WR340F (UG-1713/U) FLANGE

4.00 [102]

4.00 [102]

All dimensions are in inches [millimeters].

Updated 01JUN14