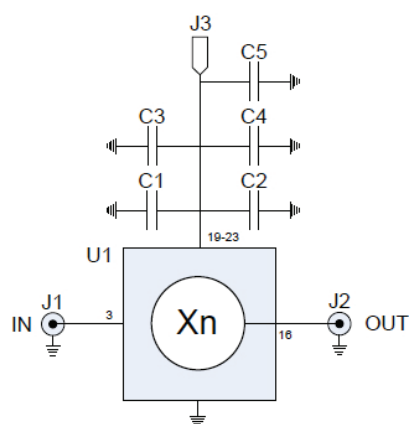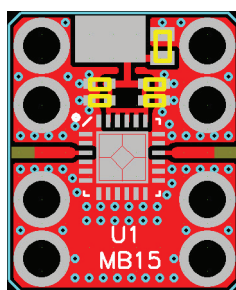### FEATURES

- Fits Hittite Microwave frequency multipliers with LP4E packages
- Usable with HMC 370, 443-445, 575, 695 multipliers
- Output frequencies in X and Ku band
- Uses standard SMD passive parts
- RO-4350 board material
- Fits MicroAmp MH-series housings

The MicroAmp MB-15 circuit board is designed for rapid prototyping of active frequency multipliers using Hittite Microwave devices in LP4E packages with RF inputs on pin 3, RF outputs on pin 16, and bias connections on pins 19-23. Multiplier MMICs are available in various multiplication factors with output frequencies throughout the X and Ku-band range. This board will fit the MicroAmp MH series of connectorized housings that allow it to be used as a stand-alone multiplier or cascaded with other MicroAmp boards for added versatility. Boards are fabricated from a high-performance 13 mil thick RO-4350 laminate with RoHS compatible ENIG plating (electroless nickel/immersion gold) on both the component side and the solid bottom ground plane. The board measures 0.490" x 0.590" and mounts into the housing with four or eight #1-72 screws for optimal high frequency grounding. Multiplier circuits can be easily assembled with standard surface-mount passive components. The MB-15 includes provisions for DC bias bypassing. Pads for the input/output RF connectors allow the SMA center pins to be easily soldered to the board after it is installed into the housing, as well as a large pad to connect the bias voltage to a feed-through. Check the specific data sheet for the multiplier being used. Many of the pins are unused and need not be soldered to the ground plane.

MULTIPLIER SCHEMATIC

ASSEMBLY

REF	SIZE	FUNCTION
C1	0402	Bias bypass (not labeled)
C2	0402	Bias bypass (not labeled)
C3	0402	Bias bypass (not labeled)
C4	0402	Bias bypass (not labeled)
C4	0603	Bias bypass (not labeled)
U1	LP4E	Multiplier
J1		RF input (pin 3)
J2		RF output (pin 16)
J3		+ Bias (pins 19-23)

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