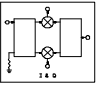
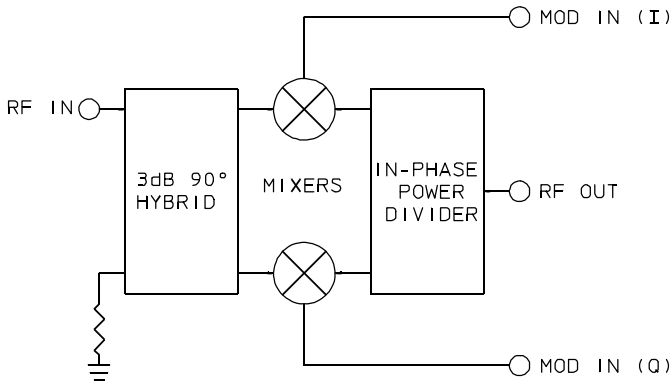


# SSP-1R Series

# SINGLE SIDEBAND MODULATORS

10 to 1000 MHz / 30 dB Sideband Rejection / Quadrature-Phased Baseband Inputs



## PRINCIPAL SPECIFICATIONS

| Model Number | Center Frequency, $f_0$ , MHz | Usable Bandwidth MHz |
|--------------|-------------------------------|----------------------|
| SSP-1R-***B  | 10 - 1000                     | 10% of $f_0$         |

For complete Model Number replace \*\*\* with desired Center Frequency in MHz.

### General Notes:

1. Single Sideband Modulators are integrated networks composed of an in-phase power divider, two double balanced mixers and at least one 90° quadrature hybrid.
2. The SSP-1R series is suitable for applications where the modulating signal is provided together with one in phase quadrature to it. This permits operation down to DC and eliminates the need for a second 90° quadrature hybrid.
3. Units in the SSP-1R series are suitable where the desired and undesired RF sidebands are too close to be effectively separated with a simple bandpass filter or where minimum group delay is required.
4. Merrimac Single Sideband Modulators are available in various package options.
5. Merrimac Single Sideband Modulators comply with the relevant sections of MIL-M-28837 and may be supplied screened for compliance with additional specifications for military and space applications requiring the highest reliability.

## GENERAL SPECIFICATIONS\*

### RF Input Characteristics

|                 |                  |
|-----------------|------------------|
| Impedance:      | 50 $\Omega$ nom. |
| VSWR:           | 1.5:1 max.       |
| RF Power Level: | +10 dBm nom.     |

### Modulation Inputs

|              |                 |
|--------------|-----------------|
| Power Level: | - 3 dBm         |
| Bandwidth:   | DC to 10% of RF |

### Output Characteristics

|                      |                |
|----------------------|----------------|
| Conversion Loss:     | 9 dB max.      |
| Sideband Rejection:  | 30 dB min.     |
| Carrier Suppression: | 25 dB min.     |
| Weight, nominal:     | 0.32 oz (9 g)  |
| Operating Temp:      | - 55° to +85°C |

\*Device used as upconverter

### Meri-Pac™ R-Package

