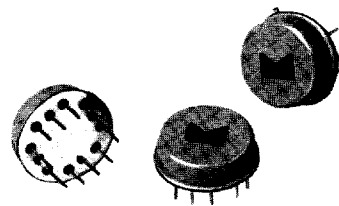
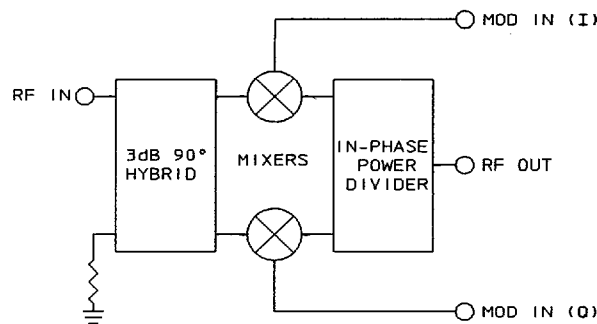




SST-1A series

HIGH PERFORMANCE SIDEBAND MODULATOR

Designed for Cellular Base Stations
Hermetic TO-8 Package

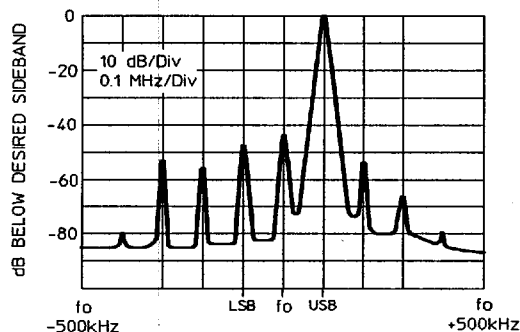


- Frequencies for 900 MHz systems
- Minimized Adjacent Channel Interference
- Minimal Size and Weight

The SST-1A series of Single Sideband Modulators has been designed to meet the base station requirements of digital and analog cellular and PCN radio transmitter applications, where low adjacent channel intermodulation performance, minimal size and cost are important.

Proper operation of this network requires that the I and Q inputs are supplied in precise quadrature. Designers should also note the trade off between dynamic range and intermodulation performance as the modulation drive levels are changed.

Typical Output Spectrum (for I & Q Inputs of -10 dBm)



Model Number	RF Center Frequency, f_0	Bandwidth MHz	Weight nominal
SST-1A-900	900 MHz	90	0.14 oz. (4 g)
SST-1A-***B	800 to 1000 MHz	30	0.14 oz. (4 g)

For complete Model Number replace *** with desired Center Frequency, f_0 in MHz.

COMMON SPECIFICATIONS

RF Input Characteristics, 50 Ω nom.

VSWR: 1.5:1 max.

RF Power Level: +10 dBm nom.

I & Q Input Characteristics, 50 Ω nom.

Recommended Input Power: -10 dBm

Video Bandwidth (nom.): DC to 100 MHz

RF Output Characteristics, 50 Ω nom.

(for -10 dBm I & Q Inputs in phase quadrature)

Conversion Loss: 10 dB typ., 12 dB max.

Carrier Suppression: -30 dB min., -35 dB typ.

Sideband Suppression: -30 dB min., -35 dB typ.

Third Harmonic Suppression: -45 dB min., -50 dB typ. (RF $\pm$ 3 IF)

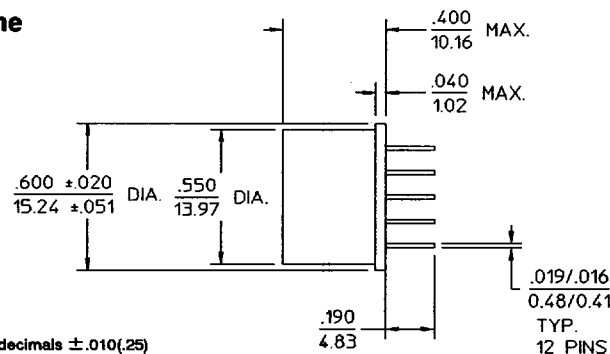
1 dB Compression Point, P_{1dB} : +3 dBm typ.

Input Intercept Point, IP_3 : +15 dBm typ.

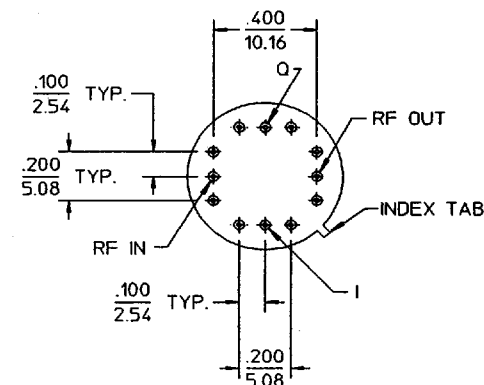
Operating Temperature: -20° to +55°C

Contact MERRIMAC for further characteristic details. (1/92)

TO-8 Package Outline



- NOTES: 1. Tolerance on 3 place decimals $\pm .010(.25)$ except as noted.
2. Dimensions in inches over millimeters.
3. All unmarked pins are internally grounded.



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