



प्लाज़्मा अनुसंधान संस्थान
Institute for **Plasma Research**

Technical Brochure

**A WIDE BAND HYBRID HIGH POWER MW LEVEL CW
RADIO FREQUENCY (RF) COMBINER/ SPLITTER**

**Projects & Technology Transfer Section
Institute for Plasma Research
Nr. Indira Bridge, Bhat, Gandhinagar – 382428**

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INTRODUCTION

The primary objective of this wideband, high power (3 MW) radio frequency (RF) combiner is to combine RF power of two different RF circuits. This can also be used to equally split the high RF power. The combiner, which is a passive device, has been designed to have lesser power dissipation per unit area and also has been provided with efficient thermal management.

APPLICATIONS

RF systems for following areas:

- Tokamak/ Fusion reactor related firm/companies/industries.
- Defence, Communications and Space sector
- Institutes and Universities where Radio Frequency subject is taught/ practiced.

SALIENT FEATURES

- Compact and Cost effective.
- Coupling flatness better than 0.6 dB over frequency band ~ 35 to 65MHz.
- Isolation and return loss better than ~ 24 dB between 36 to 65 MHz
- Power dissipation less than 10%

INFRASTRUCTURE REQUIRED

- About 8 square meter space is required for assembly, testing & installation of the system
- The system consists of a combiner with support structure.

MAJOR RAW MATERIALS

- Aluminum 6061
- ETP copper
- Teflon and Delrin

MANPOWER REQUIRED

- One graduate having Physics degree or an electronics engineer.
- One mechanical engineer
- One mechanical technical assistant

For details contact:

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