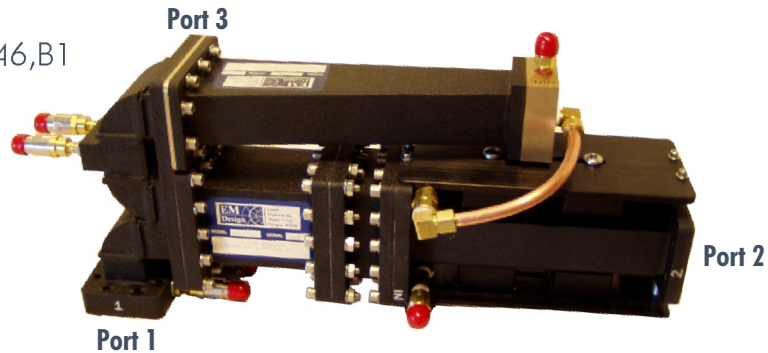


## Distributed Three Port Isolator Assembly

Model 102647A

Patent Number 6,407,646,B1



### Product Overview

This Isolator Assembly consists of the EM Design Distributed Three Port Circulator, four adjustable E field couplers and an EM Design Waterload-Model R284-3.0.

The input Port 1 is attached on a 90° E plane bend on the left side and the output Port 2 is shown on the right side of the photograph. The power reflected at Port 2 is absorbed by the load on Port 3.

The high power S band circulator is based on EM Design's unique patented concept and is especially attractive for isolating reflection from resonant loads such as accelerators or other similar devices. This isolator assembly is set for the 2.998 GHz frequency but can be readily optimized for other frequencies, including 2.856 GHz. Note that the power input, Port 1, and the terminated Port 3 has two variable insertion E field probes (at each port) for monitoring and/or control signals. These probes can be adjusted from the nominal 60 db coupling. Water cooling is connected in series so that the flow is conveyed through the circulator and the attached load.

### Unit Specifications

<b>Peak Power</b>	8 MW	<b>Frequency Band</b>	2.998 (+/- 0.010) GHz	2.8 to 3.2 GHz
<b>Average Power</b>	8 KW			
<b>Flanges</b>	CPR284F	<b>VSWR (Port 1)</b>	1.10 max	1.2 max
<b>Water Flow</b>	3.5 GPM			
<b>Water Temperature</b>	25° to 40° C (selectable)	<b>Isolation (Port 1 to Port 3)</b>	>37 db	>33 db
<b>Gas Pressure</b>	35 PSIG SF <sub>6</sub>			
<b>Length</b>	490 mm	<b>Insertion (Port 1 to Port 2)</b>	<0.2 db	<0.25 db
<b>Probe Connector</b>	Type N Female			

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