

FEATURES

| | |
|-----------------------|----------------|
| RF Frequency: | 550 – 1100 MHz |
| Input IP3: | +15 dBm |
| Input P1dB: | +7 dBm |
| Sideband Suppression: | -35 dBc |
| LO Leakage: | -50 dBm |
| LO Power: | +14 dBm |

DESCRIPTION

The SSB0511A is a single-sideband modulator optimized for linear modulation of an RF carrier (LO). The IF input is upconverted to the desired RF sideband while the unwanted RF sideband is internally suppressed.

The SSB0511A maintains excellent sideband suppression across multi-octave IF frequency bandwidths. In-stock IF bands include:

- 10 MHz to 50 MHz
- 30 MHz to 90 MHz

Other common IF bands are available. Please specify desired sideband (LSB/USB) and IF band when ordering.

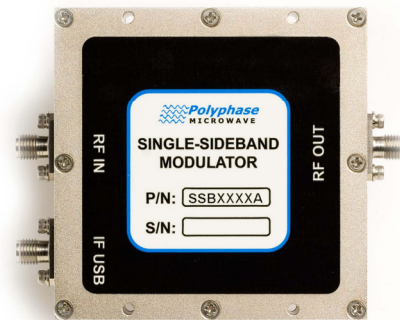
ELECTRICAL SPECIFICATIONS

Test Conditions: +25°C, RF Input = +14 dBm, IF input = 0 dBm @ 30 MHz unless otherwise noted.

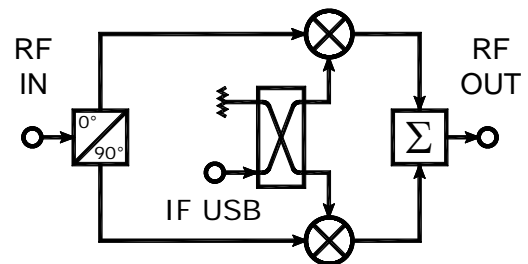
| PARAMETER | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|--------------------------------------|----------------------------|-----|-------|------|----------|
| RF Frequency Range ¹ | | 550 | | 1100 | MHz |
| RF Input (LO) Power | | +13 | +14 | +16 | dBm |
| RF Input (LO) VSWR | | | 1.4:1 | | Ratio |
| RF Output VSWR | | | 2.0:1 | | Ratio |
| IF Input Impedance ² | | | 50 | | Ω |
| Conversion Loss ² | | | 8.5 | 10.5 | dB |
| Input IP3 ² | 2-Tone, $\Delta f = 1$ MHz | | +15 | | dBm |
| Input P1dB ² | | | +7 | | dBm |
| RF Carrier (LO) Leakage at RF Output | No IF input | | -50 | -40 | dBm |
| RF-IF Isolation | No IF input | | 45 | | dB |
| Sideband Suppression ² | | | -35 | -25 | dBc |
| Operating Temperature Range | | -40 | | +85 | °C |
| RF/IF Input Power w/o Damage | | | | +25 | dBm |

Notes:

1. Standard unit is configured for USB operation and 10 MHz to 50 MHz IF band option.
2. Specified over entire IF frequency band.

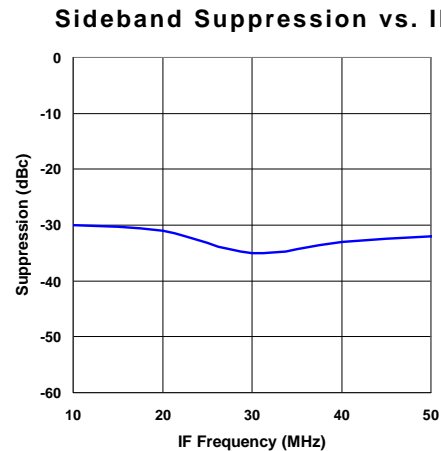
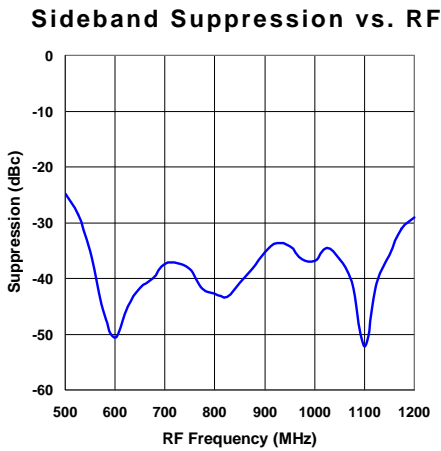
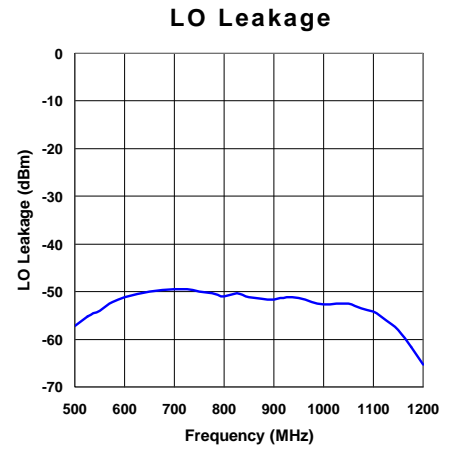
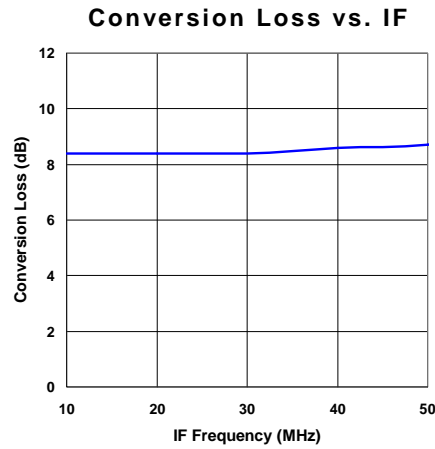
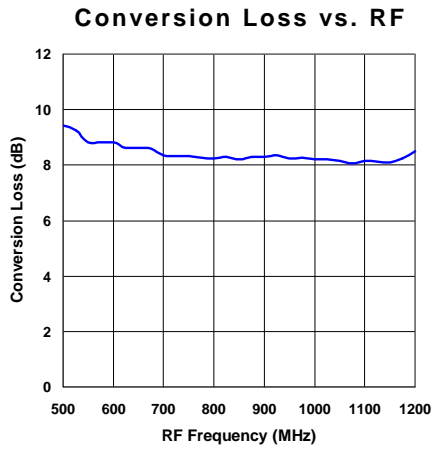


BLOCK DIAGRAM
(USB CONFIGURATION)



TYPICAL PERFORMANCE CHARACTERISTICS

Standard Test Conditions: +25°C, RF Input = +14 dBm, IF input = 0 dBm @ 30 MHz



CASE DRAWING

